Norfolk County Council

GREAT YARMOUTH TRANSPORT STRATEGY UPDATE

Strategic Environmental Assessment: Environmental Report Draft for Consultation

September 2025

Public

Type of Document (Version) Public

Project no. 70124329

DATE: September 2025

WSP

Kings Orchard
1 Queen Street
Bristol
BS2 0HQ

Phone: +44 117 930 6200

WSP.com

Quality Control

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft	Draft for Client Comment	Draft for Consultation	
Date	July 2025	August 2025	September 2025	
Prepared by	DW	DW & EA	DW & EA	
Checked by	MMD	MMD		
Authorised by		RD		
Project number	70124329	70124329	70124329	
Report number	70124329-003-01	70124329-003-02	70124329-003-03	
File reference				

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Introduction

WSP has been commissioned to undertake a Strategic Environmental Assessment (SEA) in support of the Great Yarmouth Transport Strategy Update (TS). The requirement for SEA arises through the Environmental Assessment of Plans and Programmes Regulations 2004.

The TS sits below the Norfolk Local Transport Plan and this TS replaces the previous Transport Strategy, adopted in April 2020. The updated TS reflects changes in national and local transport policy since 2020.

The TS and its Implementation Plan have been developed by NCC in collaboration with Great Yarmouth Borough Council (GYBC), with WSP have providing support.

The TS focusses on the main urban area of Great Yarmouth, Southtown, Gorleston-on-Sea, Bradwell, and Caister-on-Sea. Consideration has also been given to the wider local and strategic transport network that connects Great Yarmouth with surrounding settlements.

SEA

The SEA process is carried out during the preparation of certain plans and strategies. Its role is to promote sustainable development by assessing the extent to which emerging plans will help to achieve relevant environmental, economic and social objectives.

SEA is used to describe the application of environmental assessment to plans and programmes in accordance with the 'Environmental Assessment of Plans and Programmes Regulations' (SI 2004/1633), known as the SEA Regulations.

SEA is mandatory for plans and programmes prepared for agriculture, forestry, fisheries, energy, industry, transport, waste or water management, telecommunications, tourism, town and country planning or land use, that set the framework for future development consent of projects listed in the Town and Country Planning (Environmental Impact Assessment) Regulations.

This Environmental Report presents the findings of the SEA for the Transport Strategy Update and will be presented alongside the TS for public consultation.

Great Yarmouth Transport Strategy

The TS sets out the vision, objectives and short, medium and long-term transport improvements required to support the existing community of Great Yarmouth and to assist regeneration and unlock the significant potential of Great Yarmouth by identifying transport barriers to growth and economic development and setting out a focus and direction for how this will be addressed.

Vision and Objectives

The vision statement for the TS is as follows:

'To support sustainable economic growth in Great Yarmouth by facilitating journey reliability and improved travel mode choice for all, whilst contributing to improved air quality and safety, and protection of the built and natural environment.'

The proposed objectives underpinning the vision for the TS are outlined below:

- Growth: Support the delivery of planned housing and business growth and development in the Borough, by using improved transport links to unlock economic investment.
- Connectivity: Enhance connectivity and accessibility for all within Great Yarmouth.
- Public transport: Encourage greater use of public transport in Great Yarmouth.
- Active travel: Support modal shift from private car use to active travel in Great Yarmouth.
- Environment: Improve local air quality and Great Yarmouth's natural environment and reduce overall transport emissions.
- Safety: Improve road safety in Great Yarmouth.
- Culture and heritage: Protect and enhance Great Yarmouth's heritage and cultural environment through place-making.

Policies and targets

The TS is a short, medium, and long-term strategy, comprised of 10 policies and eight accompanying targets. The policies are summarised below:

- Policy 1: Supporting growth and new development
- Policy 2: Strategic connections
- Policy 3: Parking
- Policy 4: Bus services
- Policy 5: Rail
- Policy 6: Active travel
- Policy 7: Climate change resilience
- Policy 8: Improved air quality
- Policy 9: Road traffic harm reduction
- Policy 10: Supporting culture, heritage and tourism

The TS's includes targets for the following categories:

- Growth
- Connectivity
- Active travel
- Environment
- Safety
- Culture and heritage

SEA Scope and Methodology

Preparation of the SEA Scoping Report is the first stage in the SEA process. The Scoping Report was available for review and comment by statutory consultees from February to March 2025.

Responses were received from all statutory consultees. With amendments made to the scoping information where necessary.

The updated baseline information can be found in the Final Scoping Report, presented in **Appendix B**, with the representations made by the consultees, and how WSP have responded, outlined in **Appendix C**.

SEA Framework

The baseline information and review of plans and programmes informed the identification of a number of key issues. These were then used to develop an SEA Framework of Objectives, which are outlined below:

- SEA1: To increase the inclusivity, capacity and connectivity of the transportation network to support future demographic changes for both rural and urban populations.
- SEA2: To protect and enhance both physical and mental health and wellbeing through better access to public transport, supporting active travel and encouraging healthy lifestyles.
- SEA3: To provide greater connectivity across Great Yarmouth to support key sectors, attract inward investment and support economic success.
- SEA4: To promote safe transport through reducing accidents, improving safety and reducing crime across the transport network.
- SEA5: To protect and enhance habitats, species and valuable ecological networks that contribute to ecosystem functionality and contribute to environmental and biodiversity net gain.
- SEA6: To protect and enhance townscapes, seascapes and landscapes of visual importance.
- SEA7: To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their unique settings.
- SEA8: To reduce the risk and vulnerability to flooding.
- SEA9: To maintain and enhance water quality by reducing levels of pollution form the transport network.

- SEA10: To protect and enhance air quality by reducing emissions from the transport network.
- SEA11: Ensure that Great Yarmouth and its transport infrastructure are resilient to the effects of climate change.
- SEA12: To reduce greenhouse gas emissions across the transport network, support national and local decarbonisation initiatives and incorporate climate change adaptation to help maximise resilience.
- SEA13: To reduce exposure to transport related noise and vibration, including noise pollution and nuisance.
- SEA14: To reduce the amount of waste produced and promote sustainable use of resources.
- SEA15: To ensure the efficient use of land.
- SEA16: To ensure that critical infrastructure is protected, enhanced and increased to meet the demands of the population now and in the future.

Methodology

Assessment of the Transport strategy and Reasonable Alternatives

The SEA process has sought to identify, describe and evaluate the significant effects of the TS and reasonable alternatives. This has been done by identifying the likely changes to the baseline conditions as a result of implementing the TS and the reasonable alternatives to it. In undertaking the appraisal, consideration has been given to:

- baseline information including key issues;
- the likely activities and potential sources of effects associated with the construction and operation of transport infrastructure;
- the regulatory framework;
- the SEA objectives and guide questions; and
- the definitions of significance.

The 10 TS Policies reasonable alternatives have been assessed against the SEA objectives. The scoring system used in the appraisal and guidance on determining significant effects is summarised in **Table 3-2**. For each effect identified, a score has been given using the SEA framework.

Appraisal of Secondary, Cumulative and Synergistic Effects

The SEA Regulations require that secondary, cumulative and synergistic effects are considered as part of the SEA.

Through the appraisal of the TS, the methodology outlined earlier in this chapter, the intra-plan and inter plan cumulative effects have been considered. This has been appraised on a topic-by-topic basis to identify likely significant cumulative effects using an appraisal matrix and using the scoring system as outlined in **Table 3-2**.

Limitations and Assumptions

The following uncertainties have been noted when completing this Environmental Report and could then become material to the subsequent appraisal:

- the precise location of new infrastructure is unknown at this stage.
- the timing and delivery of new infrastructure is unknown at this stage.
- the detailed design of any development and associated infrastructure is unknown.
- temporary negative effects associated with construction will be mitigated by best practice construction measures.
- future changes to the social, economic and environmental baseline beyond those outlined are difficult to predict in light of the length of the plan period and lifespan of development.
- WSP have endeavoured to predict effects accurately based on the evidence available; however, there are significant uncertainties given the high-level nature of the TS and its assessment. Given uncertainties there is inevitably a need to make some assumptions, however, these are explained where necessary within the assessment text.
- A proportionate and precautionary approach has been applied in the identification and evaluation of potential significant effects based on the level of information available and the presence of key sensitive receptors

Assessment of the Transport Strategy

The TS is a short, medium, and long-term strategy, comprised of 10 Policies and eight Targets, summarised in **Section 2.3** of this report.

An assessment of the TS's Policies against the SEA framework was carried out, and the findings are summarised below, following the key for the assessment matrices. The full assessment of the TS is presented in **Appendix D**.

Table 1 – SEA Key and Guide for the Assessment

Symbol	Effect Significance	Description
++	Significant positive effect	The proposed measure/ action plan/ plan contributes significantly to the achievement of the objective.
+	Minor positive effect	The proposed measure/ action plan/ plan contributes to the achievement of the objective but not significantly.
-	Minor negative effect	The proposed measure/ action plan/ plan detracts from the achievement of the objective but not significantly.
--	Significant negative effect	The proposed measure/ action plan/ plan detracts significantly from the achievement of the objective.
?	Uncertain effect	The proposed measure/ action plan/ plan has an uncertain relationship to the objective or the relationship is dependent on the way in which the aspect is managed. In addition, insufficient information may be available to enable an appraisal to be made.
+/-	Minor positive and negative effect	The proposed measure/ action plan/ plan has the potential for both a minor positive and negative effect.
++/--	Significant positive and negative effect	The proposed measure/ action plan/ plan has the potential for both a significant positive and negative effect.
0	Neutral effect	The proposed measure/ action plan/ plan does not have any effect on the achievement of the objective

The table below summarises the findings from the assessment of the interactions/actions. The full assessment can be found in **Appendix D**.

Table 2 – TS Assessment Summary

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 1: Supporting growth and new development	++	+	++/-	+	+/-	+/-	+/-	+/-	+	+	+/-	++/--/?
Policy 2: Strategic connections	++	0	+	+	++/--	+	+	+/-	+/-	+	+/-	+/-/?
Policy 3: Parking	+/-	+/-	++	+	++/--	+/-	+/-	+/-	+/-	+/-	+/-	++/--
Policy 4: Bus services	++	+	++	+	++	+/-	+/-	+	+/-	+/-	+/-	+
Policy 5: Rail	++	+	++	+	+/-	+/-	+/-	+/-	-/?	+	-	+

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 6: Active travel	+	++	+	++	+/-	+	+	+	+	++	+	+
Policy 7: Climate change resilience	+	+	+/-	+	+/-	+/-	+/-	+/-	+/-	++	+/-	++
Policy 8: Improved air quality	++	++	+	0	+	+	+	+	+	++	+	+
Policy 9: Road traffic harm reduction	++/-	++	+	++	+/-	+/-	-	+/-	+/-	+/-	+/-	+
Policy 10: Supporting culture, heritage and tourism	+	++	+	+	++/-	++/-	++/-	+/-	+	+/-	+/-	+

Cumulative Effects

Cumulative effects can arise when:

- Several individual policies and sites have a combined effect on an objective; or
- Several policies and sites have insignificant effects individually but when combined, lead to significant effects.

The significance of cumulative effects resulting from a range of activities, or multiple incidences of one activity, may vary based on factors such as the nature of the proposed sites and policies and the sensitivity of the receiving communities and environment.

Intra-plan Cumulative Effects

The SEA assessment of policies drew out potential intra-project cumulative effects. These have been identified in the table below.

Table 3 – Intra-plan Cumulative Effects Summary

SEA Objective	Effect significance
Population & Equalities	**++/-**
Human Health	**++/-**
Economy & Employment	**++/-**
Community Safety	**++**
Biodiversity & Natural Capital	**++/--**
Landscape & Townscape	**++/-**
Historic Environment	**++/-**
Water Environment	**+/-**
Air Quality	**++/-**
Climate Change & Greenhouse Gases	**++/-**
Noise	**+/-**
Material Assets	**++/--**

Inter-plan Cumulative Effects

This section presents the consideration of how the Policies and Targets within the TS may interact with proposals in other relevant plans, programmes and projects.

The table below outlines the likely significant effects of the identified plans, programmes and projects, in-combination with the TS, that have been identified against each of the SEA objectives.

Table 4 – Inter-plan Cumulative effects Summary

SEA Objective	Effect significance
Population & Equalities	**++/-**
Human Health	**++/-**
Economy & Employment	**++/-/?**
Community Safety	**++/-**
Biodiversity & Natural Capital	**+/--**
Landscape & Townscape	**+/-**
Historic Environment	**+/-**
Water Environment	**+/--**
Air Quality	**+/-**
Climate Change & Greenhouse Gases	**++/-**
Noise	**+/-**
Material Assets	**+/--**

Assessment of Alternatives

The SEA Regulations require an assessment of the plan, and its reasonable alternatives. The assessment of the alternatives does not need to take into account all possible alternatives, only those that are realistic.

Identifying Alternatives

Reasonable alternatives have been provided at the Policy level, outlining alternative pathways to meet the objectives of the TS. These are outlined in the table below.

Table 5 – Proposed Alternatives for the TS

Policy	Proposed Alternative	Reasonable/Unreasonable
1	▪ To not work in partnership with other councils and instead act in isolation ▪ To do nothing and accept what comes as part of the development process with the understanding that it may not fully meet the LTP objectives or objectives of overarching strategies	▪ Unreasonable ▪ Reasonable
2	▪ To not actively seek to improve strategic connections ▪ To do nothing and continue with a business as usual approach, with no purposeful improvements to strategic connections	▪ Unreasonable ▪ Reasonable
3	▪ To focus only on public transport/active travel ▪ To focus only on private vehicles	▪ Reasonable ▪ Reasonable
4	▪ To do nothing and continue with a business as usual approach, with no involvement from NCC in bus services	▪ Reasonable
5	▪ To do nothing and continue with a business as usual approach, with no involvement from NCC in rail services	▪ Reasonable
6	▪ To do nothing and continue with a business as usual approach for active travel	▪ Unreasonable

7	▪ To take a business as usual approach with no policy specifically for Great Yarmouth, responding only when damage has occurred due to climate change and severe weather events	▪ Reasonable
8	▪ To do nothing and continue with a business as usual approach whereby emissions are likely to be reduced by technological advances and the market ▪ To not work in partnership with other councils and instead act in isolation	▪ Reasonable ▪ Unreasonable
9	▪ To do nothing and only react to new data or accidents	▪ Unreasonable
10	▪ To continue with a business as usual approach by fulfilling the statutory role to not damage structures and not actively seek to enhance culture, heritage or tourism in Great Yarmouth	▪ Reasonable

Alternatives considered unreasonable were screened out at this point, and those considered reasonable were taken forward for assessment through the SEA process, alongside the TS Policies.

The below table summarises the findings from the assessment of the reasonable alternatives. The full assessment can be found in **Appendix D**.

Table 6 – Assessment of Reasonable Alternatives Summary

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 1: Supporting growth and new development	+/-	+/-/?	-	+	+/-	+/-	-	+/-	-	-	+/-	++/--/?
Policy 2: Strategic connections	+	0	+	0	0	0	0	0	0	0	0	0
Policy 3: Parking	+/-	+/-	+/-	+/-	+/--	+/-	+/-	+/-	+/-	+/--	+/-	+/--/?
Policy 4: Bus services	+	0	+	+	+	+/-	+/-	+	+/-	+/-	+/-	0
Policy 5: Rail	+	-	-	0	-	+/-	+/-	+/-	-/?	+	-	+

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 6: Active travel	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Policy 7: Climate change resilience	+	+	0	0	0	0	0	0	+/-	+	+/-	0
Policy 8: Improved air quality	+	+	0	0	+	+	+	+	+	+	0	0
Policy 9: Road traffic harm reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Policy 10: Supporting culture, heritage and tourism	0	+	0	0	+/-	+/-	+/-	0	0	0	0	0

Outline Reasons for Selection or Rejection of Alternatives

For the ten policies contained within the Transport Strategy, reasonable alternative policies have been identified where possible and assessed under the SEA Framework. For policies 6 and 9, the suggested alternatives were not considered reasonable and therefore have not been assessed under the SEA Framework.

Many of the reasonable alternatives propose a ‘business as usual’ approach, with no implementation or improvement of transport measures and are therefore unlikely to yield the same results. A number of minor positive, minor negative, uncertain, and neutral effects have been identified, alongside a small number of significant negative effects.

Where positive effects or outcomes have been identified for the reasonable alternatives, it is likely to be realised at a lesser scale than with the transport strategy, and they have therefore not been selected.

Mitigation and Monitoring

Mitigation

The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment of implementing the plan. Mitigation measures include both proactive avoidance of adverse effects and actions taken after potential effects are identified.

It is likely that potential significant negative effects can be avoided or reduced through adherence to best design guidance, appropriate planning and best construction practice at project level. It is expected that best design and industry practice, and relevant legislative requirements will be considered from the outset and throughout development of interventions.

The mitigation measures proposed in the table below are designed to avoid or reduce the effects identified as potentially negative through the assessment of the TS policies against the SEA Objectives. The table also includes enhancement measures, that aim to optimise positive impacts and enhance sustainability.

At this stage, measures are subject to change as the TS is refined and updated. It is likely that significant negative effects can be avoided or reduced through development of the Policies.

Table 7 – Proposed Mitigation Measures

SEA Objective	Mitigation/Enhancement Measure	Mechanism
Biodiversity & Natural Capital	▪ In line with mandatory Biodiversity Net Gain (BNG) requirements, transport interventions must implement biodiversity net gain and make use of the natural capital approach to ensure environmental net gain ▪ Infrastructure schemes should incorporate design measures to lessen the impact on biodiversity and ensure biodiversity net gain. ▪ Consideration needs to be given to the potential effects of construction of developments (noise, vibration and air pollution) on biodiversity. ▪ Interventions should aim to minimise soil disturbance and to retain as many ecosystem services as possible through careful soil management during the construction process. ▪ Interventions should consider impacts on international, national and local important sites (including sites such as SACs, National Landscapes, National Parks, SSSIs and Ramsar sites). This includes the potential impacts of noise, air and light pollution.	Project level design and assessment
Material Assets	▪ Any form of construction and operation should be undertaken as sustainably as possible, making use of tools and processes, such as circular economy, waste hierarchy and should consider BREEAM and BREEAM Infrastructure. ▪ Consideration at all stages should be given to the waste hierarchy, for example, prioritising reuse and recycling and reducing use of virgin materials ▪ Sustainable design and construction techniques should be promoted, such as low energy lighting and opportunities for renewable energy regeneration. ▪ All interventions should consider climate change resilience and adaptation from early design. ▪ Where land take is required, preference should be given to brownfield land/ previously developed land and avoidance of the best and valuable land.	Project level design and assessment

Monitoring

The SEA Regulations require the significant environmental effects of plans and programmes to be monitored, in order to identify unforeseen negative effects.

The table below sets out proposed monitoring measures. As there is some uncertainty with some of the elements of TS, the monitoring measures may be updated to reflect any additional impacts.

Table 8 – Proposed Monitoring Measures

SEA Objective	Key Performance Indicators	Targets
Population and Equalities	Improving accessibility and inclusivity of the transport network	Increase the number of users of all stated routes, by sustainable transport and active travel.
Human Health	Enabling healthy behaviours and improving wellbeing by monitoring physical activity levels Utilisation of transport route to essential services and green space/green infrastructure, and the network of footpaths in the rural part of the county.	Increase the number of users of active travel infrastructure across the region.
Economy & Employment	Condition of local highways. Reliability of the transport network.	DfT road conditions data. Reducing number of delays and improving punctuality of public transport.
Community Safety	Improving transport safety and security.	A decrease in reported accidents associated with roads and the wider transport network. 50% reduction in KSIs
Biodiversity & Natural Capital	Biodiversity net gain achieved through implementation of the plan. Condition of designated sites e.g. SSSI's, SAC's, SPA's, etc.	No deterioration, or loss of coverage, of designated habitats and safeguarded areas.
Landscape and Townscape	Area of landscapes and townscapes benefiting from conservation and enhancement measures resulting from plan interventions.	No loss or damage to the Norfolk Coast National Landscape or National Character Areas due to interventions.

SEA Objective	Key Performance Indicators	Targets
Historic Environment	The number of historic assets (statutory and non-statutory) negatively affected by the interventions. The number of historic assets (statutory and non-statutory) benefitting from conservation and enhancement measures resulting from plan interventions. The number of visitors to historic assets.	No historic assets negatively affected by the interventions. Increased number of visitors to the historic environment.
Water Environment	Condition of designated and undesignated waterbodies.	No deterioration of water quality in local waterbodies.
Air Quality	Increase use of zero and low emission vehicles. Tackling climate change and protecting and enhancing the natural and built environment - Clean Air Number of locations that exceed legal NOx limit - Air Quality annual monitoring reports	Reducing carbon emissions from transport and investing in EV infrastructure. No locations exceeding the NOx legal limit.
Climate Change & Greenhouse Gases	Carbon emissions from transport. Number of publicly available EV charge points.	For all relevant interventions to incorporate suitable climate change resilience and mitigation measures. To increase publicly available EV charging infrastructure.
Noise	Local noise monitoring.	Not exceeding permitted noise levels and no addition of new Noise Important Areas.
Material Assets	Utilisation of circular economy principles to reduce the amount of additional waste during construction.	Utilisation and uptake of recycled/re-used materials where possible. Maximising use of brownfield land.

Next Steps

This Environmental Report is presented for public consultation alongside the Draft TS. The representations received will be documented and considered in reviewing the proposals for the TS. Following this, a Post Adoption Statement will be produced that summarises how the SEA and the consultation responses have been taken into account and how social, economic and environmental considerations have been integrated into the final decisions regarding the TS and will be issued as soon as is reasonably practicable after adoption.

This SEA Report will be issued to consultees for consultation alongside the draft TS between 24th September and 5th November 2025.

A table setting out the TS and SEA programme is included in **Section 7**.

1 Introduction

1.1 Overview

WSP has been commissioned to undertake a Strategic Environmental Assessment (SEA) in support of the Great Yarmouth Transport Strategy Update (the "TS" hereafter). The requirement for SEA arises through the Environmental Assessment of Plans and Programmes Regulations 2004[1] (hereafter referred to as the 'SEA Regulations'). SEA is a systematic process carried to ensure that environmental issues are fully integrated and addressed through the development of a plan.

1.2 Background to the Transport Strategy Update

The TS sits below the Norfolk Local Transport Plan, which describes Norfolk County Council's (NCC) strategy and policy framework for transport, and is used to guide investment and aid in determining planning and delivery decisions. This TS replaces the previous Transport Strategy, adopted in April 2020. The updated TS reflects changes in national and local transport policy since 2020, including the impacts of the Covid-19 pandemic, and the development of the Great Yarmouth Local Cycling and Walking Infrastructure Plan (LCWIP).

This TS and its Implementation Plan have been developed by NCC in collaboration with Great Yarmouth Borough Council (GYBC), and other stakeholders within the local area of Great Yarmouth. WSP have provided technical support throughout the development of the TS.

The TS focusses on the main urban area of Great Yarmouth, Southtown, Gorleston-on-Sea, Bradwell, and Caister-on-Sea. Consideration has also been given to the wider local and strategic transport network that connects Great Yarmouth with surrounding settlements (e.g. catchment of bus and rail services to Great Yarmouth and the function of the A47, A143 and A149).

1.3 SEA process

The SEA process is carried out during the preparation of certain plans and strategies including local transport plans, local plans, and spatial development strategies. Its role is to promote sustainable development by assessing the extent to which emerging plans will help to achieve relevant environmental, economic and social objectives.

[1] SI 2004 No. 1633, The Environmental Assessment of Plans and Programmes Regulations, 2004. Available online at: http://www.legislation.gov.uk/uksi/2004/1633/pdfs/uksi_20041633_en.pdf

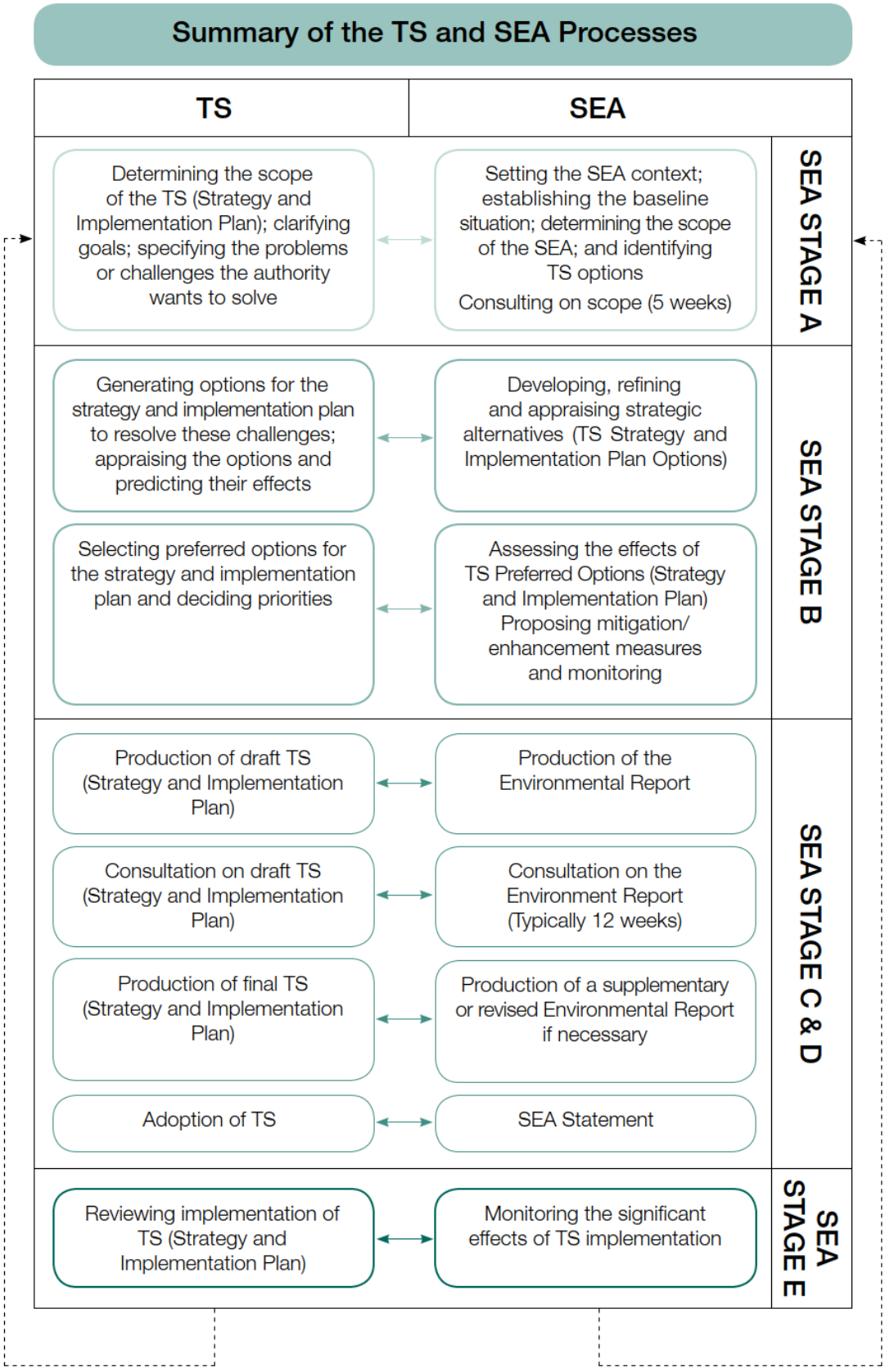
SEA is used to describe the application of environmental assessment to plans and programmes in accordance with the 'Environmental Assessment of Plans and Programmes Regulations' (SI 2004/1633, known as the SEA Regulations)[2]. Throughout the course of the development of the plan, policy or programme, the aim of SEA is to promote sustainable development by identifying the potential impact of options proposed in the plan, in terms of their environmental, economic, and social effects. If any adverse effects are identified, these options can then be avoided, or proposals modified to manage or mitigate adverse effects.

SEA is mandatory for plans and programmes prepared for agriculture, forestry, fisheries, energy, industry, transport, waste or water management, telecommunications, tourism, town and country planning or land use, that set the framework for future development consent of projects listed in the Town and Country Planning (Environmental Impact Assessment) Regulations[3].

The integration of the SEA with the TS process is shown in **Figure 1-1**. This Report represents Stages B and C of the SEA.

[2] SI 2004 No. 1633, The Environmental Assessment of Plans and Programmes Regulations, 2004. Available online at: http://www.legislation.gov.uk/uksi/2004/1633/pdfs/uksi_20041633_en.pdf
[3] UK Government, The Town and Country Planning (Environmental Impact Assessment) Regulations, 2017. Available online at: The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (legislation.gov.uk)

Figure 1-1 - SEA and TS Stages



1.4 Purpose of this report

This Environmental Report presents the findings of the SEA for the Transport Strategy Update and will be presented alongside the TS for public consultation. The purposes of the SEA and this Environmental Report are:

- to identify, describe and evaluate the likely significant environmental and socio-economic effects of the TS and any reasonable alternatives;
- to help identify appropriate measures to avoid, reduce or mitigate adverse effects and to enhance beneficial effects associated with the implementation of the TS wherever possible;
- to provide a framework for monitoring the potential significant adverse environmental effects arising from the implementation of the TS;
- to inform decisions on the TS; and
- to demonstrate that the TS has been developed in a manner consistent with the requirements of the SEA Regulations.

1.5 Environmental report structure

This Environmental Report is structured as follows:

- **Non-Technical Summary -** Provides a summary of the Environmental Report, including information on both the TS and the key findings of the assessment.
- **Section 1: Introduction -** Provides an overview of the TS, SEA process and the purpose of this report.
- **Section 2: Great Yarmouth Transport Strategy -** Describes the purpose and scope of the TS and provides an overview of its structure and contents.
- **Section 3: SEA Scope and Methodology -** Provides on overview of the scope of the SEA and outlines the approach to the appraisal of the TS and reasonable alternatives including the appraisal framework (which comprises SEA objectives and guide questions).
- **Section 4: Assessment of the Transport Strategy** - Summarises the likely significant effects of the TS, including cumulative effects for the TS as a whole, and with other plans, programmes and projects.
- **Section 5: Assessment of Alternatives -** Sets out the reasonable alternatives and presents the assessment findings.
- **Section 6: Mitigation and Monitoring** - Sets out proposed mitigation and monitoring measures for the TS.
- **Section 7: Next Steps –** Sets out the next steps for the SEA process.

2 Great Yarmouth Transport Strategy

2.1 Introduction

The TS sets out the vision, objectives and short, medium and long-term transport improvements required to support the existing community of Great Yarmouth and to assist regeneration and unlock the significant potential of Great Yarmouth by identifying transport barriers to growth and economic development and setting out a focus and direction for how this will be addressed.

Great Yarmouth Borough Council's (GYBC) Local Plan Part 1 (Core Strategy) sets out how the town will grow up to 2030 and the transport strategy will support these aspirations. GYBC currently have an emerging Local Plan, covering the period until 2041, that was submitted for examination in February 2025.[4]

2.2 Vision and Objectives

The vision statement for the TS is as follows:

'To support sustainable economic growth in Great Yarmouth by facilitating journey reliability and improved travel mode choice for all, whilst contributing to improved air quality and safety, and protection of the built and natural environment.'

The proposed objectives underpinning the vision for this TS are outlined below:

- **Growth:** Support the delivery of planned housing and business growth and development in the Borough, by using improved transport links to unlock economic investment.
- **Connectivity:** Enhance connectivity and accessibility for all within Great Yarmouth.
- **Public transport:** Encourage greater use of public transport in Great Yarmouth.
- **Active travel:** Support modal shift from private car use to active travel in Great Yarmouth.
- **Environment:** Improve local air quality and Great Yarmouth's natural environment and reduce overall transport emissions.
- **Safety:** Improve road safety in Great Yarmouth.
- **Culture and heritage:** Protect and enhance Great Yarmouth's heritage and cultural environment through place-making.

[4] Great Yarmouth Borough Council (2025) Emerging Local Plan. Available at: Emerging Local Plan - Great Yarmouth Borough Council: Local Planning

2.3 Policies and Targets

The TS is a short, medium, and long-term strategy, comprised of 10 policies and eight accompanying targets. The policies are summarised below:

- **Policy 1: Supporting growth and new development:** Norfolk County Council, working with partners and developers, will seek to ensure transport measures, including sustainable transport options, support new housing developments and employment sites.
- **Policy 2: Strategic connections:** Norfolk County Council, working in partnership, will seek to improve strategic connections between Great Yarmouth, the port, the surrounding villages, Norwich, Norfolk and the wider region. Improvements to strategic connections including the A47, A149 and the railway line to Norwich will be sought.
- **Policy 3: Parking:** Norfolk County Council, working with partners, will seek to develop car parking policy for on street and off-street public parking that balances the needs of residents and visitors whilst still supporting the promotion of public transport and active travel.
- **Policy 4: Bus services:** Norfolk County Council, will seek to support bus operators to deliver quicker, reliable, integrated, convenient and accessible journeys.
- **Policy 5: Rail:** Norfolk County Council, working with partners, will seek to support rail operators to make improvements to Great Yarmouth Station and to the Wherry Lines services for the public and freight. This will include aiming to make them more reliable, accessible, integrated, quicker and we will seek improved frequency and earlier / later services.
- **Policy 6: Active travel:** Norfolk County Council, will seek to support and promote the use and benefits of active and sustainable modes of travel by walking, wheeling and cycling to reduce dependency on cars.
- **Policy 7: Climate change resilience:** Norfolk County Council, working with partners, will seek to contribute to making the transport network zero emission by 2050 and resilient to the impacts of severe weather and climate change.
- **Policy 8: Improved air quality:** Norfolk County Council, working with partners, will seek to reduce emissions from vehicles to improve air quality.
- **Policy 9: Road traffic harm reduction:** Norfolk County Council, working with partners, will seek to reduce road traffic collisions and transport related casualties. Improvement schemes will aim to address the fear of road traffic affecting vulnerable road users.
- **Policy 10: Supporting culture, heritage and tourism:** Norfolk County Council, working with partners, will seek to protect existing green infrastructure and where possible, enhance the public realm for the benefit of residents, visitors and tourists using a healthy streets approach to make streets attractive.

The TS's targets are as follows:

- **Growth target:** Secure transport network improvements as part of new housing and employment sites.
- **Connectivity target:** Secure future improvements to the strategic road and rail network.

- **Public transport target:** Grow annual bus and rail patronage.
- **Active travel target:** Increase in the number of people walking, wheeling and cycling to support the government's ambitious target for half of all journeys in towns and cities to be walked or cycled by 2030.
- **Environment target:** Continue to have no Air Quality Management Areas (AQMAs).
- **Safety target:** Reduce accident numbers from current levels.
- **Culture and heritage target:** Increasing tourist numbers.

3 SEA Scope and Methodology

3.1 Introduction

Preparation of the SEA Scoping Report is the first stage in the SEA process, identifying issues, objectives and a framework for assessment of the likely effects of the TS. The Scoping Report was available for review and comment by statutory consultees (the Environment Agency, Historic England and Natural England) from February to March 2025.

Responses were received from all statutory consultees. The comments from the Environment Agency were taken into account and amendments made to the scoping information where necessary. Natural England and Historic England had no specific comments, therefore no amendments were required.

The updated baseline information can be found in the Final Scoping Report, presented in **Appendix B**, with the representations made by the consultees, and how WSP have responded, outlined in **Appendix C**.

3.2 SEA Appraisal Framework

The baseline information and review of plans and programmes informed the identification of a number of key issues (see **Appendix B**). These were then used to develop an SEA Framework of Objectives, which are presented in **Table 3-1** below.

Table 3-1 – SEA Appraisal Framework

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Population & Equalities	▪ Transport issues affect different groups to varying extents, and there is evidence showing that the barriers to accessing and using transport can be exacerbated by age, ethnicity and gender. ▪ The rural nature of some parts of Great Yarmouth could pose significant challenges in providing good services for all rural residents. There will, therefore, be a need for increased access to transport. ▪ The population of Great Yarmouth is predicted to increase in number resulting in a change in the age profile. ▪ Changing work habits such as remote, internet-based jobs and working from home are likely to reduce transport demand, but may also increase social isolation, which could increase reliance on alternative social interaction. ▪ With an increasing ageing population in Great Yarmouth, there is likely to be additional strain on the area's services and infrastructure particularly health and social care. ▪ The change in working habits has also affected traditional 5/2-day shift patterns for public transport with one in 10 local bus services in the UK cancelled in 2022. This is further exacerbated by reductions in local authority subsidies.	**SEA1:** To increase the inclusivity, capacity and connectivity of the transportation network to support future demographic changes for both rural and urban populations.	Will the TS: ▪ Help to reduce inequalities, particularly for those people and communities most vulnerable? ▪ Improve access to services, facilities and transport for all inclusively (including disabilities, hidden disabilities, dementia, and autism)? ▪ Proportionately support both rural and urban communities ▪ Support diversity? ▪ Support population growth?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
	▪ Population growth in Great Yarmouth between 2011 and 2021 was lower than the average for Norfolk, and England and Wales. ▪ Great Yarmouth has a shorter than average travel to work distance compared to national averages, and a high proportion of people living in its main urban area.		
Human Health	▪ The population of the area is ageing; older people may not have access to appropriate forms of private transport to access healthcare, community, and social care facilities. ▪ There are high levels of physical inactivity and obesity across Great Yarmouth. ▪ Social isolation can lead to loneliness which has the potential to undermine well-being thereby impacting negatively on people's quality of life. ▪ There are higher levels of loneliness in Great Yarmouth than the surrounding area.	**SEA2:** To protect and enhance both physical and mental health and wellbeing through better access to public transport, supporting active travel and encouraging healthy lifestyles.	Will the TS: ▪ Promote healthier lifestyles? ▪ Increase walking and cycling? ▪ Promote health enhancing environments, behaviours and activities for local communities? ▪ Help prevent risks to human health, which arise from noise and air pollution? ▪ Help prevent social isolation in both the

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
			rural and urban setting?
Economy & Employment	▪ If employment remains more concentrated in urban centres, this could put increased pressure on transport systems as commuting distances increase. ▪ The working age population is lower than the average and there are high levels of economic inactivity. ▪ Retirement is one of the main factors contributing to economic inactivity in Great Yarmouth. ▪ There is a low density of jobs within Great Yarmouth compared to regional and national averages.	**SEA3:** To provide greater connectivity across Great Yarmouth to support key sectors, attract inward investment and support economic success.	Will the TS: ▪ Support economic growth? ▪ Support access to jobs and training opportunities? ▪ Improve access to employment centres? ▪ Support regeneration of town and district centres? ▪ Support the tourism industry?
Community Safety	▪ Crime on public transport in the UK is on the rise, particularly with regards to sexual assault, violent crimes and disruption. ▪ As the population within Great Yarmouth increases there are expected to be a greater number of vehicles on the borough's roads, which may result in an increase in the number of accidents and those KSI on roads.	**SEA4:** To promote safe transport through reducing accidents, improving safety and reducing crime across the transport network.	Will the TS: ▪ Improve safety? ▪ Ensure that residents feel safe, particularly after dark? ▪ Support designing out crime principals?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
	▪ Children in the most deprived neighbourhoods are nearly three times more likely to be KSI as a pedestrian compared to non-deprived neighbourhoods. ▪ There are opportunities to increase the safety of active transport modes such as cycling and walking. ▪ Vulnerable road users such as cyclist and pedestrians are more likely to be casualties.		▪ Reduce levels of crime deprivation? ▪ Improve road safety and reduce the number of people KSI on the roads, particularly children from deprived backgrounds?
Biodiversity & Natural Capital	▪ There are a wide range of statutory local, national and international sites designated for nature conservation across Great Yarmouth, which may be affected by increased transport infrastructure development. Habitats and wildlife corridors outside of these protected areas are especially at risk of being lost, damaged or fragmented by transport development. ▪ New transport routes will need to be carefully planned so that they do not cause adverse effects on ecosystems with high (potential) ecosystem services provision. ▪ Given that ecosystem services are the benefits that nature provides to people, areas of high (potential) provision are often the green and blue spaces close to centres of population, as well as connecting	**SEA5:** To protect and enhance habitats, species and valuable ecological networks that contribute to ecosystem functionality and contribute to environmental and biodiversity net gain.	Will the TS: ▪ Cause damage to locally and nationally designated sites though infrastructure provision, traffic or maintenance? ▪ Maintain and enhance biodiversity in the borough? ▪ Seek opportunities for at least 10% biodiversity net gain through green infrastructure?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
	habitats that link these with more remote designated habitats and landscapes. ▪ There is an opportunity for the TS to create and enhance ecological corridors along transport routes, to improve habitat connectivity between designated sites and fragmented habitats. ▪ There is an opportunity to link biodiversity enhancement with carbon sequestration through creation and restoration of habitats including wetlands, woodlands and grasslands. ▪ There is an opportunity to reduce road mortality of protected and priority species by incorporating wildlife crossings, such as underpasses and overpasses, where transport routes intersect with key habitats. ▪ There is an opportunity to implement measures to reduce light and noise pollution from transport infrastructure, which can negatively impact nocturnal species such as bats and birds. ▪ UK Government objectives aim to halt biodiversity loss by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042 and to protect 30% of our land and sea also by 2030.		▪ Increase provision of ecosystem services from the borough's natural capital? ▪ Prevent fragmentation of habitats and promote ecological networks? ▪ Result in developments which will improve biodiversity on site? ▪ Support UK Government biodiversity objectives, including halting biodiversity loss, improve species abundance and protect the land and sea?
Landscape & Townscape	▪ Transport infrastructure has the potential to cause direct and indirect impacts on designated landscapes, eroding the character and quality of the	**SEA6:** To protect and enhance townscapes,	Will the TS:

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
	landscapes, increasing pollution and eroding the visual amenity for residents and visitors alike. ▪ Future growth in some locations could risk compromising landscape, seascape and townscape character and features, however a landscape-led design with GI principles in place, could play a key role in the enhancement of the natural environment, visual amenity and physical and mental health of its people. ▪ Climate change will also put pressure on the landscape and seascape designations as new pests and diseases emerge sea levels rise and extreme weather increasing the stresses on nature conservation.	seascapes and landscapes of visual importance.	▪ Respect, maintain and strengthen local character and distinctiveness? ▪ Improve the quality and condition of the townscape and landscape? ▪ Incorporate green infrastructure into design? ▪ Protect and enhance the special character of designated National Landscapes?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Historic Environment	▪ There is potential for development to encroach on assets, particularly affecting the settings of assets through increased noise and visual effects. ▪ New and/or upgraded transport infrastructure across Great Yarmouth has the potential to affect the survival, fabric, condition and setting of cultural heritage assets (both above and below ground) in addition to increased pressure from population growth. ▪ Highly significant archaeological remains, whether designated or not, normally require preservation in situ. This clearly has implications and can represent a significant constraint to future scheme design, which should respect, retain and protect the remains (e.g. through avoidance and redesign). ▪ Vehicle damage and pollution can adversely affect both listed buildings and scheduled monuments, so reducing vehicle movements within historic urban areas is also an important area to address.	**SEA7:** To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their unique settings.	Will the TS: ▪ Conserve and/or enhance heritage assets, their setting and the wider historic environment? ▪ Improve the quality and condition of the historic environment? ▪ Respect, maintain and strengthen local character and distinctiveness? ▪ Result in the loss of buried and unknown historic assets and artifacts?
Water Environment	▪ The physical and chemical quality of water resources is an important aspect of the natural environment and can be adversely affected by pollution associated with surface water runoff from new or existing transport infrastructure, as well as	**SEA8:** To reduce the risk and vulnerability to flooding.	Will the TS: ▪ Reduce the risk of flooding? ▪ Increase surface runoff?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
	by changes to waterbodies which can affect their quality as a habitat. ▪ Of the 32 water bodies, just 3.1% are achieving 'good' status, falling far short of the WFD target. ▪ Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk in Great Yarmouth. ▪ Increased development (including transport infrastructure) can increase flood risk on a local and catchment scale. ▪ There are significant competing demands on scarce water resources, with the needs of different users having to be traded-off against each other. ▪ Upgrading existing infrastructure provides the opportunity to improve pollution control, include the reduction of litter. ▪ Upgrading existing infrastructure provides an opportunity to strategically review existing infrastructure, and to improve its resilience to flooding and climate change through locating, designing, and building infrastructure with long term resilience in mind. ▪ Possible opportunity to reduce flood risk through design of new transport infrastructure, e.g. embankments, tree planning, and flood management.	**SEA9:** To maintain and enhance water quality by reducing levels of pollution form the transport network.	▪ Result in the reduction of water quality? ▪ Support the protection and enhancement of water bodies?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Air Quality	▪ The number of vehicles on the roads is likely to increase as the population rises, putting air quality at further risk of degradation. ▪ More severe and frequent heat episodes as a result of climate change can contribute to the worsening of air quality. ▪ Whilst electric cars should have positive effects for air quality in terms of NO2 reductions, there is concern that electric vehicles (EVs), which are currently heavier than 'conventional' vehicles, may generate more particulate (PM10) pollution from brake and tyre wear. ▪ Air quality issues across Great Yarmouth can be addressed via a modal shift towards less polluting methods of transport (low carbon transport initiatives) and inclusive of active transport (e.g. cycling, walking etc.) thereby leading to a higher standard of air quality.	**SEA10:** To protect and enhance air quality by reducing emissions from the transport network.	Will the TS: ▪ Support measures to reduce levels of air pollution? ▪ Support measures for the reduction of congestion and traffic levels particularly in AQMAs and congestion hot spots?
Climate Change & Greenhouse Gases	▪ Transport is the largest contributor to greenhouse gas emissions in the UK, with the largest contributor being domestic transport. ▪ There is a need to ensure climate resilience of the transport infrastructure in Great Yarmouth. The extent of future climate change will be strongly	**SEA11:** Ensure that Great Yarmouth and its transport infrastructure are resilient to the effects of climate change.	Will the TS: ▪ Support low carbon and energy efficient design? ▪ Increase the resilience of transport

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
	affected by the amount of greenhouse gases that the population chooses to emit. ▪ In rural areas of Great Yarmouth, particularly, where there are limited local facilities and fewer public transport services, many people are reliant on private transport which contributes to greenhouse gas emissions.	**SEA12:** To reduce greenhouse gas emissions across the transport network, support national and local decarbonisation initiatives and incorporate climate change adaptation to help maximise resilience.	infrastructure to the impacts of climate change (including flood risk, extreme weather, heat and cold)? ▪ Support the councils' Net Zero ambitions by 2030 and 2040? ▪ Support low carbon, energy efficient design? ▪ Reduce levels of embodied carbon?
Noise	▪ Increased transport development and infrastructure may adversely impact sensitive receptors and increase current noise levels in areas adjacent to roads and rail lines. ▪ Excessive noise exposure from transport can cause stress and sleep disturbance and is often perceived as a nuisance. This can result in adverse effects on human health. ▪ Transport noise can adversely affect biodiversity including nesting and feeding habits of many species.	**SEA13:** To reduce exposure to transport related noise and vibration, including noise pollution and nuisance.	Will the TS: ▪ Support measures to reduce levels of noise pollution? ▪ Support measures for the reduction of congestion and traffic levels particularly in areas

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
	▪ Increased noise exposure can also have negative impacts on designated sites including the National Landscapes, and other designated sites with road or rail noise reducing amenity within these areas.		with sensitive noise receptors?
Material Assets	▪ It is important that any future development of the transport network across Great Yarmouth does not have adverse impacts or lead to the degradation or sterilisation of the best and most versatile land, as this is important for the UK's self-sufficiency in food production. ▪ Minerals are a finite resource and materials will be required for any new transport infrastructure, with subsequent waste produced. ▪ There is currently a large reliance on road transport for importing and exporting minerals across the UK, which is unlikely to change. ▪ There is a continued increase in renewable energy supplies across the borough, of which needs to be managed efficiently to ensure the capacity requirements of this transition are met.	**SEA14:** To reduce the amount of waste produced and promote sustainable use of resources. **SEA15:** To ensure the efficient use of land. **SEA16:** To ensure that critical infrastructure is protected, enhanced and increased to meet the demands of the population now and in the future.	Will the TS: ▪ Support the use of sustainable materials? ▪ Support the reuse of existing infrastructure? ▪ Promote a circular economy? ▪ Minimise the amount of waste? ▪ Support the use of brownfield land? ▪ Protect and enhance land quality? ▪ Result in the loss of agricultural land? ▪ Ensure that critical infrastructure is resilient to the

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
			effects of climate change?

3.3 Methodology

3.3.1 Assessment of the Transport strategy and Reasonable Alternatives

In line with the legislative requirements, the SEA process has sought to identify, describe and evaluate the significant effects of the TS and reasonable alternatives. This has been done by identifying the likely changes to the baseline conditions as a result of implementing the TS and the reasonable alternatives to it. These changes are described (where possible) in terms of scale, the timescale over which they could occur, whether the effects would be temporary or permanent, positive or negative, likely or unlikely, frequent or rare. Where numerical information was not available, the appraisal has been based on professional judgement and with reference to relevant legislation, regulations and policy. More specifically, in undertaking the appraisal, consideration has been given to:

- baseline information including key issues;
- the likely activities and potential sources of effects associated with the construction and operation of transport infrastructure;
- the regulatory framework;
- the SEA objectives and guide questions (see **Table 3-1**); and
- the definitions of significance (see **Table 3-2**).

The 10 Policies of the TS and reasonable alternatives have been assessed against the SEA objectives on a topic-by-topic basis to identify likely significant environmental, social and economic effects using an appraisal matrix.

In line with the SEA Regulations, the SEA must detail which of the identified effects are likely to be significant (whether this is significantly positive or negative). The scoring system used in the appraisal and guidance on determining significant effects is summarised in **Table 3-2** below.

Table 3-2 – SEA Key and Guide for the Assessment

Symbol	Effect Significance	Description
++	Significant positive effect	The proposed measure/ action plan/ plan contributes significantly to the achievement of the objective.
+	Minor positive effect	The proposed measure/ action plan/ plan contributes to the achievement of the objective but not significantly.
-	Minor negative effect	The proposed measure/ action plan/ plan detracts from the achievement of the objective but not significantly.

Symbol	Effect Significance	Description
--	Significant negative effect	The proposed measure/ action plan/ plan detracts significantly from the achievement of the objective.
?	Uncertain effect	The proposed measure/ action plan/ plan has an uncertain relationship to the objective or the relationship is dependent on the way in which the aspect is managed. In addition, insufficient information may be available to enable an appraisal to be made.
+/-	Minor positive and negative effect	The proposed measure/ action plan/ plan has the potential for both a minor positive and negative effect.
++/--	Significant positive and negative effect	The proposed measure/ action plan/ plan has the potential for both a significant positive and negative effect.
0	Neutral effect	The proposed measure/ action plan/ plan does not have any effect on the achievement of the objective

For each effect identified, a score has been given using the framework set out in **Table 3-1** and **Table 3-2**. This assessment process has been undertaken using expert judgement after a review of the evidence available. All evidence/ assumptions that have been used to make these judgements have been documented.

3.4 Appraisal of Secondary, Cumulative and Synergistic Effects

The SEA Regulations require that secondary, cumulative and synergistic effects are considered as part of the SEA. These terms are not mutually exclusive, often the term cumulative effects is taken to include secondary and synergistic. The terms are defined as follows:

- **Secondary (or indirect):** Effects that do not occur as a direct result of the TS's implementation but occur at distance from the direct impacts or as a result of a complex pathway.
- **Cumulative:** Effects that occur where several individual activities which each may have an insignificant effect, combine to have a significant effect. Examples of a cumulative effect resulting from the implementation of the TS could include potential effects on a National Sites Network Sites where a habitat or species is vulnerable and the cumulative effects of disturbance and pollutant emissions arising from development and operation causes a significant impact. Cumulative effects will also include the potential effects (if

any) of a proposed plan or activity under the plan and any other proposed plan and/or consented developments.
- **Synergistic:** Effects that interact to produce a total effect that is greater than the sum of the individual effects.

Through the appraisal of the TS, the methodology outlined earlier in this chapter, the cumulative effects of the TS as a whole (intra-plan) and in-combination with other plans and programmes (inter-plan) have been considered. This has been appraised on a topic-by-topic basis to identify likely significant cumulative effects using an appraisal matrix and using the scoring system as outlined in **Table 3-2**.

3.5 Limitations and assumptions

The following uncertainties have been noted when completing this Environmental Report and could then become material to the subsequent appraisal:

- the precise location of new infrastructure is unknown at this stage.
- the timing and delivery of new infrastructure is unknown at this stage.
- the detailed design of any development and associated infrastructure is unknown.
- temporary negative effects associated with construction will be mitigated by best practice construction measures.
- future changes to the social, economic and environmental baseline beyond those outlined are difficult to predict in light of the length of the plan period and lifespan of development.
- WSP have endeavoured to predict effects accurately based on the evidence available; however, there are significant uncertainties given the high-level nature of the TS and its assessment. Given uncertainties there is inevitably a need to make some assumptions, however, these are explained where necessary within the assessment text.
- A proportionate and precautionary approach has been applied in the identification and evaluation of potential significant effects based on the level of information available and the presence of key sensitive receptors

4 Assessment of the Transport Strategy

4.1 Introduction

The TS is a short, medium, and long-term strategy, comprised of 10 Policies and eight Targets, summarised in **Section 2.3** of this report.

An assessment of the TS's Policies against the SEA framework was carried out, and the findings are summarised below. The full assessment of the TS is presented in **Appendix D**.

4.2 Assessment of the Transport strategy

Table 4-1 summarises the findings from the assessment of the interactions/actions. The full assessment can be found in **Appendix D**.

Table 4-1 – TS Assessment Summary

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 1: Supporting growth and new development	++	+	++/-	+	+/-	+/-	+/-	+/-	+	+	+/-	++/--/?
Policy 2: Strategic connections	++	0	+	+	++/--	+	+	+/-	+/-	+	+/-	+/-/?
Policy 3: Parking	+/-	+/-	++	+	++/--	+/-	+/-	+/-	+/-	+/-	+/-	++/--
Policy 4: Bus services	++	+	++	+	++	+/-	+/-	+	+/-	+/-	+/-	+
Policy 5: Rail	++	+	++	+	+/-	+/-	+/-	+/-	-/?	+	-	+
Policy 6: Active travel	+	++	+	++	+/-	+	+	+	+	++	+	+

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 7: Climate change resilience	+	+	+/-	+	+/-	+/-	+/-	+/-	+/-	++	+/-	++
Policy 8: Improved air quality	++	++	+	0	+	+	+	+	+	++	+	+
Policy 9: Road traffic harm reduction	++/-	++	+	++	+/-	+/-	-	+/-	+/-	+/-	+/-	+
Policy 10: Supporting culture, heritage and tourism	+	++	+	+	++/-	++/-	++/-	+/-	+	+/-	+/-	+

4.2.1 Positive Effects

Six policies were identified as having significant positive effects on Population & Equalities; Policy 1, Policy 2, Policy 4, Policy 5, Policy 8 and Policy 9. Significant effects against this SEA Objective are reflective of improvements to connectivity, accessibility and inclusivity of the transport network and a reduction in inequalities in access for both urban and rural communities. Minor positive and mixed effects were identified for the remaining policies.

Four policies were identified as having significant positive effects on Human Health; Policy 6, Policy 8, Policy 9 and Policy 10. For Policy 8 and Policy 10, effects have been identified as uncertain as the exact measures associated with implementation of the policies are not known. Significant effects against this SEA Objective are reflective of reductions in noise and air pollution, improvements to connectivity and access to services, promotion of active travel, and the subsequent impacts these changes will have on both physical and mental health for the population. For the remaining policies, four minor positive, one mixed and one neutral were identified for this SEA Objective.

Four policies were identified as having significant positive effects on Economy & Employment; Policy 1, Policy 3, Policy 4, and Policy 5. For Policy 1, effects have been identified as uncertain, due to uncertainties around the exact scale and location of proposed transport measures. Positive effects against this SEA Objective are reflective of improvements to connectivity and accessibility of services, employment sites and training opportunities. Minor positive and mixed effects were identified for the remaining policies.

Two policies were identified as having significant positive effects on Community Safety; Policy 6 and Policy 9. Significant positive effects identified against this SEA Objective are reflective of improvements to active travel and transport infrastructure that are likely to reduce the number of collisions and number of KSI on roads, leading to safety improvements, and promotion of active travel reducing the number of private vehicles on the road. Minor positive effects were identified for six of the remaining policies, and one neutral effect was identified.

Two policies were identified as having significant positive effects on Biodiversity & Natural Capital; Policy 4 and Policy 10, and mixed significant effects were identified for Policy 2 and Policy 3. Significant positive effects are reflective of improvements to the transport network causing a reduction in pollution (e.g. noise and air pollution) and subsequent impacts on wildlife, as well as improvements to green infrastructure and habitats. Minor positive effects were identified for the remaining policies.

A mixed significant positive and minor negative effect has been identified on Landscape & Townscape, for implementation of Policy 10. This significant positive effect is reflective of enhancements to the public realm, and the positive impacts that this would have on the quality of and condition of landscape and townscape across the study area. Mixed minor and minor positive effects were identified for the remaining policies.

A mixed significant positive and minor negative effect has been identified on Historic Environment, for implementation of Policy 10. This significant positive effect is reflective of enhancements to the public realm, and the positive impacts that this would have on the setting of heritage assets across the study area, and opportunities to incorporate sustainable design. The uncertainty is identified as the location of improvements are not known, and therefore the full opportunity for positive effects on the historic environment may not be realised. Minor positive and mixed effects were identified for the eight of the nine other policies.

A significant positive effect has been identified on Climate Change & Greenhouse Gases for three policies; Policy 6, Policy 7 and Policy 8. Uncertainties were also identified due to the scale of emissions reduction not being known for Policy 6 and Policy 8. Significant positive effects are reflective of an increase in sustainable transport and a move towards a net zero transport network, reducing transport emissions whilst improving the transport networks resilience to climate change. Minor positive effects were identified for the remaining policies.

A significant positive effect has been identified on Material Assets for three policies; Policy 1, Policy 3, and Policy 7. Significant positive effects are reflective of opportunities provided to support a green economy, and to utilise sustainable materials, support a circular economy, reuse brownfield land and to improve resource efficiency. Minor/minor uncertain positive and mixed effects were identified for the remaining policies.

4.2.2 Negative Effects

A significant negative uncertain effect has been identified on Biodiversity & Natural Capital for implementation of Policy 4 and Policy 10, and mixed significant effects were identified for Policy 2 and Policy 3. The significant negative effects are reflective of land take from construction of new parking facilities, and disturbance to habitats and wildlife associated with additional traffic and use of active travel routes. Uncertainty has been identified as the exact location of construction and land take, and therefore the impacts on designated sites, are not known. Minor mixed effects have been identified for five of the remaining policies.

Significant negative effects have been identified on Material Assets for two policies; Policy 1 and Policy 3. Significant negative effects are reflective of the potential for land take, and loss of best and most versatile agricultural land. Uncertainty has been identified as the exact location of infrastructure, and therefore the impact on material assets, is not known. Minor negative uncertain effects have also been identified for Policy 2.

No further significant negative effects have been identified, though a range of minor negative and mixed effects have been identified for each SEA Objective.

4.3 Cumulative Effects

The SEA Regulations require that the cumulative effects of the TS are considered when identifying likely significant effects. This includes the cumulative effects of the policies and

interventions comprising the plan (intra-plan), and the effects of the plan in conjunction with other plans and programmes (inter-plan).

Cumulative effects can arise when:

- Several individual policies and sites have a combined effect on an objective; or
- Several policies and sites have insignificant effects individually but when combined, lead to significant effects.

The significance of cumulative effects resulting from a range of activities, or multiple incidences of one activity, may vary based on factors such as the nature of the proposed sites and policies and the sensitivity of the receiving communities and environment.

4.3.1 Intra-plan Cumulative effects

The SEA assessment of policies drew out potential intra-project cumulative effects. These have been identified in **Table 4-2**.

Table 4-2 – Intra-plan Cumulative Effects Summary

SEA Objective	Effect significance	Description of intra-plan cumulative effects
Population & Equalities	**++/-**	Significant positive cumulative effects are anticipated for Population & Equalities, as the TS policies will improve connectivity and inclusivity of, and access to, services, facilities and transport for all, through improvements to transport and active travel infrastructure across the GY area. This is anticipated to benefit rural and urban areas proportionately, as policies aim to improve infrastructure across the area, including strategic connections between urban and rural areas. The TS policies will also support future population growth, by improving connectivity ensuring that the needs of existing and future businesses and residents within the borough, as well as visitors and commuters to the town, will be met. Improvements to transport infrastructure to implement the TS policies will require construction of new infrastructure, as well as updates and works to existing infrastructure. Construction works could result in temporary negative effects on access to services. If all construction were to be carried out simultaneously (unlikely worst-case scenario), there could be significant negative cumulative effects due to severe restrictions to access, depending on the location of works. It is expected that construction works would take this into account and minor negative cumulative effects have been identified.
Human Health	**++/-**	Significant positive cumulative effects are anticipated for Human Health, as the TS policies will seek to promote healthier lifestyles and increase walking and cycling, across the region, through improvements to and promotion of active travel improving physical and mental health. New infrastructure will provide opportunities to incorporate green infrastructure, promoting physical and mental health enhancing environments. The TS policies also support a general move to sustainable and active travel, in support of NCC's

SEA Objective	Effect significance	Description of intra-plan cumulative effects
		net zero targets. This will work to reduce air and noise pollution. Improved connectivity can also help to tackle social isolation in both rural and urban areas, also having positive effects on human health. Negative cumulative effects are anticipated due to construction, as improvements to transport infrastructure could increase noise and air pollution, negatively affecting human health. If all construction were to be carried out simultaneously (unlikely worst-case scenario), there could be significant negative cumulative effects However these impacts are anticipated to be accounted for during scheme design and timing of works, resulting in minor negative cumulative effects.
Economy & Employment	**++/-**	Significant positive cumulative effects are anticipated on Economy & Employment as the TS policies will improve transport infrastructure and connectivity across the GY area, through improved sustainable and active travel and improved parking amongst other measures. This will support economic growth, access to jobs, training and employment centres, regeneration of town centres, and the tourism industry through increased ease of access for residents and visitors, including to key tourist areas such as the Norfolk Coast National Landscape. Investment associated with construction of new infrastructure may also result in additional jobs and supply chain benefits. Negative cumulative effects are anticipated as construction may cause temporary restrictions to access, particularly to services and key transport corridors. If all construction were to be carried out simultaneously (unlikely worst-case scenario), there could be significant negative cumulative effects However these impacts are anticipated to be accounted for during scheme design and timing of works, resulting in minor negative

SEA Objective	Effect significance	Description of intra-plan cumulative effects
		cumulative effects. There may also be negative cumulative effects on tourism, as construction and operation of new transport infrastructure may impact the Norfolk Coast National Landscape and its value to the tourism economy.
Community Safety	**++**	Significant positive cumulative effects are anticipated on Community Safety. Improvements to transport infrastructure e.g. road crossings, signage and markings and a move towards sustainable transport and active travel will likely reduce the number of private vehicles in use and work to reduce both collisions and the number of KSI on roads in the area, which will encourage walking and cycling as feelings of safety increase. Better public transport can increase feeling of safety, particularly after dark if public transport services and better connected and more reliable.
Biodiversity & Natural Capital	**++/--**	Significant positive cumulative effects are anticipated on Biodiversity & Natural Capital due to encouragement of a modal shift away from private car use, improving air quality across the County and reducing traffic disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as their habitats. The TS policies also aim to make the transport network net zero and improve the resilience of the transport network to the effects of severe weather and climate change, having a positive effect on this SEA Objective through a reduction in congestion, traffic related noise and air pollution and subsequently disturbance to wildlife. Schemes that deliver new infrastructure of sufficient scale will be required to deliver Biodiversity Net Gain (BNG) under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). This is anticipated to have significant positive cumulative effects.

SEA Objective	Effect significance	Description of intra-plan cumulative effects
		Implementing the policies of the TS will require some construction works, new permanent infrastructure may require land take which may result in permanent loss of biodiversity and natural capital, leading to negative cumulative effects. Construction works may also result in negative cumulative effects, as they may result in temporary increases in disturbance to local habitats during construction as a result of noise, vibration and reduced air quality. Increased use of active travel routes may also increase their use and have negative effects on biodiversity through increased disturbance to wildlife and habitats. If all construction were to be carried out simultaneously (unlikely worst-case scenario), there could be significant negative cumulative effects Although these impacts are anticipated to be accounted for during scheme design and timing of works, there is potential for significant negative effects.
Landscape & Townscape	**++/-**	Significant positive cumulative effects are anticipated on Landscape & Townscape as the TS policies aim to generally improve the transport network, whilst promoting use of sustainable transport and active travel. This will likely increase ease of access to designated landscapes and reduce pollution such as air and noise pollution in their vicinity, leading to improvement in the quality of landscape and townscape settings. The TS policies also provide numerous opportunities to improve the public realm and incorporate green infrastructure and SuDS, improving the quality of landscape and townscapes across the county, whilst maintaining and strengthening the quality of local character having positive cumulative effects.

SEA Objective	Effect significance	Description of intra-plan cumulative effects
		Construction works could however result in temporary adverse effects on landscape and townscape character and quality, and visual amenity. If all construction were to be carried out simultaneously (unlikely worst-case scenario), there could be significant negative cumulative effects However these impacts are anticipated to be accounted for during scheme design and timing of works, resulting in minor negative cumulative effects.
Historic Environment	**++/-**	Significant positive cumulative effects are anticipated on Historic Environment as the TS policies aim to generally improve the transport network, whilst promoting use of sustainable transport and active travel, reducing use of private vehicles and pollution from transport. Improvements to the transport network could improve access to heritage assets, and provide opportunities to incorporate high quality design and green infrastructure into the public realm and enhance the setting of heritage assets through development of schemes that can reduce traffic and noise and enhance accessibility around heritage assets, as well as improve resilience of assets to the effects of climate change. This would be anticipated to have further positive cumulative effects. Construction works could however result in temporary adverse effects on access to, and the setting, quality and condition of, the historic environment. Excavation associated with construction of new infrastructure may impact non-designated and unknown heritage assets, which could be of high value. Areas such as the Norfolk Coast National Landscape are rich in archaeological and historical sites, including assets of internationally recognised value. Much of this may be as yet undiscovered and could be damaged during construction of transport infrastructure.

SEA Objective	Effect significance	Description of intra-plan cumulative effects
		If all construction were to be carried out simultaneously (unlikely worst-case scenario), there could be significant negative cumulative effects. However these impacts are anticipated to be accounted for during scheme design and timing of works, resulting in minor negative cumulative effects.
Water Environment	**+/-**	Positive cumulative effects are anticipated on Water Environment as the TS policies will support use of sustainable design, increasing green infrastructure and SuDS. This is expected to lead to positive effects on the water environments through improved drainage reducing discharge from roads and other permeable surfaces, therefore reducing surface water flooding. Operation of new transport infrastructure could lead to localised increased emissions, noise pollution, dust and other associated pollution could result in a reduction in water quality depending on location. An increase in impermeable surface from new transport infrastructure could lead to a reduction in flood resilience, though it is anticipated that this will be factored in and flood defences and mitigation will be included at the project level. Construction works could also result in temporary adverse effects on the water environment through noise, dust, and surface runoff entering waterbodies leading to a reduction in quality. If all construction were to be carried out simultaneously (unlikely worst-case scenario), there could be significant negative cumulative effects However these impacts are anticipated to be accounted for during scheme design and timing of works, resulting in minor negative cumulative effects.

SEA Objective	Effect significance	Description of intra-plan cumulative effects
Air Quality	**++/-**	Significant positive cumulative effects are anticipated on Air Quality as the TS policies aim to generally improve the transport network, whilst promoting use of sustainable transport and active travel, reducing use of private vehicles and subsequent air pollution from transport. Operation of new transport infrastructure could lead to localised increased emissions, noise pollution, dust and other associated pollution could result in a reduction in water quality depending on location. Construction works could also result in temporary adverse effects on air quality through increased noise, dust, and greenhouse gas emissions reducing air quality. Reductions in air quality, during construction or operation, that occur in or near an AQMA could lead to significant negative effects on this SEA Objective. However, potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. If all construction were to be carried out simultaneously (unlikely worst-case scenario), or if all new transport infrastructure were near sensitive receptors, there could be significant negative cumulative effects. However, these impacts are anticipated to be accounted for during scheme design and timing of works, resulting in minor negative cumulative effects.
Climate Change & Greenhouse Gases	**++/-**	Significant positive cumulative effects are anticipated on Climate Change & Greenhouse Gases as the TS policies are expected to support low carbon and energy efficient design, increase the resilience of transport infrastructure to the impacts of climate change, reduce levels of embodied carbon, and support net zero ambitions. The TS policies are expected

SEA Objective	Effect significance	Description of intra-plan cumulative effects
		to do this by encouraging and facilitating a modal shift towards a net zero transport network by reducing private vehicle use, provision of EV charging facilities, and promoting sustainable and active travel. New and upgraded infrastructure is anticipated to improve resilience to climate change by incorporating green infrastructure and SuDS, as well as using low carbon materials where possible. A negative cumulative effect has also been identified as there is potential for new infrastructure to result in an increase in impermeable surfaces, impacting drainage and flood resilience as well as contributing to the greenhouse effect. Although it is likely mitigation measures will be utilised, at the strategy level a residual minor negative effect is anticipated.
Noise	**+/-**	Minor positive cumulative effects are anticipated on Noise as the TS policies aim to generally improve the transport network, whilst promoting use of sustainable transport and active travel, reducing use of private vehicles and subsequent noise pollution from transport. Improvements to transport infrastructure, promotion of active travel and sustainable transport, and use of sustainable design amongst other measures will likely lead to reduced congestion and subsequent noise. There is potential for significant effects, dependent on the extent of a modal shift towards use EVs, public transport and active travel, however this is currently unknown and will require monitoring. Operation of new transport infrastructure could lead to localised increases in noise, and construction works could also result in temporary adverse effects on noise through increased traffic and use of machinery. Increases in noise, during construction or operation, that occur in or near sensitive receptors e.g. Noise Important Areas, could lead

SEA Objective	Effect significance	Description of intra-plan cumulative effects
		to significant negative effects on this SEA Objective. However, potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. If all construction were to be carried out simultaneously (unlikely worst-case scenario), or if all new transport infrastructure were near sensitive receptors, there could be significant negative cumulative effects. However, these impacts are anticipated to be accounted for during scheme design and timing of works, resulting in minor negative cumulative effects.
Material Assets	**++/--**	Significant positive cumulative effects are anticipated on Material Assets, as works to improve existing infrastructure and development of new infrastructure associated with the TS policies will provide opportunities to utilise sustainable materials, support reuse of existing materials, promote a circular economy, utilise brownfield land, protect and enhance land quality, and ensure that transport infrastructure is resilient to climate change. Due to the anticipated scale of works, this is expected to have a significant positive effect. Development of new infrastructure in support of the TS policies will produce waste and require land take, which could result in loss of best and most versatile land. Due to the anticipated scale of works, this is expected to have a significant negative cumulative effect.

The assessment of intra plan cumulative effects identified potential for significant positive cumulative effects against 10 of the 12 SEA Objectives; all Objectives other than the Water Environment, which was assessed as having a minor positive effect. Positive cumulative effects have been identified due to the delivery of a more reliable and sustainable transport network and improved active travel routes as part of a modal shift to a net zero transport network. Development associated with the TS policies brings opportunity to improve sustainability, and improve the setting of the public realm and surrounding environment.

Significant negative cumulative effects have been identified for Material Assets and Biodiversity & Natural Capital, due to the assumed scale of development and amount of resource required to support the TS policies, and potential for disturbance to wildlife during construction. For the remaining SEA Objectives, other than Community Safety, minor negative cumulative effects have been identified due to the potential for overlapping construction periods, and developments to be in close proximity to one another. However, it is assumed that in line with national and local planning policy any proposals would seek to avoid and minimise impacts, therefore, residual significant effects are unlikely.

4.3.2 Inter-plan Cumulative Effects

4.3.5. This section presents the consideration of how the Policies and Targets within the TS may interact with proposals in other plans, programmes and projects.

Table 4-3 identifies the types of plans, programmes and projects that could result in interactions and therefore cumulative effects with the TS.

Table 4-3 – Sources of Inter-plan Cumulative Effects

Summary of Plans
Regional and Sub-Regional
Transport East Transport Strategy 2023-2050 (2023) This Strategy is set out by the sub-national transport body for Norfolk, Suffolk, Essex, Southend-on-Sea and Thurrock. The Strategy aims to guide investment in the east until 2050, to overcome the transport challenges faced and deliver a fit for purpose, high quality, inclusive and sustainable transport network that can accommodate growth. The Vison of the Strategy is to achieve '*A thriving Eastern region with safe, efficient and net zero transport networks advancing a future of inclusive and sustainable growth for decades to come'*. The Strategic Priorities set out to deliver the vision are as follows: ■ Decarbonisation to net-zero ■ Connecting growing towns and cities ■ Energising coastal and rural communities ■ Unlocking international gateways
North Norfolk Shoreline Management Plan The SMP aims to identify the best ways to manage flood and erosion risk to people and the developed, historic and natural environment and to identify opportunities where shoreline management can work with others to make improvements.

Summary of Plans

Wash Environment Agency (2022) Anglian river basin district (RBD) river basin management plan

Describes the pressures facing the water environment and the actions that will address them, particularly in relation to water quality. The environmental objectives covered by the plan are:

- preventing deterioration of the status of surface waters and groundwater
- achieving objectives and standards for protected areas
- aiming to achieve good status for all water bodies
- reversing any significant and sustained upward trends in pollutant concentrations in groundwater
- cessation of discharges, emissions and losses of priority hazardous substances into surface waters
- progressively reducing the pollution of groundwater and preventing or limiting the entry of pollutants

Norfolk Coast Partnership (2022) Norfolk Coast Areas of Outstanding Natural Beauty (AONB) Management Plan 2019-2024 (Revised 2022)

The relevant local authorities (Norfolk County Council, North Norfolk District Council, Borough Council of King's Lynn and West Norfolk, Great Yarmouth Borough Council, Broad Authority) have agreed that the Norfolk Coast Partnership undertake the AONB Management Plan.

The plan includes a 20-year vision for the area. The vision covers what needs protecting - and what needs changing. The aim is not for everything to remain the same and it is important to recognise the tension between the character of the area, as seen today, and change and adaptation required to meet the future. There are five themes within the plan, covering aspects of management of the area:

- Landscape, biodiversity and geodiversity;
- Built and historic environment;
- Farming, forestry and fishing;
- Sustainable communities; and
- Access and recreation.

Norfolk Council Plans

Summary of Plans
Norfolk County Council, Local Transport Plan 4 – Implementation Plan The Implementation Plan is firmly focussed on achieving the strategic ambitions of our adopted LTP4 strategy. The plan includes 7 objectives to achieve the ambitions of the LTP4: ■ Embracing the future ■ Delivering a sustainable Norfolk ■ Enhancing Connectivity ■ Enhancing Norfolk's quality of life ■ Increasing accessibility ■ Improving Transport Safety 'Objective 6: Improving Transport Safety' includes the target to work in partnership to achieve casualty reductions on the transport network using the Safe Systems approach.
Norfolk County Council, Better Together for Norfolk, Norfolk County Council Strategy 2021-25 The strategy includes the following vision: *'We want Norfolk to be the place where everyone can start life well, live well and age well, and where no one is left behind.* *We want our economy to be vibrant, entrepreneurial and sustainable, supported by the right jobs, skills, training and infrastructure.* *We want our communities to feel safe, healthy, empowered and connected, their individual distinctiveness respected and preserved'* The strategy also includes better opportunities for children and young people, as well as families. Additionally, it includes community priorities to improve communities and opportunities.
Norfolk County Council, Environmental Policy (2019) This policy includes a number of goals relating to biodiversity: ■ Encouraging a thriving plant and wildlife community ■ Enhancing beauty, heritage and engagement with the natural environment ■ Enhancing biosecurity

Summary of Plans

Norfolk County Council, Local Nature Recovery Strategy

The strategy will provide a blueprint for how Norfolk's local communities, landowners, land managers, local authorities, private companies and government bodies can work together to broaden protection for nature in the planning system, and restore and recover it on the ground. This will include:

- Creating Ecological Networks: Establishing a 'Nature Recovery Network' to connect isolated habitats, creating corridors that promote species migration, genetic exchange, and adaptation to climate change. This approach recognises that a connected landscape is more resilient and beneficial for both wildlife and people.
- Enhancing Biodiversity: The protection and restoration of local wildlife, creating and improving habitats for native species.
- Green Space Access and Connection: Improving access to, and the quality of, green spaces and natural areas for local residents and tourists. This is both for the physical and mental health benefits they provide and to foster a deeper connection with, and appreciation for, the natural world.
- Using Land Sustainably: Promoting land use practices that are sustainable and nature-friendly. Including encouraging everything from sustainable agriculture and forestry practices to nature-based solutions in urban planning and development.
- Engaging With Communities and Partners: Involving local communities, landowners, land managers, local authorities, private companies, business, the third sector, and government bodies in the nature recovery process. This will ensure strategies are locally grounded, widely supported, and that they offer social, economic and environmental benefits.
- Climate Change Mitigation and Adaptation: Using natural solutions to combat climate change, such as increasing tree cover to remove carbon from the atmosphere, restoring wetlands and peatlands, and changing the way farmland is managed.
- Opportunities for Education: Providing opportunities for environmental education and citizen science. This will help to increase community awareness and understanding of biodiversity issues and the importance of healthy ecosystems.

Summary of Plans

Norfolk County Council (2015) Flood Risk Management Strategy

The Local Flood Risk Management Strategy aims to inform all groups and individuals who may have an interest in, or an ability to influence or manage flood risk, including householders, businesses, landowners, developers and risk authorities.

The Local Flood Risk Management Strategy seeks to:

- explain what flooding is, its dangers, and how flood risk can be managed;
- inform about the extent and characteristics of flood risk in Norfolk and signpost other sources of information about flood risk in the county;
- clarify which Risk Management Authorities are responsible for which flood risk management activities;
- indicate the objectives of the strategy and make commitments in respect of the actions that will be taken by the Lead Local Flood Authority and other Risk Management Authorities;
- establish a framework of policies that will ensure that riparian owners, businesses, developers and authorities apply a consistent and strategic approach to flood management;
- outline a series of proactive measures which will increase understanding of local flood risk and identify further measures to manage those risk;
- clarify how flood risk management is to be funded in Norfolk
- indicate how flood risk management activities will be monitored and how the strategy will be reviewed

The existing policies in the Local Flood Risk Management Strategy was reviewed in 2021 against new and emerging national strategies and policies. This has resulted in 3 new policies and minor updates to our existing policies.

Norfolk County Council, Climate Strategy (2023)

This Strategy outlines the Council's commitment to tackline climate change and includes 7 focus areas for the County moving forward:

- Our estate
- Indirect emissions
- County-wide emissions
- Promoting a green economy
- Adapting to climate change
- Space for nature to recover and grow
- Engage and collaborate

Summary of Plans

Norfolk County Council (2010) Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2010-2026

In planning for mineral extraction and waste management facilities to meet Norfolk's future needs in the most sustainable way, the Core Strategy will:

- Help to reduce emissions of greenhouse gases and thus mitigate climate change and ensure that Norfolk is seen as a leader in this area;
- Protect Norfolk's special and distinctive natural and cultural heritage, especially in areas such as the Broads, the North Norfolk Coast and the Brecks, and help to develop the county's ecological network;
- Minimise adverse impacts on the transport system and promote opportunities for more sustainable transport;
- Maintain the amenity and well being of people living in close proximity to mineral extraction and associated development and waste management facilities through effective mitigation measures and provide long term benefits through restoration; and
- Safeguard important and finite mineral resources from inappropriate development, particularly the nationally-significant deposits of silica sand in the county.

The Strategy also outlines a number of aims and objectives, including:

- To meet minerals and waste requirements in a sustainable manner and help to deliver sustainable growth;
- To reduce the impact of mineral extraction and associated development and waste management facilities on the transport system;
- To protect and enhance the natural, historic and built environment in relation to mineral extraction and associated development and waste management facilities;
- To mitigate climate change;
- To promote social inclusion and human health and wellbeing.

Norfolk County Council, Broads National Park, National Trails – Norfolk Access Improvement Plan (NAIP) 2019 - 2029

This Plan incorporates Norfolk's Rights of Way Improvement Plan, and sets out priorities for the next 10 years, for improving the rural and urban access network to make it easier to enjoy Norfolk's coast and countryside in a sustainable manner. The key strategic objectives of the Plan are to:

- Manage the countryside access network so that it is better able to meet the varying demands placed upon it;
- Increase public, economic and environmental benefit;
- Actively seek the involvement of communities;
- Take a collaborative and pragmatic approach to responsibilities and resources; and
- Increase investment in the countryside access network

Summary of Plans

Norfolk County Council Local Growth Plan – Norfolk Economic Strategy 2024-2029

The Strategy outlines the council's mission to improve productivity, drive growth and improve standards of living, aiming to increase GVA and shape economic growth for the benefit of people. The Strategy outlines the Vision for Norfolk to be:

- A more inclusive, higher productivity economy
- A Centre of excellence for research and innovation
- A UK leader in offshore clean energy production and climate change adaptation
- A major cluster for the UK's agri-food and agri-tech sector, with a flourishing supply chain of local firms and farmers
- A European leader in financial services
- An international and domestic tourism destination for the UK with growing value and expanding offer
- A major growth location and extension of the London to Cambridge growth corridor
- An economy that prioritises growth alongside health and wellbeing

Norfolk Rail Prospectus

The Norfolk County Council Norfolk Rail Prospectus 2025 sets out the ambition for a new Great Yarmouth rail station and improved surrounding routes and stations.

Norfolk Strategic Infrastructure Delivery Plan 2024/25

The Norfolk strategic infrastructure delivery plan (NSIDP) pulls together information on the key infrastructure needed to deliver economic growth in Norfolk. It is a working document that will be reviewed on an annual basis as information becomes available and projects progress through to delivery.

Local Policies

Great Yarmouth Local Plan

Planning authorities within England are required to prepare a Local Plan to guide decision-making on future development proposals. Plans seek to identify the needs and opportunities of the area; identifying the scale and location of growth to be delivered across their respective administrative area.

The Great Yarmouth Local Plan is made up of two parts, the Core Strategy (Part 1) and the Local Plan Part 2, with Part 2 amending some policies within the Core Strategy. The Plan covers the period 2013-2030 and sets out the level of growth in the GY Local Plan Area which needs to be planned for, where growth should be located and how it should be delivered.

Summary of Plans

Great Yarmouth Local Cycling and Walking Infrastructure Plan

Local Cycling and Walking Infrastructure Plans are 10-year, focused plans for developing a cycling and walking network within the local area. The purpose of the plan is to identify and prioritise cycling and walking network improvements to be implemented in the short, medium and long term.

Great Yarmouth Borough Council, The Plan 2025-2030

The Plan sets out to secure the best possible future for the residents of GY, focussing on people, places and communities. The Vision of the Plan is '*to have a vibrant economy, capitalising on the investment in clean energy alongside further investment in our place and our visitor economy; creating a quality environment for all and improving the life chances of all those living and working in our borough.'*

GY Borough Council aim to achieve this by focussing on four strategic priority areas:

- A strong and growing economy
- Improved housing and strong communities
- High-quality and sustainable environment
- An efficient and effective council

Great Yarmouth Borough Council, Housing Strategy 2024-29

The Housing Strategy sets a local authority's vision and priorities for its district for all tenures and types of housing.

The Vision of the Housing Strategy is:

'To enable a thriving housing market in which the residents of the Great Yarmouth Borough have access to a suitable home, which is healthy, safe, efficient and affordable'

The vision will be delivered trough three objectives:

- Meeting the housing needs of current and future residents
- Quality housing for all
- Access to suitable and sustainable housing

Neighbourhood Plans

Summary of Plans

Neighbourhood plans set out planning policies for a specific area and are written by the local communities that they represent, formalising the communities wishes for development of their neighbourhood in the planning system. They are used to decide whether to approve planning applications. Neighbourhood Plans must address development and use of land and conform with Local Plans.

Adopted Neighbourhood Plans within Great Yarmouth are:

- Belton with Browston, Burgh Castle and Fritton with St Olaves
- Filby
- Gleggburgh
- Hemsby
- Rollesby
- Winterton-on-Sea

The following neighbourhood areas currently have plans under preparation:

- Hopton-on-Sea
- Ormesby St Margaret with Scratby

Water Resource Management Plans (WRMPs)

WRMPs are statutory documents that are required to be produced by water companies at least once every five years. WRMPs set out how a company will ensure that a secure supply of water is maintained for businesses and homes, while protecting the natural environment. Anglian Water's WRMP is most likely to interact with the Great Yarmouth TS.

Nationally Significant Infrastructure Projects (NSIPs)

At the time of writing, 54 nationally significant infrastructure projects in the Eastern region were at various stages; 17 at pre-application, one at examination and 36 decided. The projects, their respective developers, and their status at the time of writing are outlined below:

- A12 Chelmsford to A120 Widening Scheme – National Highways – Decided
- A14 Cambridge to Huntingdon Improvement Scheme – Highways England – Decided
- A428 Black Cat to Caxton Gibbet Road Improvement scheme – Highways England – Decided
- A47 – A11 Thickthorn Junction – Highways England – Decided
- A47 Blofield to North Burlingham – Highways England – Decided
- A47 North Tuddenham to Easton – Highways England – Decided
- A47 Wansford to Sutton – Highways England – Decided
- Bramford to Twinstead – National Grid Electricity Transmission – Decided
- Cambridge Waste Water Treatment Plant Relocation – Anglian Water Services Limited – Decided
- East Anglia ONE North Offshore Windfarm – East Anglia ONE North Limited – Decided
- East Anglia ONE Offshore Windfarm – East Anglia One Ltd – Decided
- East Anglia THREE Offshore Wind Farm – East Anglia THREE Limited – Decided
- East Anglia TWO Offshore Windfarm – East Anglia TWO Limited – Decided
- East Park Energy – BSSL Cambsbed 1 Limited – Pre-application
- East Pye Solar – East Pye Solar Ltd – Pre-application
- East West Rail – Bedford to Cambridge and Western improvements – East West Railway Company Limited – Pre-application
- Eastern Green Link 3 and Eastern Green Link 4 – National Grid Electricity Transmission – Pre-application
- Ecopower Suffolk Solar – EcoPower Suffolk Limited – Pre-application
- Fens Reservoir – Anglian Water and Cambridge Water – Pre-application
- Five Estuaries Offshore Wind Farm – Five Estuaries Wind Farm Ltd – Decision
- Galloper Offshore Wind Farm – Galloper Wind Farm Ltd – Decided
- Great Yarmouth Third River Crossing – Norfolk County Council – Decided
- Hedgehog Grove Solar Farm – Hedgehog Grove Solar Farm Ltd – Pre-application
- High Grove Solar – RWE Renewables UK Solar and Storage Ltd – Pre-application
- Hornsea Project Three Offshore Wind Farm – Orsted Hornsea Project Three (UK) Ltd – Decided
- Ipswich Rail Chord – Network Rail – Decided
- Kings Lynn B Connection Project – National Grid – Decided
- Kingsway Solar Farm – Kingsway Solar Farm Limited – Pre-application
- Lake Lothing Third Crossing – Suffolk County Council – Decided
- LionLink Interconnector – National Grid Interconnector Holdings Limited – Pre-application
- London Luton Airport Expansion – London Luton Airport Limited – Decided
- Longfield Solar Farm – Longfield Solar Energy Farm Limited – Decided
- M1 Junction 10a Grade Separation – Luton – Luton Borough Council – Decided
- Medworth Energy from Waste Combined Heat and Power Facility – Medworth CHP Limited Decided
- Meridian Solar Farm – Meridian Solar Farm Ltd – Pre-application
- Millbrook Power – Millbrook Power Limited – Decided

Summary of Plans

- Norfolk Boreas – Norfolk Boreas Limited – Decided
- Norfolk Vanguard – Norfolk Vanguard Limited – Decided
- North Falls Offshore Wind Farm – North Falls Offshore Wind Farm Ltd – Examination
- Norwich Northern Distributor Road (NDR) – Norfolk County Council – Decided
- Norwich to Tilbury – National Grid Electricity Transmission (NGET) – Pre-application
- Palm Paper 3 CCGT Power station Kings Lynn – Palm Paper Ltd – Decided
- Progress Power Station – Progress Power Limited – Decided
- Rivenhall IWMF and Energy Centre – Indaver Rivenhall Ltd – Decided
- Rookery South Energy from Waste Generating Station – Covanta Rookery South Limited – Decided
- Rosefield Solar Farm – Rosefield Energy Farm Limited – Pre-application
- Sheringham and Dudgeon Extension Projects – Equinor – Decided
- Sunnica Energy Farm – Sunnica Ltd – Decided
- The Droves Solar Farm – The Droves Solar Farm Limited – Pre-application
- The Grand Union Canal Transfer – Affinity Water and Severn Trent Water – Pre-application
- The Sizewell C Project – NNB Generation Company (SZC) Limited – Decided
- Walpole Flexible Generation Project – Walpole Flexible Generation Limited – Pre-application
- White Elm Solar Farm – ELMYA RPC UK Grange Road Limited – Pre-application
- Woodside Link Houghton Regis Bedfordshire – Central Bedfordshire Council - Decided

Table 4-4 outlines the likely significant effects of the identified plans, programmes and projects, in-combination with the TS, that have been identified against each of the SEA objectives.

Table 4-4 – Assessment of Inter-plan Cumulative Effects

SEA Objective	Effect significance	Description of potential cumulative effects
Population & Equalities	**++/-**	The updated TS policies have the potential to interact with other plans, including the Transport East Transport Strategy, NCC's Local Transport Plan 4 (LTP4), the NCC Strategy, Local Nature Recovery Strategy (LNRS), Great Yarmouth Local Plan, the LCWIP, GY BC's The Plan, GY BC's Housing strategy, and any plans and policies leading to construction work and/or development of infrastructure, resulting in cumulative effects on Population & Equalities. The visions, aims and objectives of the TS policies, along with the regional transport strategies and LTP4 are likely to lead to significant positive cumulative effects, as improvements to the transport network at a regional and subregional scale will improve inclusivity of and access to services, facilities and transport for all, as well as supporting diversity and population growth. This is anticipated to positive impact both rural and urban areas. The NCC Strategy and Local Nature Recovery Strategy also highlight objectives focussed on improving connectivity, and the LCWIP aims to encourage a modal shift to active travel. The GY Local Plan, The Plan and Housing Strategy include objectives to accommodate a growing population and meet the housing needs of future populations. The Local Plan also aims to ensure that all developments are supported by appropriate infrastructure and are accessible. As a consequence, these strategies also provide opportunity for positive cumulative effects with the TS policies. In line with national and local planning policy it is assumed that there is suitable mitigation available to address any negative interactions between the TS policies and other plans and strategies, including the phasing of developments to ensure that no residual significant negative effects arise during construction.

SEA Objective	Effect significance	Description of potential cumulative effects
Human Health	**++/-**	The updated TS policies have the potential to interact with other plans, including the Transport East Transport Strategy, NCC's LTP4, the NCC Strategy, the NCC LNRS, the NCC Climate Strategy, the NCC Minerals and Waste Development Management Policies Development Plan Document, the Norfolk Access Improvement Plan (NAIP), the LCWIP, the GY Local Plan, The Plan and any plans and policies leading to construction work and/or development of infrastructure, resulting in cumulative effects on Human Health. The aforementioned plans and strategies contain a number of objectives and aims that could enhance access to sustainable transport modes and active travel routes, as well as improved transport infrastructure, that in combination with the TS policies will promote healthier lifestyles, increase walking and cycling, and help to reduce social isolation through improved connectivity, resulting in significant positive cumulative effects. Improved connectivity will improve access to green space, having positive effects on physical and mental health for residents and tourists. The Local Plan specifically includes a strategic objective aimed at reducing social exclusion and deprivation, and The Plan aims to improve the health and wellbeing of GY's residents by addressing physical and mental wellbeing and reducing health inequality. Overall, there is potential for significant positive cumulative effects on Human Health. There are also a number of aims and objectives relating to reducing emissions, and moving towards a net zero transport network, which will also have positive cumulative effects on Human Health across the region through reductions in noise and air pollution. There is potential for negative interactions between the TS policies and other plans, especially those involving new or improved infrastructure, to result in travel disruption and increased air and noise pollution, which may have a negative effect on human health. In line with national and local planning policy it is assumed that there is suitable mitigation available to address any negative interactions between the TS and

SEA Objective	Effect significance	Description of potential cumulative effects
		other plans, including the phasing of developments to ensure that no residual significant negative effects arise during construction.
Economy & Employment	**++/-/?**	The updated TS policies have the potential to interact with other plans, including the Transport East Transport Strategy, NCC's LTP4, the NCC Strategy, NCC's Climate Strategy, the NAIP, the GY Local Plan, the LCWIP, The Plan, NSIPs, Neighbourhood Plans, and any plans and policies leading to construction work and/or development of infrastructure resulting in cumulative effects on Economy & Employment. These strategies, plans and projects support improvements to the transport network at a local and regional scale, which will increase accessibility and support economic growth, as well as access to jobs and training, employment centres, and tourism. This is anticipated to have significant positive cumulative effects alongside the TS policies. The policies will also support the regeneration of town and district centres through improvements to access and to the public realm. There is potential for temporary negative cumulative effects during the construction phase, if multiple developments take place in close proximity to each other, with overlapping construction periods, temporarily restricting access to services and causing increased congestion. Ultimately, the nature and significance of effects will be dependent on the precise location, scale and timing of developments. Over the longer term, improvements to local infrastructure should have a positive impact on the economy and employment as access to sustainable transport improves.
Community Safety	**++/-**	The updated TS policies have the potential to interact with other plans, including the Transport East Transport Strategy, NCC's LTP4, the NCC Strategy, and any plans and policies leading to construction work and/or development of infrastructure, to provide significant positive cumulative effects on Community Safety. Thes policies and strategies, in combination with the TS policies, will lead to improvements to transport infrastructure e.g. road crossings, better lighting, signage and markings and a move towards sustainable

SEA Objective	Effect significance	Description of potential cumulative effects
		transport and active travel will likely reduce the number of private vehicles in use and work to reduce both collisions and the number of KSI on roads in the area, which will encourage walking and cycling as feelings of safety increase. Better public transport can increase feeling of safety, particularly after dark if public transport services and better connected and more reliable. The LTP4 will utilise the Safe Systems Approach, like the TS, and The Local Plan contains objectives to design out crime and generally improve community safety. Overall, this will result in positive cumulative effects on Community Safety. Short term, temporary, negative cumulative effects on safety could be seen during the construction period if multiple developments take place in close proximity to each other, with overlapping construction periods. Increased construction traffic and congestion in a concentrated area could increase the risk of accidents on the road network.
Biodiversity & Natural Capital	**+/--**	The updated TS policies have the potential to interact with other plans, including the NCC's Environmental Policy, the LNRS, NCC LTP, the GY Local Plan, water management plans, and any plans and policies leading to construction work and/or development of infrastructure, to provide significant positive cumulative effects on Biodiversity & Natural Capital. These policies and strategies contain aims and objectives to encourage plants and wildlife to thrive and enhance biosecurity, as well as to enhance biodiversity, protect and restore wildlife, and create and improve habitats. Overall, there is potential to deliver positive effects on biodiversity across the NCC area. The TS policies and other plans have the potential to interact, resulting in cumulative effects on Biodiversity & Natural Capital. Some of these plans may involve major construction works and land take, that could impact sensitive receptors and outweigh potential benefits from the TS policies. If construction works are in close proximity, at the same time and with impact pathways to the same receptors, there is potential for significant negative cumulative effects. However, national and local planning policies, including NCC's Environmental Policy and LNRS seek to protect and enhance biodiversity, as a result, it is considered that

SEA Objective	Effect significance	Description of potential cumulative effects
		significant residual, negative, cumulative effects are unlikely. There are likely to be opportunities to deliver a net gain for biodiversity; however, this is uncertain at this stage. Ultimately, the nature and significance of effects will be dependent on the precise location, scale and design of development and implementation of mitigation at the project level. Overall, a significant negative effect has been identified due to the potential for negative impacts without appropriate mitigation.
Landscape & Townscape	**+/-**	The updated TS policies and other plans have the potential to interact, resulting in cumulative effects on Landscape & Townscape. There is potential for positive cumulative effects between the TS policies and other plans, including the Transport East Transport Strategy, NCC's LTP4, the NCC LNRS, and any plans and policies leading to construction work and/or development of infrastructure. Positive cumulative effects could arise as improvements to the transport network could reduce the number of vehicles on the roads and also improve and encourage sustainable access to green spaces, townscapes and designated and non-designated landscapes. The LNRS includes an objective to improve access to, and the quality of, green spaces and natural areas for local residents and tourists, which is likely to result in positive cumulative effects alongside the TS. There is potential for negative cumulative effects on Landscape & Townscape, if multiple developments were to take place in close proximity. However, national and local planning policies require proposals for development to protect and enhance the landscape, and townscape. As a result, it is considered that significant negative cumulative effects are unlikely. Ultimately, the nature and significance of effects will be dependent on the precise location, scale and design of development and implementation of mitigation at the project level.
Historic Environment	**+/-**	The updated TS policies and other plans have the potential to interact, resulting in cumulative effects on Historic Environment. There is potential for positive cumulative effects between the TS policies and other plans, including the Transport East Transport Strategy, NCC's LTP4, NCC's Core Strategy and Minerals and

SEA Objective	Effect significance	Description of potential cumulative effects
		Waste Development Management Policies Development Plan, the NCC Environmental Policy, the North Norfolk Shoreline Management Plan, the Wash East Coastal Management Strategy, and any plans and policies leading to construction work and/or development of infrastructure. Improvements to the transport network and development of new infrastructure will improve access to the historic environment, and provide opportunity to improve the quality and condition of the historic environment, whilst respecting, maintaining and strengthening local character and distinctiveness. The aforementioned plans also contain objectives and aims relating to management of the historic environment, reducing flood risk to the historic environment, to protect and enhance the built and historic environment and to protect and enhance Norfolk's heritage, bringing potential for minor positive effects on the historic environment. The updated TS policies and other plans have the potential to interact, resulting in negative cumulative effects on the historic environment. Particularly if construction periods overlap and are within the setting of the same heritage asset (designated or non-designated). Construction could also result in loss of buried and unknown historical and archaeological artefacts. In line with national and local planning policy any proposal would be required to conserve and enhance the historic environment, including designated and non-designated heritage assets. As a result, it is considered that significant negative cumulative effects are unlikely.
Water Environment	**+/--**	The updated TS policies and other plans have the potential to interact, resulting in cumulative effects on Water Environment. There is potential for positive cumulative effects between the TS policies and other plans, including the Transport East Transport Strategy, NCC's LTP4, NSIPs, Anglian river basin district (RBD) river basin management plan, the LFRMS, Anglian Water's WRMP, the Wash East Coastal Management Strategy, the North Norfolk Shoreline Management Plan, and any plans and policies leading to construction work and/or development of infrastructure.

SEA Objective	Effect significance	Description of potential cumulative effects
		There is potential for positive cumulative effects with water related plans, especially the LFRMS, coastal Management Strategy and Shoreline Management Plan through appropriate management of the water environment and a subsequent reduction in coastal and surface water flood risk. Cumulative improvements to the transport network will result in reductions in traffic, which may lead to reductions in pollution load in runoff over the long term and further positive cumulative effects. There is potential for negative cumulative effects on Water Environment if multiple developments were to take place in close proximity or hydrologically connected to one another. Increased construction activity associated with multiple sites could lead to increased risk of pollution and negative effects on water quality through waste, dust, and runoff from construction sites. This could negatively impact both surface water and groundwater. As some plans will require major construction works, there is potential for significant negative effects. Although national and local planning policies require that any new development will seek to protect and enhance watercourses and utilise Sustainable Drainage Systems (SuDS) where appropriate, a significant negative effect has been identified due to the potential for negative impacts without appropriate mitigation.
Air Quality	**+/-**	The updated TS policies and other plans have the potential to interact, resulting in cumulative effects on Water Environment. There is potential for positive cumulative effects between the TS policies and other plans, including the Transport East Transport Strategy, NCC's LTP4, NSIPs, the NCC Climate Strategy, and any plans and policies leading to construction work and/or development of infrastructure. Improvements to the transport network could lead to increased utilisation of public transport and active travel routes, reducing reliance on, and use of, private vehicles for journeys. This is line with other plans including the Transport Strategies for both the East and for Norfolk and the LTP4 that seek to deliver sustainable development and support a modal shift to sustainable transport, as well as reducing transport emissions and

SEA Objective	Effect significance	Description of potential cumulative effects
		associated air pollution. This could result in a significant positive cumulative effect on air quality through a reduction in traffic emissions during operation. If the construction periods of multiple developments overlap and are in close proximity to one another, there is potential for temporary negative cumulative effects due to increased dust and particulate matter as well as traffic, which could negatively impact air quality. The appropriate phasing of development would help to avoid the potential for cumulative negative effects during the construction phase. In line with national and local planning policies it can also be assumed that the negative impacts as a result of construction would be mitigated to ensure that there are no residual significant effects.
Climate Change & Greenhouse Gases	**++/-**	The updated TS policies and other plans have the potential to interact, resulting in cumulative effects on Climate Change & Greenhouse Gases. There is potential for positive cumulative effects between the TS policies and other plans, including the Transport East Transport Strategy, NCC's LTP4, the LNRS, the Climate Strategy, and any plans and policies leading to construction work and/or development of infrastructure. Improvements to the transport network outlined in the aforementioned plans and policies will bring additional opportunities to incorporate green infrastructure and sustainable, low carbon design, and reduce embodied carbon, reducing flood risk and increasing the resilience of transport infrastructure. The plans and policies also support a modal shift towards more sustainable and active travel, reducing reliance on private cars and reducing emissions, and outline methods for reducing operational transport emissions into the future. Due to this, there is potential for significant positive cumulative effects on Climate Change & Greenhouse Gases. There is potential for temporary negative cumulative effects during the construction phase, if multiple developments take place in close proximity to each other, with overlapping construction periods. This could result in increased greenhouse gas emissions from increased traffic. However, in line with national and local

SEA Objective	Effect significance	Description of potential cumulative effects
		planning policy it is assumed that any proposals will be required to provide appropriate mitigation to ensure that construction related activities do not result in a residual significant effect.
Noise	**+/-**	The updated TS policies have the potential to interact with other plans, including the Transport East Transport Strategy, the LTP4, and any plans and policies leading to construction work and/or development of infrastructure. The plans and policies, in combination with the TS policies, will aim to support a modal shift towards sustainable transport and active travel rather than reliance on private cars, through improvements to the transport network and promotion of other modes of travel. This is likely to lead to positive cumulative effects on Noise, through a reduction in traffic related noise pollution. There is potential for temporary negative cumulative effects on Noise during the construction phase, if multiple developments take place in close proximity to each other, with overlapping construction periods. This could result in an increased amount of noise pollution from construction activities as well as increased traffic noise. In line with national and local planning policies it is assumed that any proposals for development would seek to minimise impacts of noise pollution and that residual significant effects would therefore not occur.
Material Assets	**+/--**	The updated TS policies have the potential to interact with other plans, including the Transport East Transport Strategy, the LTP4, NSIPs, and any plans and policies leading to construction work and/or development of infrastructure. There is potential for positive cumulative effects of the TS policies and other plans through improvement of the transport network. These plans could utilise recycled and recyclable materials, contributing to a circular economy and helping to meet net zero targets. It is assumed that the options will all seek the efficient use of land, utilising brownfield land and minimising loss of agricultural land where possible and appropriate, in line

SEA Objective	Effect significance	Description of potential cumulative effects
		with national planning policies. Improvements to transport infrastructure and the built environment will also result in positive cumulative effects on Material Assets, through improving the resilience of critical infrastructure to Climate Change. In the short-term, the delivery of development set out in the TS policies and other plans will require resources, including materials, during construction. In line with national and local planning it is assumed that any proposals would seek to encourage the efficient and appropriate use of resources, including the use of sustainable materials, and reuse of existing materials, in support of a circular economy, where appropriate. Due to the scale of development and likely amount of resource required, significant negative cumulative effects have been identified.

The assessment of inter plan cumulative effects identified potential for significant positive cumulative effects against five of the 12 SEA Objectives; Population & Equalities, Human Health, Economy & Employment, Community Safety, and Climate Change & Greenhouse Gases. Positive cumulative effects have been identified due to the delivery of a more reliable and sustainable transport network and improved active travel routes as part of a modal shift to a net zero transport network. Development associated with the TS policies and other plans and strategies brings opportunity to improve sustainability, and improve the setting of the public realm and surrounding environment. For the remaining seven SEA Objectives, minor positive cumulate effects have been identified.

Significant negative cumulative effects have been identified for Biodiversity & Natural Capital, the Water Environment, and Material Assets. These plans may involve major infrastructure works and land take, that could result in a significant amount of construction, disturbance to biodiversity and wildlife, and potential pollution of the water environment. Significant effects are due to the assumed scale of development and amount of resource required to support the TS policies, and development associated with other plans and strategies.

For the remaining SEA Objectives, minor negative cumulative effects have been identified due to the potential for overlapping construction periods, and developments to be in close proximity to one another. However, it is assumed that in line with national and local planning policy any proposals would seek to avoid and minimise impacts, therefore, residual significant effects are unlikely.

5 Assessment of Alternatives

5.1 Introduction

The SEA Regulations require an assessment of the plan, and its reasonable alternatives, taking into account the objectives and the geographical scope of the plan. The assessment of the alternatives does not need to take into account all possible alternatives, only those that are realistic.

5.2 Identifying Alternatives

As stated above, for any alternatives to be reasonable, they need to meet the objectives of the plan, which are set out in **Section 2**. Individual interventions/ measures cannot be considered a reasonable alternative in and of themselves, as they would not meet the objectives for the plan as a whole.

Reasonable alternatives have been provided at the Policy level, outlining alternative pathways to meet the objectives of the TS. **Table 5-1** provides a summary of the reasonable alternative options identified for the TS.

Table 5-1 – Proposed Alternatives for the TS

Policy	Proposed Alternative	Reasonable/Unreasonable
1	▪ To not work in partnership with other councils and instead act in isolation ▪ To do nothing and accept what comes as part of the development process with the understanding that it may not fully meet the LTP objectives or objectives of overarching strategies	▪ Unreasonable ▪ Reasonable
2	▪ To not actively seek to improve strategic connections ▪ To do nothing and continue with a business as usual approach, with no purposeful improvements to strategic connections	▪ Unreasonable ▪ Reasonable
3	▪ To focus only on public transport/active travel ▪ To focus only on private vehicles	▪ Reasonable ▪ Reasonable
4	▪ To do nothing and continue with a business as usual approach, with no involvement from NCC in bus services	▪ Reasonable

Policy	Proposed Alternative	Reasonable/Unreasonable
5	▪ To do nothing and continue with a business as usual approach, with no involvement from NCC in rail services	▪ Reasonable
6	▪ To do nothing and continue with a business as usual approach for active travel	▪ Unreasonable
7	▪ To take a business as usual approach with no policy specifically for Great Yarmouth, responding only when damage has occurred due to climate change and severe weather events	▪ Reasonable
8	▪ To do nothing and continue with a business as usual approach whereby emissions are likely to be reduced by technological advances and the market ▪ To not work in partnership with other councils and instead act in isolation	▪ Reasonable ▪ Unreasonable
9	▪ To do nothing and only react to new data or accidents	▪ Unreasonable
10	▪ To continue with a business as usual approach by fulfilling the statutory role to not damage structures and not actively seek to enhance culture, heritage or tourism in Great Yarmouth	▪ Reasonable

Alternatives considered unreasonable were screened out at this point, and those considered reasonable were taken forward for assessment through the SEA process, alongside the TS Policies.

5.3 Assessment of Alternatives

Table 5-2 summarises the findings from the assessment of the reasonable alternatives. The full assessment can be found in **Appendix D**.

Table 5-2 – Assessment of Reasonable Alternatives summary

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 1: Supporting growth and new development	+/-	+/-/?	-	+	+/-	+/-	-	+/-	-	-	+/-	++/--/?
Policy 2: Strategic connections	+	0	+	0	0	0	0	0	0	0	0	0
Policy 3: Parking	+/-	+/-	+/-	+/-	+/--	+/-	+/-	+/-	+/-	+/--	+/-	+/--/?
Policy 4: Bus services	+	0	+	+	+	+/-	+/-	+	+/-	+/-	+/-	0
Policy 5: Rail	+	-	-	0	-	+/-	+/-	+/-	-/?	+	-	+

SEA Objective / Policy	Population & Equalities	Human Health	Economy & Employment	Community Safety	Biodiversity & Natural Capital	Landscape & Townscape	Historic Environment	Water Environment	Air Quality	Climate Change & Greenhouse Gases	Noise	Material Assets
Policy 6: Active travel	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Policy 7: Climate change resilience	+	+	0	0	0	0	0	0	+/-	+	+/-	0
Policy 8: Improved air quality	+	+	0	0	+	+	+	+	+	+	0	0
Policy 9: Road traffic harm reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Policy 10: Supporting culture, heritage and tourism	0	+	0	0	+/-	+/-	+/-	0	0	0	0	0

Policy 1: Supporting growth and new development

The reasonable alternative for Policy 1 is to do nothing and accept what comes as part of the development process with the understanding that it may not fully meet the LTP objectives or objectives of overarching strategies. This differs from Policy 1 which seeks for NCC to work in partnership to ensure transport measure, including sustainable transport measures, support new housing developments and employment sites.

Assessment of the reasonable alternative identified a significant positive effect against the Material Assets Objective due to the potential of using sustainable materials during construction, improving resource efficiency and supporting a circular economy. Supporting provision of employment sites and better connectivity to and between these sites will help to support a green economy. There is also an opportunity to redevelop brownfield land and reduce resource use and reduce reliance on private cars, reducing resource use.

A significant negative effect was also identified against the Material Assets SEA Objective, due to the potential impacts of new infrastructure on air quality and the potential to lose the region's best and most versatile land.

A combination of minor positive and negative effects were identified across the remaining SEA Objectives, some with uncertain effects. Uncertainties are primarily around the unknown location and magnitude of any potential new infrastructure and the updates and/or works to existing infrastructure to improve connections.

Policy 2: Strategic Connections

The reasonable alternative for Policy 2 is to do nothing and continue with a business as usual approach, with no purposeful improvements to strategic connections. This differs from Policy 2 which aims for NCC to work in partnership to improve strategic connections between Great Yarmouth, the port, the surrounding villages, Norwich, Norfolk and the wider region, including improvements to the A47, A149 and the railway line to Norwich.

Assessment of the reasonable alternative policy identified no significant positive or negative effects against any of the SEA Objectives.

Neutral effects were identified for 10 of the SEA Objectives, as the reasonable alternative is unlikely to result in improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services. This would result in no construction related to transport infrastructure, and no subsequent benefits.

The remaining 2 SEA Objectives, Population & Equalities and Economy & Employment were identified as having minor positive effects due to the Government's Road Investment Strategy which identifies six road schemes along the A47 that are in need of improvement. These road schemes are likely to lead to improvements to strategic connections in areas surrounding GY which may lead to improvements to accessibility and connectivity to GY.

Policy 3: Parking

The reasonable alternatives for Policy 3 are to either focus only on public transport/active travel or to focus only on private vehicles. This differs from Policy 3 which seeks for NCC to work with partners to deliver a car parking strategy for on street and off-street public parking that balances the needs of residents and visitors whilst still supporting the promotion of public transport and active travel.

Assessment of the reasonable alternative policy identified no significant positive effects against the SEA Objectives.

Significant negative effects were identified against four SEA Objectives during assessment of the reasonable alternative for Policy 3; Biodiversity & Natural Capital, Climate Change & Greenhouse Gases, and Material Assets. Significant negative effects have been identified due to encouraging private vehicle usage and the potential construction works which would decrease air quality, noise quality, increase greenhouse gas emissions, lead to increased congestion, and could lead to loss of best and most versatile agricultural land.

Policy 4: Bus Services

The reasonable alternative for Policy 4 is to do nothing and continue with a business as usual approach, with no involvement from NCC in bus services. This differs from Policy 4 which aims to support bus operators to deliver quicker, reliable, integrated, convenient and accessible journeys.

Assessment of the reasonable alternative policy identified no significant positive or negative effects against any of the SEA Objectives.

For the majority of SEA Objectives, minor positive effects or mixed minor positive and minor negative effects were identified. This is largely due to government funding through the Bus Service Improvement Plan (BSIP) which aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to positive effects, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a minor positive effect has been identified.

Policy 5: Rail

The reasonable alternative for Policy 5 is to do nothing and continue with a business as usual approach, with no involvement from NCC in rail services. This differs from Policy 5 which seeks for NCC to work with partners to support rail operators to make improvements to Great Yarmouth Station and to the Wherry Lines services for the public and freight. This will include aiming to make them more reliable, accessible, integrated, quicker and seeking improved frequency and timing of services.

Assessment of the reasonable alternative policy identified no significant positive or negative effects against any of the SEA Objectives.

For the 12 SEA Objectives, a range of minor positive and negative effects were identified, as rail operators currently plan to enact improvements to rail facilities and infrastructure without implementation of the policy.

Policy 6: Active Travel

No reasonable alternative was identified for Policy 6.

Policy 7: Climate Change Resilience

The reasonable alternative for Policy 7 is to take a business as usual approach with no policy specifically for Great Yarmouth, responding only when damage has occurred due to climate change and severe weather events. This differs from Policy 7 which aims for NCC to work with partners to make the transport network net zero by 2050, and resilient to the impacts of severe weather and climate change.

Assessment of the reasonable alternative policy identified no significant positive or negative effects against any of the SEA Objectives.

For 7 of the SEA Objectives, neutral effects were identified as by enacting no policy and taking a reactionary approach in response to the effects of climate change and severe weather, would not result in any proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. Therefore, there would be no effect across the SEA objectives.

The remaining SEA Objectives were identified as having either minor positive effects or mixed minor positive and minor negative effects due to Norfolk County Council's 2023 Climate Strategy which aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This may improve connectivity and accessibility across GY, although the benefits are likely to be realised at a lesser scale than with the policy.

Policy 8: Improved Air Quality

The reasonable alternative for Policy 8 is to do nothing and continue with a business as usual approach whereby emissions are likely to be reduced by technological advances and the market. This differs from Policy 8 which seeks to reduce emissions from vehicles to improve air quality.

Assessment of the reasonable alternative policy identified no significant positive or negative effects against any of the SEA Objectives.

However, minor positive uncertain effects were identified for eight SEA Objectives. The reasonable alternative is likely to result in some improvements to air quality within the GY area, however, the changes are likely to be realised at a slower pace, and to a lesser extent than would be seen with implementation of Policy 8.

Policy 9: Road Traffic Harm Reduction

No reasonable alternative has been identified to Policy 9.

Policy 10: Supporting Culture, Heritage and Tourism

The reasonable alternative for Policy 10 is to continue with a business as usual approach by fulfilling the statutory role to not damage structures and not actively seek to enhance culture, heritage or tourism in Great Yarmouth. This differs from Policy 10 which seeks to protect existing green infrastructure and where possible, enhance the public realm for the benefit of residents, visitors and tourists using a healthy streets approach to make streets attractive.

Assessment of the reasonable alternative policy identified no significant positive or negative effects against any of the SEA Objectives.

For 7 out of 12 SEA Objectives, neutral effects were identified as the reasonable alternative to the policy is to only fulfil the council's statutory role to not damage structures and not to enhance them. This would result in no proactive action to support culture, heritage and tourism. This would mean no negative effects associated with construction, but also no positive outcomes, therefore neutral effects have been assessed against each SEA Objective.

The remaining SEA Objectives were identified as having either minor positive effects or mixed minor positive and minor negative effects due to Great Yarmouth's 2020 Culture, Heritage and Tourism strategy which aims to enhance the public realm where appropriate and to conserve and enhance heritage assets. This may deliver some positive effects, but likely at a lesser scale than with the policy.

5.4 Outline Reasons for Selection or Rejection of Alternatives

For the ten policies contained within the Transport Strategy, reasonable alternative policies have been identified where possible and assessed under the SEA Framework. For policies 6 and 9, the suggested alternatives were not considered reasonable and therefore have not been assessed under the SEA Framework.

Many of the reasonable alternatives propose a 'business as usual' approach, with no implementation or improvement of transport measures and are therefore unlikely to yield the same results. A number of minor positive, minor negative, uncertain, and neutral effects have been identified, alongside a small number of significant negative effects.

Where positive effects or outcomes have been identified for the reasonable alternatives, it is likely to be realised at a lesser scale than with the transport strategy, and they have therefore not been selected.

6 Mitigation and Monitoring

6.1 Introduction

This chapter sets out proposed mitigation and monitoring measures following implementation of the TS, and sets out recommendations for the TS.

6.2 Mitigation

The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment of implementing the plan. The measures are known as 'mitigation' measures. Mitigation measures include both proactive avoidance of adverse effects and actions taken after potential effects are identified.

It is likely that potential significant negative effects can be avoided or reduced through adherence to best design guidance, appropriate planning and best construction practice at project level. As specific interventions under the TS policies are developed further by the organisations responsible for their delivery, it is expected that best design and industry practice, and relevant legislative requirements will be considered from the outset and throughout.

This is important not only in terms of compliance but also as they have cost, programme and risk implications. Key legislative and policy requirements, without providing an extensive list, include:

- Conservation of Habitats and Species Regulations 2017 as amended (known as the Habitats Regulations). Under these regulations, competent authorities must carry out an assessment, known as a habitats regulations assessment (HRA), to test if a plan or project proposal could significantly harm the designated features of a nationally designated site
- Environmental Impact Assessment legislative requirements which are enacted in the UK through different legislative instruments depending on the nature of the scheme and consenting mechanism.
- Water Framework Directive assessment where applicable to protect the UK's water environments by preventing their deterioration and improving their quality.
- Biodiversity Net Gain legislative and policy requirements as part of the UK Government targets towards halting biodiversity loss and delivering environmental enhancements :
- Halt the decline in species abundance by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042.
- Protecting 30% of land and 30% of ocean to be protected by 2030.

The mitigation measures proposed in **Table 6-1** are designed to avoid or reduce the effects identified as potentially negative through the assessment of the TS policies against the SEA Objectives. The table also includes enhancement measures, that aim to optimise positive impacts and enhance sustainability.

As this is the SEA draft reporting stage, these measures are subject to change as the TS is refined and updated. It is likely that significant negative effects can be avoided or reduced through development of the Policies.

Table 6-1 – Proposed Mitigation/Enhancement Measures

SEA Objective	Mitigation/Enhancement Measure	Mechanism
Biodiversity & Natural Capital	▪ In line with mandatory BNG requirements, transport interventions must implement biodiversity net gain and make use of the natural capital approach to ensure environmental net gain ▪ Infrastructure schemes should incorporate design measures to lessen the impact on biodiversity and ensure biodiversity net gain. ▪ Consideration needs to be given to the potential effects of construction of developments (noise, vibration and air pollution) on biodiversity. ▪ Interventions should aim to minimise soil disturbance and to retain as many ecosystem services as possible through careful soil management during the construction process. ▪ Interventions should consider impacts on international, national and local important sites (including sites such as SACs, National Landscapes, National Parks, SSSIs and Ramsar sites). This includes the potential impacts of noise, air and light pollution.	Project level design and assessment
Material Assets	▪ Any form of construction and operation should be undertaken as sustainably as possible, making use of tools and processes, such as circular economy, waste hierarchy and should consider BREEAM and BREEAM Infrastructure. ▪ Consideration at all stages should be given to the waste hierarchy, for example, prioritising reuse and recycling and reducing use of virgin materials ▪ Sustainable design and construction techniques should be promoted, such as low energy lighting and opportunities for renewable energy regeneration. ▪ All interventions should consider climate change resilience and adaptation from early design. ▪ Where land take is required, preference should be given to brownfield land/ previously developed land and avoidance of the best and valuable land.	Project level design and assessment

6.3 Monitoring

The SEA Regulations require the significant environmental effects of plans and programmes to be monitored, in order to identify unforeseen negative effects. The monitoring should help to:

- Monitor the significant effects of the TS;
- Track whether the TS has had any unforeseen effects; and
- Ensure that action can be taken to reduce/ offset the significant effects of the TS.

Table 6-2 below sets out some proposed monitoring measures. As there is some uncertainty with some of the elements of the plan's Objectives, Policies, and Targets, and what impact they may have on the SEA Objectives, the monitoring measures may be updated to reflect any additional impacts.

Table 6-2 – Proposed Monitoring Measures

SEA Objective	Key Performance Indicators	Targets
Population and Equalities	Improving accessibility and inclusivity of the transport network	Increase the number of users of all stated routes, by sustainable transport and active travel.
Human Health	Enabling healthy behaviours and improving wellbeing by monitoring physical activity levels Utilisation of transport route to essential services and green space/green infrastructure, and the network of footpaths in the rural part of the county.	Increase the number of users of active travel infrastructure across the region.
Economy & Employment	Condition of local highways. Reliability of the transport network.	DfT road conditions data. Reducing number of delays and improving punctuality of public transport.
Community Safety	Improving transport safety and security.	A decrease in reported accidents associated with roads and the wider transport network. 50% reduction in KSIs

SEA Objective	Key Performance Indicators	Targets
Biodiversity & Natural Capital	Biodiversity net gain achieved through implementation of the plan. Condition of designated sites e.g. SSSI's, SAC's, SPA's, etc.	No deterioration, or loss of coverage, of designated habitats and safeguarded areas.
Landscape and Townscape	Area of landscapes and townscapes benefiting from conservation and enhancement measures resulting from plan interventions.	No loss or damage to the Norfolk Coast National Landscape or National Character Areas due to interventions.
Historic Environment	The number of historic assets (statutory and non-statutory) negatively affected by the interventions. The number of historic assets (statutory and non-statutory) benefitting from conservation and enhancement measures resulting from plan interventions. The number of visitors to historic assets.	No historic assets negatively affected by the interventions. Increased number of visitors to the historic environment.
Water Environment	Condition of designated and undesignated waterbodies.	No deterioration of water quality in local waterbodies.
Air Quality	Increase use of zero and low emission vehicles. Tackling climate change and protecting and enhancing the natural and built environment - Clean Air Number of locations that exceed legal NOx limit - Air Quality annual monitoring reports	Reducing carbon emissions from transport and investing in EV infrastructure. No locations exceeding the NOx legal limit.
Climate Change & Greenhouse Gases	Carbon emissions from transport. Number of publicly available EV charge points.	For all relevant interventions to incorporate suitable climate change resilience and mitigation measures. To increase publicly available EV charging infrastructure.

SEA Objective	Key Performance Indicators	Targets
Noise	Local noise monitoring.	Not exceeding permitted noise levels and no addition of new Noise Important Areas.
Material Assets	Utilisation of circular economy principles to reduce the amount of additional waste during construction.	Utilisation and uptake of recycled/re-used materials where possible. Maximising use of brownfield land.

7 Next Steps

This Environmental Report is presented for public consultation alongside the Draft TS. The representations received will be documented and considered in reviewing the proposals for the TS. Following this, a Post Adoption Statement will be produced that summarises how the SEA and the consultation responses have been taken into account and how social, economic and environmental considerations have been integrated into the final decisions regarding the TS and will be issued as soon as is reasonably practicable after adoption.

This SEA Report will be issued to consultees for consultation alongside the draft TS between 24th September 2025 and 5th November.

Table 7-1 - Indicative TS and SEA Timetable

SEA and TS Stages	Timescales
SEA Report and TS Consultation	24th September – 5th November
SEA and TS Updates	5th November – January 2026
TS Adoption	March 2026
SEA Post Adoption Statement	Following adoption

Appendix A

Quality Assurance Checklist

The Government's Guidance on SEA[5] contains a quality assurance checklist to help ensure that the requirements of the SEA Directive are met. Those requirements relevant to the scoping stage of the SEA of draft Drought Plan have been set out in **Table A-1** below.

Table A-1 – Quality Assurance Checklist

Checklist	Evidence
The plan's or programme's purpose and objectives are made clear.	The plan's purpose and objectives are set out in **Section 1.4**.
Environmental issues and constraints, including international and EC environmental protection objectives, are considered in developing objectives and targets.	Key environmental issues identified through a review of relevant plans and programmes and analysis of baseline conditions (see **Appendix B**) have informed the development of the assessment framework presented in **Section 3.2**.
SEA objectives, where used, are clearly set out and linked to indicators and targets where appropriate.	**Section 3.2** presents the SEA Objectives and guide questions.
Links with other related plans, programmes and policies are identified and explained.	A review of relevant plans and programmes is contained at **Appendix B**.
Conflicts that exist between SEA objectives, between SEA and plan objectives and between SEA objectives and other plan objectives are identified and described.	The plan's purpose and objectives are set out in **Section 1.4**.
Consultation Bodies are consulted in appropriate ways and at appropriate times on the content and scope of the Environmental Report.	The SEA Scoping Report was consulted upon and responses to this are included in this Environmental Report (see **Appendix C**).
The assessment focuses on significant issues.	Environmental issues have been identified in the baseline analysis contained in **Appendix B** of this Environmental Report on a topic-by-topic basis. **Section 3.2** summarises the key issues identified.
Technical, procedural and other difficulties encountered are discussed; assumptions and uncertainties are made explicit.	**Section 3.5** details limitations of the data used in the Environmental Report, as well as general difficulties and assumptions.
Reasons are given for eliminating issues from further consideration.	The proposed scope of the assessment is set out in **Appendix B**. In this instance none of the topic areas have been scoped out of the assessment.

[5] Office of the Deputy Prime Minister (2005) *A Practical Guide to the Strategic Environmental Assessment Directive*.

Checklist	Evidence
Realistic alternatives are considered for key issues, and the reasons for choosing them are documented.	All options were assessed as set out in **Sections 4 and 5** and **Appendix D** of this report.
Alternatives include 'do minimum' and/or 'business as usual' scenarios wherever relevant.	A 'do minimum' and/or 'business as usual' scenario has been assessed as an alternative for the TS policies where relevant
The environmental effects (both adverse and beneficial) of each alternative are identified and compared.	This is included in **Section 5** and **Appendix D** of this report.
Inconsistencies between the alternatives and other relevant plans, programmes or policies are identified and explained.	No inconsistencies were identified.
Reasons are given for selection or elimination of alternatives.	This is set out in **Section 5.4** of this report.
Relevant aspects of the current state of the environment and their likely evolution without the plan or programme are described.	**Appendix B** to this Environmental Report characterises the current environmental baseline conditions, along with how these are likely to change in the future.
Environmental characteristics of areas likely to be significantly affected are described, including areas wider than the physical boundary of the plan area where it is likely to be affected by the plan.	Throughout **Appendix B** of this Environmental Report, reference is made to areas which may be affected by the draft Transport Strategy although it should be noted that until the plan measures have been determined, it is not possible to determine with certainty those areas that are likely to be most affected by the plan.
Difficulties such as deficiencies in information or methods are explained.	**Section 3.5** details limitations of the data used in the Environmental Report and assumptions made.
Effects identified include the types listed in the Directive (biodiversity, population, human health, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage and landscape), as relevant; other likely environmental effects are also covered, as appropriate.	The potential effects of the options are identified in **Sections 4 and 5** and **Appendix D**.
Both positive and negative effects are considered, and the duration of effects (short, medium or long-term) is addressed.	The nature and duration of potential effects has been set out in the detailed assessment matrices contained in **Appendix D** of this report.
Likely secondary, cumulative and synergistic effects are identified where practicable.	Information on secondary, cumulative and synergistic effects is set out in **Section 4.3**. Where identified, effects are also set out in the detailed assessment matrices contained in **Appendix D** of this report.

Checklist	Evidence
Inter-relationships between effects are considered where practicable.	These relationships are identified where appropriate in the detailed assessment matrices contained in **Appendix D** of this report.
The prediction and evaluation of effects makes use of relevant accepted standards, regulations, and thresholds.	Relevant standards have been used where appropriate in undertaking the assessment.
Methods used to evaluate the effects are described.	Information on the methods used for evaluation of potential effects is included in **Section 3** and in the detailed assessment matrices contained in **Appendix D** of this report. The definitions of significance used in the assessment are set out in **Section 3.3**.
Measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the plan or programme are indicated.	Mitigation measures for potential negative effects are set out in **Section 6**.
Issues to be taken into account in project consents are identified.	Issues to be taken into account in project consents are included in the appraisal matrices in **Appendix D**.
Is clear and concise in its layout and presentation.	We believe the report is clear and concise.
Uses simple, clear language and avoids or explains technical terms.	The report uses accessible language wherever possible.
Uses maps and other illustrations where appropriate.	Maps and illustrations have been utilised in the report.
Explains the methodology used.	The method used is set out in the report in **Section 3**.
Explains who was consulted and what methods of consultation were used.	**Appendix C** of this report outlines the consultation that has been carried out to-date.
Identifies sources of information, including expert judgement and matters of opinion.	Sources of information are included throughout the report.
Contains a non-technical summary covering the overall approach to the SEA, the objectives of the plan, the main options considered, and any changes to the plan resulting from the SEA.	An Executive Summary has been included as part of the report.
The SEA is consulted on as an integral part of the plan-making process.	The previously issued SEA Scoping Report was consulted upon and responses are included in this Environmental Report (see **Appendix C**).

Checklist	Evidence
Consultation Bodies and the public likely to be affected by, or having an interest in, the plan or programme are consulted in ways and at times which give them an early and effective opportunity within appropriate time frames to express their opinions on the draft plan and Environmental Report.	Consultation on the draft TS and this Environmental Report will be undertaken by NCC.
The Environmental Report and the opinions of those consulted are taken into account in finalising and adopting the plan or programme.	This will be incorporated following consultation on draft TS and Environmental Report.
An explanation is given of how they have been taken into account.	This will be provided following consultation on the draft TS and Environmental Report.
Reasons are given for choosing the plan or programme as adopted, in the light of other reasonable alternatives considered.	This will be set out following consultation on the draft TS and Environmental Report.
Measures proposed for monitoring are clear, practicable and linked to the indicators and objectives used in the SEA.	The report sets out the proposed approach to monitoring measures that NCC could use in **Section 6**.
Monitoring is used, where appropriate, during implementation of the plan or programme to make good deficiencies in baseline information in the SEA.	The suggestions for monitoring are included in **Section 6** of the report.
Monitoring enables unforeseen adverse effects to be identified at an early stage. (These effects may include predictions which prove to be incorrect.)	The suggestions for monitoring made in **Section 6** are for NCC to act on, with monitoring taking place following implementation of the TS.
Proposals are made for action in response to significant adverse effects.	Mitigation methods are outlined for the preferred options in **Section 6** of this report.

Appendix B

FINAL SCOPING REPORT

Norfolk County Council

Great Yarmouth Transport Strategy Update Strategic Environmental Assessment

Revised Scoping Report

70124329-002-P03
September 2025

Public

Norfolk County Council

Great Yarmouth Transport Strategy Update Strategic Environmental Assessment

SEA Environmental Report Appendix B - Revised Scoping Report

Type of document (version) Public

Project no. 70124329

Our Ref. No. 70124329-002-P03

Date: September 2025

WSP

62-64 Hills Road
Cambridge
CB2 1LA

Phone: +44 1223 558 050

WSP.com

Quality control

Issue/revision	First issue	Revision 1	Revision 2
Remarks	Draft for client review	Draft for consultation	Revised Report
Date	October 2024	February 2025	April 2025
Prepared by	AA	AA DW	AA DW
Checked by	CT	CT	CT
Authorised by	KD	AP	AP
Project number	70124329	70124329	70124329
Report number	70124329-002-P01	70124329-002-P01	70124329-002-P03

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1 Introduction

1.1 Introduction

1.1.1. Norfolk County Council (NCC) has commissioned WSP UK Ltd ("WSP") to undertake a Strategic Environmental Assessment (SEA) in support of the update of the Transport Strategy (TS) for Great Yarmouth Borough Council (GYBC).

1.1.2. This TS sets out the vision, objectives and short, medium and long-term transport improvements required to support the existing community of Great Yarmouth and to assist regeneration and unlock the significant potential of Great Yarmouth by identifying transport barriers to growth and economic development and setting out a focus and direction for how this will be addressed. Great Yarmouth Borough Council's (GYBC) Local Plan Part 1 (Core Strategy) sets out how the town will grow up to 2030 and the transport strategy will support these aspirations.

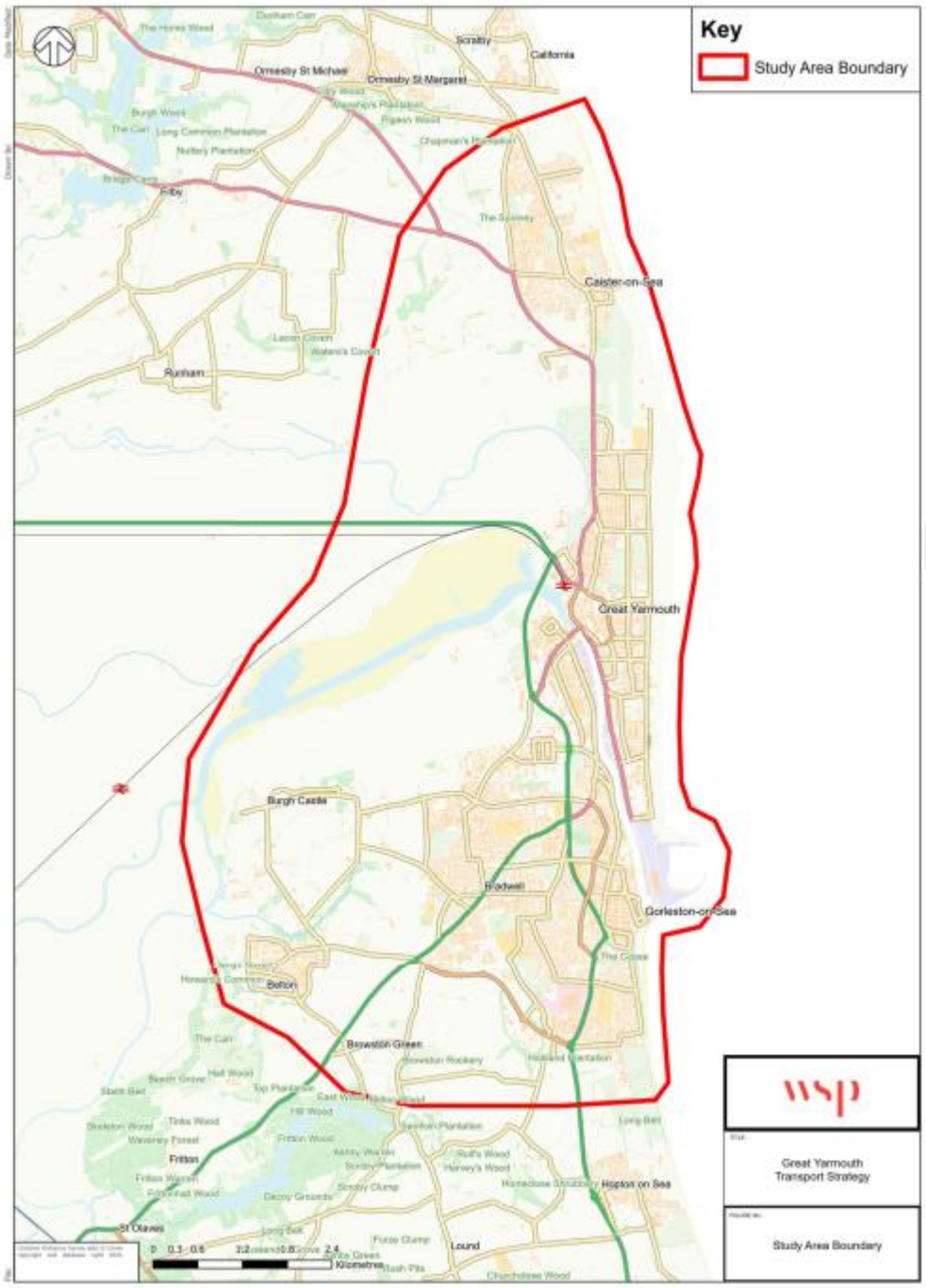
1.1.3. The TS is intended to provide assistance in joining together transport improvements already being undertaken in and around Great Yarmouth, as well as identifying a strategy for future transport infrastructure improvements.

1.1.4. GYBC includes a number of settlements, including but not limited to:

- Great Yarmouth;
- Gorleston-on-Sea;
- Caister-on-Sea;
- Hemsby;
- Hopton-on-Sea; and
- Winterton-on-Sea.

1.1.5. Great Yarmouth is the largest town in the GYBC, and it acts as the main centre in the borough for retail, services and employment, including port related activities. The TS also considers the wider local and strategic transport network that connects Great Yarmouth with surrounding settlements. This includes consideration of the catchment of bus and rail services to the GYBC area and the function of the A47, A143 and A149. There is currently only one train station within the GYBC area, located in the town of Great Yarmouth. **Figure 1-1** sets out the Transport Strategy Study Area.

Figure 1-1 - Transport Strategy Study Area



1.1.6. Whilst the focus for the preferred Transport Strategy is the GYBC area (shown in **Figure 1-1**), consideration has been given to the wider local and strategic transport network that connects Great Yarmouth with surrounding settlements. This includes consideration of the catchment of bus and rail services to and from Great Yarmouth and the function of the A47, A143 and A149.

1.2 Purpose of the SEA Scoping Report

1.2.1. SEA is used to describe the application of environmental assessment to plans and programmes in accordance with European Council Directive 2001/42/EC[1]. The SEA Directive is enacted in England through the "Environmental Assessment of Plans and Programmes Regulations" (SI 2004/1633, known as the SEA Regulations)[2].

1.2.2. These Regulations place an obligation on local authorities to undertake SEA for certain plans and programmes which include local transport plans and strategies.

1.2.3. WSP has been appointed by Norfolk County Council (NCC) to assist with undertaking an SEA of the Great Yarmouth TS, see **Section 3.2** of this Report for more information. The SEA will ensure that sustainability considerations are fundamental to the TS.

1.2.4. This report sets out the first stage of the SEA process, known as scoping. The purpose of this stage is to define the scope of the SEA by:

- Identifying likely options for the delivery of the Transport Strategy (**Section 2**);
- Presenting the methodology and framework for undertaking the SEA (**Section 3**);
- Reviewing current relevant legislation, plans and programmes baseline (**Section 4**);
- Establishing the current and future environmental, social and economic baseline for the area (the future baseline representing the likely evolution of the current baseline without the TS) (**Section 5**);
- Identifying key issues and opportunities for the TS (**Section 5**);
- Identifying sustainability objectives to inform an overall framework for appraisal of options (**Section 6**); and
- Setting out next steps (**Section 7**).

1.2.5. A scoping report for the NCC Local Transport Plan 4 was undertaken in 2020, which included detailed information about GYBC. Where still relevant, information from this has been used to inform this report.

[1] Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment
[2] The Environmental Assessment of Plans and Programmes Regulations 2004

1.3 Relationship with Other Processes

1.3.1. The Conservation of Habitats and Species Regulations 2019 (referred to as the Habitats Regulations)[3], stipulates that a Habitats Regulations Assessment (HRA) needs to be undertaken 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 – these are Special Areas of Conservation (SACs), candidate SACs (cSACs), and Special Protection Areas (SPAs). In addition, Ramsar sites (wetlands of international importance), potential SPAs (pSPA) and in England possible SACs (pSACs), are considered in this process as a matter of law or Government policy. [These sites are collectively termed 'European sites' in Habitats Regulations Assessment (HRA)]; and
- Is not directly connected with, or necessary to, the management of the site.

1.3.2. Guidance on the Habitats Directive[4] sets out four distinct stages for assessment under the Directive:

- 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.
- 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.
- 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 the Natura 2000 network.

1.3.1. The first stage of the Habitats Regulations Assessment (screening) will be undertaken as the TS develops. Stages 2 to 4 will be progressed when sufficient information is available to undertake them. The HRA screening will enable consideration of TS regarding likely significant effects on European sites, as required by the legislation.

[3] HM Government (2017), The Conservation of Habitats and Species Regulations 2017. Available online at: The Conservation of Habitats and Species Regulations 2017

[4] Managing and protecting Natura 2000 sites

2 The Transport Strategy

2.1 Background

2.1.1. The TS will be set within the context of the current policy and future development framework. As transport and travel choices continue to evolve the strategy will need to be re-evaluated.

2.1.2. The TS that will follow this initial understanding of the issues and opportunities, therefore concentrates primarily on the Short to Medium term (5 to 10 years) up to 2035, whilst also identifying some long-term aspirations for Great Yarmouth transport network (beyond 2035).

2.1.3. The purpose of the strategy is to assist regeneration and unlock the significant potential of Great Yarmouth by identifying transport barriers to growth and economic development and setting out a focus and direction for how this will be addressed.

2.1.4. The Transport Strategy is intended to provide assistance in joining together transport improvements already being undertaken in and around GYBC, as well as identifying a strategy for future medium and long-term transport infrastructure improvements.

2.2 Emerging Vision and Objectives

2.2.1. The vision statement for the transport strategy is as follows:

To support sustainable economic growth in Great Yarmouth by facilitating journey reliability and improved travel mode choice for all, whilst contributing to improved air quality and safety, and protection of the built and natural environment.

2.2.2. The proposed objectives for this Transport Strategy are outlined below. These have been updated to align with current national policy directions and to continue supporting economic growth in Great Yarmouth:

- Enhance connectivity and accessibility for all within Great Yarmouth.
- Encourage greater use of public transport in Great Yarmouth.
- Encourage modal shift from private car use to active travel in Great Yarmouth.
- Support the delivery of planned housing and business growth and development in the Borough, buy using improved transport links to unlock economic investment.
- Protect and enhance Great Yarmouth's heritage and cultural environment through place-making.
- Improve local air quality and Great Yarmouth's natural environment and reduce overall transport emissions.
- Improve road safety in Great Yarmouth.

2.2.3. The Transport Strategy will be framed within the context of current policies and future development frameworks. As transport and travel choices evolve, the strategy will need to be re-evaluated.

2.2.4. This Transport Strategy, building on the initial understanding of issues and opportunities, will focus primarily on the short to medium term (5 to 10 years) up to 2035, while also identifying some long-term aspirations for Great Yarmouth's transport network beyond 2035.

2.2.5. The final implementation plan will address issues such as congestion and accessibility on the transport network. It aims to make Great Yarmouth more attractive for economic investment and support both existing and new businesses. The plan will also consider planned growth to ensure sustainable development and protect the historic areas of the towns, which are crucial for attracting visitors.

3 Approach to SEA

3.1 Introduction

3.1.1. The SEA process is carried out during the preparation of local plans and spatial development strategies. Its role is to promote sustainable development by assessing the extent to which emerging plans will help to achieve relevant environmental, economic and social objectives.

3.1.2. SEA is used to describe the application of environmental assessment to plans and programmes in accordance with the "Environmental Assessment of Plans and Programmes Regulations" (SI 2004/1633, known as the SEA Regulations)[2].

3.1.3. An SEA is mandatory for plans and programmes which are prepared for agriculture, forestry, fisheries, energy, industry, ***transport***, waste or water management, telecommunications, tourism, town and country planning or land use, and which set the framework for future development consent of projects listed in the Town and Country Planning (Environmental Impact Assessment) Regulations[5].

3.2 Strategic Environmental Assessment

3.2.1. SEA is an iterative process of gathering data and evidence, assessment of environmental effects, developing mitigation and monitoring measures and making recommendations to refine plans or programmes in view of the predicted environmental effects.

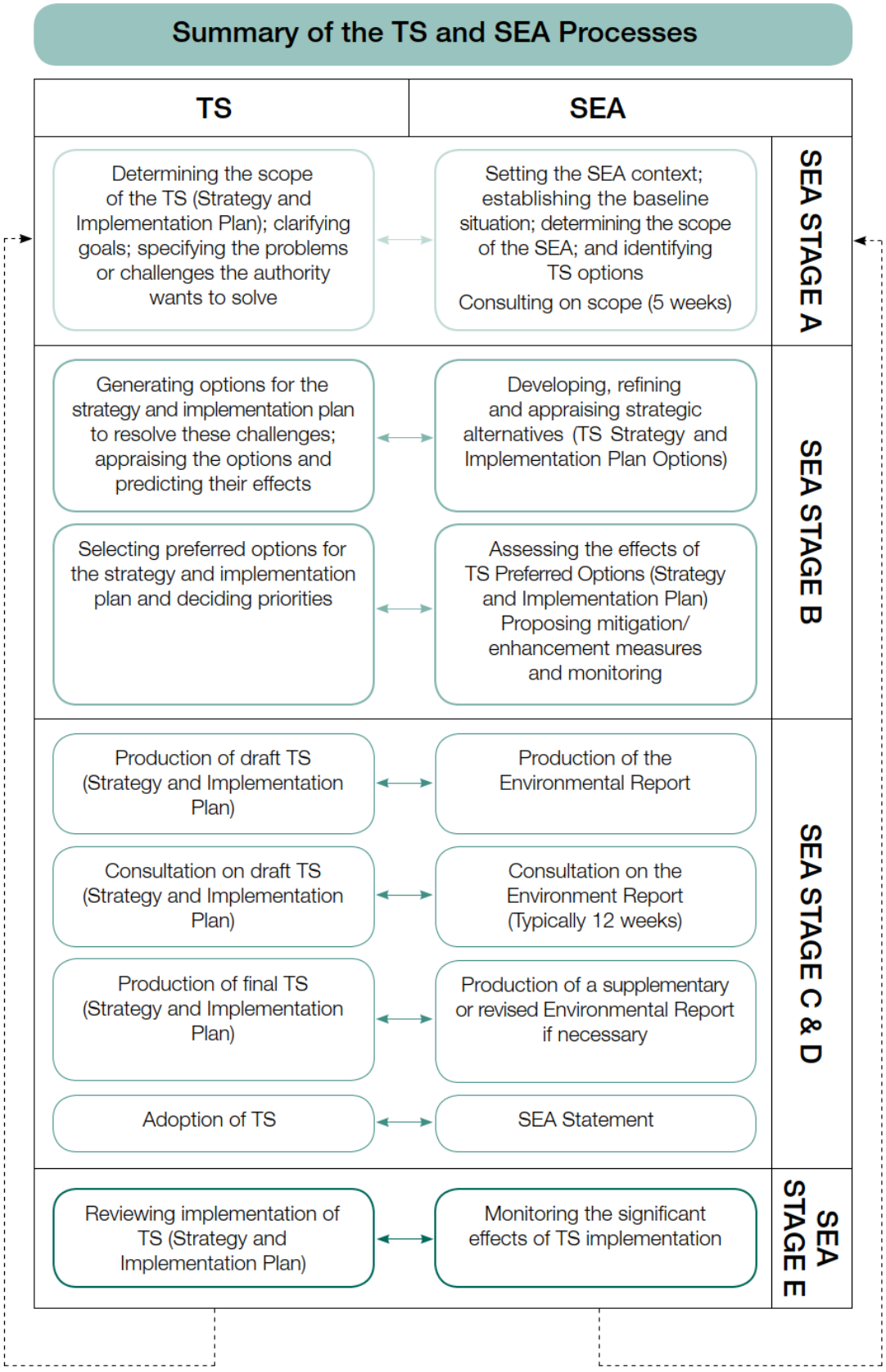
3.2.2. The approach adopted for the SEA of the TS follows that set out in the Practical Guide to SEA[6] and the Planning Practice Guidance to SEA[7]. It involves the development of an assessment framework comprising a series of sustainability objectives, assessment criteria and indicators. This framework is developed from an understanding of environmental problems and opportunities identified through a review of existing baseline information and a review of other plans, programmes and environmental protection objectives relevant to the plan area (i.e. Great Yarmouth) and subject matter (transport).

[5] The Town and Country Planning (Environmental Impact Assessment) Regulations 2017
[6] Office of the Deputy Prime Minister, A Practical Guide to the Strategic Environmental Assessment Directive 2005
[7] Department for Communities and Local Government, Strategic environmental assessment and sustainability appraisal 2015

3.2.3. The key stages of the SEA process are the following:

- Stage A: Setting the context and objectives, establishing the baseline and deciding on scope **(this stage)**;
- Stage B: Developing and refining strategic alternatives and assessing their effects;
- Stage C: Preparing the Environmental Report;
- Stage D: Consulting on the draft plan or programme and the Environmental Report; and
- Stage E: Monitoring the significant effects of implementing the plan or programme on the environment.

Figure 3-1 - SEA Process



4 Policy Context

4.1.1. Economic, social and environmental objectives relevant to the TS in international, national, regional and local governance have been reviewed to help establish the scope of the SEA.

4.1.2. Regulation 12(3), Schedule 2, Information for Environmental Reports of the SEA Regulations requires information on the following:

- An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes (Schedule 2, Paragraph 1); and
- The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation (Schedule 2, Paragraph 5).

4.1.3. The purpose of the review is to ensure the SEA complies with legislation and governance. The process entails identifying and reviewing environmental protection objectives that are directly relevant to both the TS and SEA.

4.1.4. The scoping task of identifying related legislation, policies and plans cannot yield an exhaustive or definitive list. The review has therefore been focussed to ensure only policies that are current and of direct relevance to the TS and sustainability are included.

4.1.5. A detailed outline of the policy documents, objectives and targets reviewed is set out in **Appendix A**. **Table 4-1** below outlines the key messages of the review. The review provides the context for the SEA and helps to inform the SEA Framework of objectives (**Section 6**), which will guide the subsequent appraisal process.

Table 4-1 – Key Messages from Policy Review

IIA Topic	Key Messages from Review
Population and Equalities	■ Transport is a key factor shaping experiences of poverty. The ability of households in poverty to find paid work often depends on access to affordable, regular and reliable transport. ■ The Plan should provide infrastructure that drives productivity, supports economic prosperity and sustainable public services. ■ The delivery of new developments should not be of detriment to the interests of existing communities. ■ Projects and proposals should help to improve social value by providing opportunity, addressing inequality, tackling the climate crisis and improving life chances. ■ There is a need to: • Reduce inequalities in care (both physical and mental) across and within communities that cause disparities; • Ensure fair and equal access to services and support irrespective of race, religion, sex, age, sexual orientation, disability, gender reassignment, marriage and civil partnership or pregnancy/maternity; • Plan for an ageing population with complex needs, which will require inputs from all parts of the health and social case system; and Ensure that he transport network is inclusive of people with disabilities and the elderly.

IIA Topic	Key Messages from Review
Human Health	■ Good placemaking is linked to a wider set of positive social, economic and environmental outcomes; ■ Liveable neighbourhoods can provide an effective way to create healthy and active communities whilst improving equality, inclusion and help tackle climate change; ■ Regular physical activity provides a range of physical and mental health and social benefits. ■ Greater active commuting is associated with higher levels of physical wellbeing. ■ Commuting more actively can benefit both physical and mental health, in turn resulting in happier and more productive employees. ■ There is a need to: • Promote healthy standards of living; • Prioritise walking, cycling and use of public transport; and Enhance accessibility to key community facilities, services and jobs for all.

IIA Topic	Key Messages from Review
Economy and Employment	■ The National Planning Policy Framework (NPPF) [8]states that planning policies should recognise and address the specific locational requirements of different sectors, which includes making provision for clusters or networks of knowledge and data-driven, high technology industries in suitably accessible locations; ■ Working with businesses and infrastructure owners is necessary to develop proposals that meet the needs of the freight and logistics sector; and ■ Continued investment in the transport infrastructure is an essential part of post-pandemic economic recovery. ■ There is a need to: • Promote a low carbon, green economy; • Create the conditions for growth; • Provide conditions for a thriving education sector; • Support the sustainable growth and expansion of businesses; and • Deliver increased economic growth and decreased emissions.
Community Safety	■ Safety is an important consideration for road users owing to the significant impact of serious and fatal accidents. ■ There is a need to: • Continue to improve safety by investing in the road network, both to prevent incidents from occurring and to reduce the severity of those that do; • Work towards the vision that no road user should be killed or seriously injured on the roads of GYBC; and • Reduce transport related crime and the fear of crime, as well as encourage reporting.

[8] Ministry of Housing, Communities & Local Government (2024), National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

IIA Topic	Key Messages from Review
Biodiversity and Natural Capital	▪ Requirement for new developments to minimise adverse impacts on biodiversity and provide net gains in biodiversity where possible. ▪ There is a need to: • Identify opportunities for green infrastructure (GI) provision, recognising the multiple functions that GI provides to the area and linking into regional and national GI networks; • Protect and enhance biodiversity, including designated sites, priority species, habitats and ecological networks; • Minimise the impact on biodiversity and ensure net gain wherever possible; • Maintain and enhance ecosystems and their services; and • Improve the long-term sustainability of ecological and physical processes that underpin the functioning of ecosystems.
Landscape and Townscape	▪ The delivery of new developments should not have adverse impacts on the quality of the natural and built environment. ▪ Development needs to be sympathetic to local character, the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change. ▪ Design quality should be considered throughout the evolution and assessment of individual proposals. ▪ Transport developments should add to the overall quality of the area throughout the lifetime of the development. ▪ There is a need to: • Conserve and enhance the quality and distinctiveness of natural landscapes and seascapes, including National Landscapes and National Parks, in ways that allow them to continue to evolve; and • • Provide greater access to greenspace, to help reconnect people to nature.

IIA Topic	Key Messages from Review
Historic Environment	■ The delivery of new developments should not have adverse impacts to the historic environment. ■ There is a need to: • Conserve and enhance the integrity and setting of internationally, nationally and locally designated cultural and historical assets as well as those which are undesignated; • Enhance the beauty of the natural scenery and improving its environmental value while being sensitive to considerations of its heritage; • Encourage engagement with the historic environment; and • Ensure that transport development adjacent, or in close proximity to the local conservation areas, designated assets, archaeological remains or listed buildings, respects their character and context, and does not detract from the quality of the built environment.
Water Environment	■ Water resources in the region are under increasing pressure from a rapidly growing population, climate change and environmental needs; ■ Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest flood risk; ■ Any 'essential infrastructure' proposed to be located in Flood Zone 3a or 3b should be designed and constructed to remain operational and safe for users in times of flood; ■ Infrastructure in Flood Zone 3b should result in no net loss of floodplain storage, and not impede water flows, and not increase flood risk elsewhere; ■ There is a need to: • Protect and enhance surface and groundwater quality and ensure that water quality is improved or maintained where possible; • Avoid development in areas prone to flooding; and • Ensure that infrastructure is resilient to the impact of climate change and sea level rise.

IIA Topic	Key Messages from Review
Air Quality	■ Air pollution increases the risks of diseases such as asthma, respiratory and heart disease, particularly for those who are more vulnerable such as the very young and the elderly or those with existing health conditions; ■ The impacts of poor air quality are not distributed evenly across the population; and ■ Additional opportunities to improve air quality or mitigate impacts should be identified, such as GI provision and enhancement. ■ There is a need to: • Ensure that air quality is maintained (through net maintenance) or enhanced and that emissions of air pollutants are kept to a minimum; and • Encourage active and sustainable travel options that use clean energy will help reduce air pollution.
Climate Change and Greenhouse Gases	■ Take all possible action to mitigate climate change, while adapting to reduce its impact; and ■ Avoid increased vulnerability to the range of impacts arising from climate change. ■ There is a need to: • Reduce emissions of greenhouse gases that cause climate change; • Increase energy efficiency and move towards a low carbon economy; • Ensure that infrastructure is resilient to the impacts of climate change; and • Ensure climate resilience of the transport infrastructure.
Noise	■ Development must be undertaken in accordance with statutory requirements for noise; and ■ There is a need to: promote good health and a good quality of life through the effective management of noise within the context of UK Government policy on sustainable development. • mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life

IIA Topic	Key Messages from Review
Material Assets	▪ The delivery of new developments should not have adverse impacts on soils, land stability, or resources. ▪ There is a need to: • Facilitate the sustainable supply and use of minerals and minimise impacts on soil quality, considering any mitigation measures proposed; • Maintain and enhance geodiversity through the management of sites, areas and wider landscapes; and • Consider land stability in respect of new development; and encourage a circular economy.

5 Baseline, Issues and Opportunities

5.1 Introduction

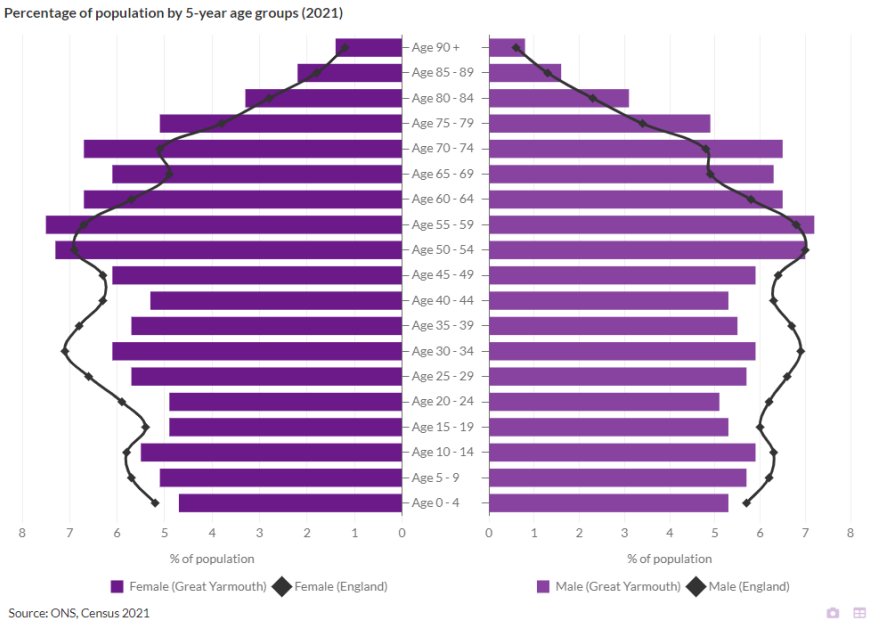
5.1.1. This section sets out the key baseline information for each of the SEA topics, as well as anticipated future trends without the implementation of the TS. It also identifies key issues and opportunities for sustainability in relation to TS, which have been used to develop an appraisal framework in **Section 6**.

5.2 Population and Equalities

Summary of Current Baseline

5.2.1. GYBC has a total population of approximately 99,800 people[9], a 2.6% increase since 2011[10], which is lower than the national average increase of 6.6%. The highest proportion of people in the borough are aged between 55-59 years who make up over 7.5% of the total population. The percentage of those aged 65 and over (24%) exceed the national average of 18.4%. The 70-74 age bracket experienced the largest growth between 2011-2021 at 39.0%, suggesting that there is a growing older population in GYBC.

Figure 5-1 GYBC Population Pyramid[11]



[9] Office for National Statistics, Population and household estimates, England and Wales, Census 2021
[10] Great Yarmouth population change, Census 2021 – ONS
[11] Population - LTLA | Great Yarmouth | Report Builder for ArcGIS (norfolkinsight.org.uk)

5.2.1. Great Yarmouth has a population density of 573 people per square kilometre (km^2)[9]. This is higher than both the East of England (regional) and England (national) averages of 331 people per km^2 and 434 people per km^2 respectively. Approximately 65.2% of the population of Great Yarmouth live in urban areas.

5.2.2. Within Great Yarmouth approximately 51% of the population are female and 49% are male, which is equivalent to both the regional and national averages of 51% and 49% for females and males respectively[11].

5.2.3. Overall, the ethnic make-up of Great Yarmouth is much less diverse compared to the national average[12]. Of the resident population, 94.6% identified themselves as White, 1.9% identified as Asian, 1.6% as Mixed or Multiple ethnic groups, 1.1% as Black, and 0.8% as 'Other'.

5.2.4. The majority of the residents within Great Yarmouth are Christian (47%), followed by no religion (45%), Muslim (0.7%), Other (0.5%), Buddhist (0.3%), Hindu (0.4%), Jewish (0.1%), and Sikh (0%)[13]. However, 6% of people did not answer the Census question about religious belief.

5.2.5. Looking at the Indices of Multiple Deprivation (IMD) 2019[14], Great Yarmouth contains neighbourhoods covering the entire deprivation spectrum, with 15 LSOAs in the 10% most deprived and 8 LSOAs within the 20% most deprived neighbourhoods[15]. In terms of overall deprivation, Great Yarmouth was ranked 24th out of 326 Local Authority Districts (LADs) in 2019 (1 being the most deprived and 326 the least deprived). Some of the most deprived areas in Great Yarmouth include Cobholm Island, Barrack Estate, Runham Vauxhall, Bradwell and Southtown.

Future Baseline

5.2.6. Population projections by the Office for National Statistics suggest that, by 2050, those aged 65 and over will make up 24.7% of England's total population. By 2032, it is anticipated that more people will be living on their own, making up 40% of all households nationally. The number of over 85s living alone is expected to more than double to 1.4 million nationally in which social isolation could become a more prevalent issue.

5.2.7. This could become a significant issue in Great Yarmouth, where 24% of the population are currently over 65 and may be further exacerbated by the number of people living rurally. The old age dependency ratio, which is the ratio of the population who are of current State

[12] Office for National Statistics, Ethnic Group, England and Wales, Census 2021
[13] Office for National Statistics, Religion, England and Wales, Census 2021
[14] Ministry of Housing, Communities and Local Government, Indices of Multiple Deprivation 2019
[15] Norfolk Insight, Deprivation Report for Great Yarmouth. Available at: https://www.norfolkinsight.org.uk/deprivation/reports/#/view-report/ba0cb2741fe94a9ea519e7ebc77b1257/E07000145/G2

Pension age (SPA) and higher relative to the size of the population aged 16 years and over and under SPA, in Great Yarmouth is expected to rise by 18.7% in 2035, compared to just a 1.5% increase in the working age population over the same period[16].

5.2.8. In 2016, 14% of the working age population in the UK were from ethnic minority backgrounds[17]. This is increasing, with the proportion expected to rise to 21% by 2051. The working population is likely to become increasingly diverse, particularly in Great Yarmouth, as indicated by this national trend.

5.2.9. The overall highest rate of deprivation in Great Yarmouth creates a unique set of challenges for transport. There are multiple factors that can contribute to this distribution including a lack of service provision, limited accessibility and opportunity, and poor digital connectivity.

5.2.10. Implementing the strategy would provide opportunities for the dispersion of population growth through providing infrastructure and improving access to employment and services. This will also help to support community cohesion and reduce isolation, particularly amongst the elderly and those living rurally.

Issues and Opportunities

5.2.11. The following issues and opportunities have been identified in **Table 5-1** below.

Table 5-1 – Issues and Opportunities for Population and Equalities

Key Issues & Opportunities	Considerations for the TS
▪ Transport issues affect different groups to varying extents, and there is evidence showing that the barriers to accessing and using transport can be exacerbated by age, ethnicity and gender[18]. ▪ The rural nature of some parts of Great Yarmouth could pose significant challenges in providing good services for all rural residents. There will, therefore, be a need for increased access to transport.	▪ There are opportunities to improve access to rural areas through transport services, digital services and bringing services to people. ▪ There will be a need for adequate support and greater access to services and facilities for the elderly population, families with young children and single parent families. ▪ If low population growth continues, this could result in less pressure on transport infrastructure in Great Yarmouth,

[16] Office for National Statistics, Population of State Pension age and working age, and old age dependency ratios, for local authorities and regions in England
[17] The Kings Fund (2012) Demography: Future Trends
[18] NatCen Social Research, Transport and inequality: An evidence review for the Department for Transport, 2019 available online at: https://assets.publishing.service.gov.uk/media/60080f728fa8f50d8f210fbe/Transport_and_inequality_report_document.pdf

Key Issues & Opportunities	Considerations for the TS
■ The population of Great Yarmouth is predicted to increase in number resulting in a change in the age profile. ■ Changing work habits such as remote, internet-based jobs and working from home are likely to reduce transport demand, but may also increase social isolation, which could increase reliance on alternative social interaction. ■ With an increasing ageing population in Great Yarmouth, there is likely to be additional strain on the area's services and infrastructure particularly health and social care. ■ The change in working habits has also affected traditional 5/2-day shift patterns for public transport with one in 10 local bus services in the UK cancelled in 2022[19] This further exacerbated by reductions in local authority subsidies. ■ Population growth in Great Yarmouth between 2011 and 2021 was lower than the average for Norfolk, and England and Wales. ■ Great Yarmouth has a shorter than average travel to work distance compared to national averages, and a high proportion of people living in its main urban area.	compared to the borough and nationally, though pressure is still likely to increase. ■ A change in age profile will result in a change in travel demands, e.g. an older population may have increased requirement for infrastructure accommodating mobility scooters. ■ A high proportion of population in the main urban area and short travel to work distances could make active travel more feasible.

5.3 Human Health

Summary of Current Baseline

5.3.1. The average life expectancy (at birth) across Great Yarmouth is slightly lower than the regional average (80.3 years for males and 83.7 years for females) and the national average (79.6 years for males and 83.2 years for females) for both males and females at 78.2 years and 82.6 years respectively[20]. Life expectancy is 10.7 years lower for men and

[19] The Guardian (2023) Almost one in 10 local bus services axed over last year in Great Britain
[20] Public Health England, Great Yarmouth Local Authority Health Profile 2019 (phe.org.uk)

4.5 years lower for women in the most deprived areas of Great Yarmouth than in the least deprived areas.

5.3.2. The percentage of physically active adults is much lower in Great Yarmouth when compared with regional and national averages. Levels below the national average of 66.3%, and regional average of 65.4% are recorded, at 62.6%[20]. The percentage of adults who are classified as overweight or obese is slightly higher than the regional average and national average of 62.1% and 62.0% respectively, with 64.6% of adults (18+) classified as overweight or obese. In Year 6 children across Great Yarmouth, 23.5% are classified as obese, higher than the regional and national average of 18.0% and 20.2% respectively.

5.3.3. Public Health England describe the health of people in Great Yarmouth as varied compared with the England average. This is reflected in the Health Deprivation and Disability Domain of IMD 2019[14], where Great Yarmouth is ranked 50th out of 151 upper tier authorities nationally (where a rank of 1 is the most deprived and 151 is the least deprived). This domain measures the risk of premature death and the impairment of quality of life through poor physical or mental health. **Figure B-3** in **Appendix B** shows health deprivation across Great Yarmouth.

5.3.4. Poor air quality is a significant public health issue and there is clear evidence that particulate matter has a significant contributory role in mortality. Each year in the UK between 28,000 and 36,000 deaths a year are attributed to long-term exposure to poor air quality[21]. Air pollution can also be linked to cardiovascular disease, diabetes and dementia. Sufferers of chronic respiratory diseases such as chronic obstructive pulmonary disease (COPD) and asthma are especially vulnerable to the effects of air pollutants. Air pollution has also been shown to have an increased health impact on those in lower socio-economic groups.

5.3.5. There are no Air Quality Management Areas (AQMAs) located within Great Yarmouth (see **Section 5.10** for more details) that identify areas of higher air pollution that may affect health.

5.3.6. Great Yarmouth has a higher mortality rate from COPD at 44.6 people per 100,000 when compared to the regional average of 37.9 people per 100,000 and the national average of 42.8 people per 100,000[22].

5.3.7. Social isolation can lead to loneliness which has the potential to undermine well-being thereby impacting negatively on people's quality of life. Loneliness can have a huge impact on the wellbeing of many people particularly older people, those with disabilities and new

[21] Gov.uk (2019) Public Health England publishes air pollution evidence review
[22] Respiratory disease - Data - OHID (phe.org.uk)

and expectant mothers. It can often result in unhappiness, lowering of self-confidence and ability to reach out for help.

5.3.8. According to Age UK, the majority of the people aged 65 and over in Great Yarmouth are within very low and low risk areas for loneliness with areas in the UK ranked from 1 high risk to 32,844 very low risk[23]. However, the areas of Yarmouth North, Nelson, Southtown and Cobholm have areas of high risk and very high risk of loneliness.

5.3.9. The proportion of people within Great Yarmouth who are considered disabled under the equality act (day-to-day activities limited a lot) is significantly lower than the national average (17.7%) at 9.7%[24].

Future Baseline

5.3.10. The ageing population in Great Yarmouth is expected to continue to grow in the future, which may cause strain on the transport system due to rising inequalities in in access to healthcare, community facilities and other services.

5.3.11. A population with a larger proportion of older people will likely result in an increase in the number of people in Great Yarmouth with physical and sensory impairments which could result in a greater demand for access to health and social care services.

5.3.12. The anticipated population growth and the increasing affordability and convenience of car travel is likely to result in an increase in the number of private vehicles on the roads. This could have subsequent cumulative effects on air quality, noise pollution and public health if current trends continue.

5.3.13. The rising cost of living, or 'Cost-of-Living Crisis', is also predicted to impact those with pre-existing mental health problems, as they are among those at greatest risk[25]. It is well documented that recessions increase social inequalities, which are drivers of poor mental health[26].

5.3.14. Reduced levels of physical activity is a growing issue nationally, with fewer people reporting that they are achieving the level of activity recommended by the NHS. Effective transport planning can play a role in encouraging active transport choices (e.g. walking and cycling) as well as improve accessibility to sports and recreation facilities.

5.3.15. Air pollution has been linked to diabetes and dementia – both chronic illnesses in the UK are expected to rise in future. Increased mortality and morbidity amongst diabetics is associated with increased nitrogen dioxide concentrations with long term exposure to traffic

[23] Age UK (2016) Risk of Loneliness in England
[24] Office for National Statistics, Disability in England and Wales, Census 2021
[25] Mental Health Foundation (2023) Mental Health and the Cost-of-Living Crisis: Another pandemic in the making?
[26] Wahlbeck, K. & McDaid, D. (2012), 'Actions to alleviate the mental health impact of the economic crisis', World Psychiatry

borne air pollution positively correlating with incidence of type two diabetes and increased mortality among diabetics[27].

5.3.16. In 2023, the government enacted the Levelling Up and Regeneration Act[28], setting out a broad approach to rebalancing the UK economy and addressing significant regional inequalities that restrict people, places, and prosperity. The Levelling Up and Regeneration Act has the potential to reduce inequalities, improving health outcomes. Working towards becoming a Marmot Community could help to reduce health inequalities across Great Yarmouth both now and in the future, in order to achieve six common goals as set out in Professor Sir Michael Marmot's original report from 2010[29]:

1. Give every child the best start in life
2. Enable all children, young people and adults to maximise their capabilities and have control over their lives
3. Create fair employment and good work for all
4. Ensure healthy standard of living for all
5. Create and develop healthy and sustainable places and communities
6. Strengthen the role and impact of ill-health prevention

5.3.17. Without the TS, it is likely that health issues related to transport within the borough will continue to persist, and without further intervention dimensions of health such as activity and social isolation may continue to deteriorate. The strategy would allow for Great Yarmouth to improve access to community services, greenspaces and sports/ recreational facilities to the areas where access to health and community services is poor. This will also help to support community cohesion and reduce isolation.

Issues and Opportunities

5.3.18. The following issues and opportunities have been identified in

5.3.19.

5.3.20.

5.3.21. Table 5-2 below.

[27] Committee on the Medical Effects of Air Pollutants (COMEAP), The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom, 2010
[28] Legislation.gov.uk (2023) Levelling Up and Regeneration Act 2023
[29] Fair Society, Healthy Lives, 'The Marmot Review', 2008

Table 5-2 – Issues and Opportunities for Human Health

Key Issues & Opportunities	Considerations for the TS
■ The population of the area is ageing; older people may not have access to appropriate forms of private transport to access healthcare, community, and social care facilities. ■ There are high levels of physical inactivity and obesity across Great Yarmouth. ■ Social isolation can lead to loneliness which has the potential to undermine well-being thereby impacting negatively on people's quality of life.	■ The TS should maximise opportunities to enhance walking and cycling routes and encourage the use of active travel. This will help to improve both access and levels of physical activity within Great Yarmouth. ■ There will be an ongoing need to provide inclusive services in order to meet the needs of older residents. ■ There will be a need to improve public transport users' confidence in returning to public transport post-COVID. ■ Transport must become accessible and affordable for all that live and work in Great Yarmouth to reduce inequalities and impacts of the rising cost of living. ■ Health funding could help deliver active transport initiatives. ■ There were 3.5 million disabled people in work in 2017, with the Government aiming to increase this to 4.5 million by 2027. By helping more disabled people into work, this will enable people to reach their potential and to achieve economic independence.

5.4 Economy and Employment

Summary of Current Baseline

5.4.1. In 2021, 58.8% of the population of Great Yarmouth were of working age (between 16-64 years) which is lower than both the regional and UK averages of 61.6% and 62.9% respectively[9].

5.4.2. Job density, the ratio of total jobs to population aged 16-64, within Great Yarmouth is recorded as 0.74 which is slightly lower than the regional average of 0.84 and the national average of 0.87[30]. GYBC's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. In the context of the study area approximately 54% of workers live in the study area.

5.4.3. Great Yarmouth has an economic inactivity of 29.3%, higher than the rate of 19.4% in the region and 21.2% in the UK[31]. Economic inactivity is mainly attributed to a high number of people in retirement (24% of population of 65 years and over)[11].

5.4.4. As of 2023, there are 2,790 active businesses in Great Yarmouth, comprising just 1% of businesses in the East of England region[32]. **Table 5-3**shows Great Yarmouth's key economic sectors compared to regional and national averages. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth, with a higher employment rate than both the regional and national averages.

Table 5-3 – Employment by Economic Sector in Great Yarmouth [30]

Industry	Great Yarmouth (%)	East of England (%)	England (%)
B : Mining And Quarrying	0.3	0.0	0.2
C : Manufacturing	8.1	7.4	7.6
D : Electricity, Gas, Steam And Air Conditioning Supply	0.3	0.2	0.4
E : Water Supply; Sewerage, Waste Management And Remediation Activities	0.8	0.8	0.7
F : Construction	4.1	6.7	4.9
G : Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles	16.2	15.5	14.0

[30] Labour Market Profile - Nomis - Official Census and Labour Market Statistics – Great Yarmouth (nomisweb.co.uk)
[31] Great Yarmouth's employment, unemployment and economic inactivity - ONS
[32] Office for National Statistics, UK business: activity, size and location

Industry	Great Yarmouth (%)	East of England (%)	England (%)
H : Transportation And Storage	3.4	5.6	5.0
I : Accommodation And Food Service Activities	18.9	7.9	8.0
J : Information And Communication	1.1	3.6	4.6
K : Financial And Insurance Activities	0.5	2.4	3.3
L : Real Estate Activities	0.9	1.9	1.9
M : Professional, Scientific And Technical Activities	6.1	8.0	9.1
N : Administrative And Support Service Activities	4.7	11.0	9.0
O : Public Administration And Defence; Compulsory Social Security	2.4	3.5	4.7
P : Education	8.1	8.7	8.6
Q : Human Health And Social Work Activities	21.6	12.4	13.5
R : Arts, Entertainment And Recreation	3.4	2.2	2.4
S : Other Service Activities	0.9	1.7	2.0

5.4.5. Great Yarmouth's cultural landscape is multi-layered ranging from street performance and festivals to historic buildings and museums, the Broads National Park, the circus and Golden Mile, amusement arcades and mediaeval town walls, giant skies and the finest of sands (see **Section 5.8** for more details), making it an attractive destination for tourists. Major tourist attractions in the borough include:

- Burgh Castle Roman Ruins
- The Waterways
- Caister On Sea Roman Fort
- Norfolk Fire Museum
- Greyfriars Cloisters
- St. Margaret's Ruins

- Time and Tide Museum
- Hippodrome Circus Museum
- The Waterways

5.4.6. NCC is part of the New Anglia Local Enterprise Partnership (LEP) to drive growth and enterprise in Norfolk and Suffolk[33]. The functions of the LEP will be integrated into the respective local authorities from 1st April 204. The LEP has added £1bn to the local economy over 10 years through its Business Growth Programme[34]. The LEP's Growth Deal has enabled infrastructure projects to receive important funding, such as new Great Yarmouth Learning Centre and University Campus to provide an enhanced route to economic activity and support growth sectors[35].

Future Baseline

5.4.7. The rising population in Great Yarmouth is accelerating the need for the delivery of additional housing, services and infrastructure. Growth in jobs is also anticipated in order to close the gap between increases in population and the need for employment. There is a need for improving accessibility to these jobs and training opportunities.

5.4.8. During and since the COVID-19 pandemic homeworking has been encouraged for those who are able, leading to a short-term reduction in travel demand, however, traffic flows have broadly returned to pre-pandemic levels. Peak periods for traffic congestion are likely to change with less people commuting for work. Public transport will need to adapt to these altered working and lifestyle patterns and encourage more passengers. It reduces need for significant new highway infrastructure and instead can focus on pinch-point improvements

5.4.9. Without the implementation of the TS, it is likely that increasing pressure will be placed on Great Yarmouth's roads, with rising vehicle numbers likely. This is likely to increase journey time for commuters, particularly to places of employment, as well as limit economic growth within the tourism sector. The introduction of the TS presents an opportunity to provide the availability of alternative transport modes for commuters and tourists.

Issues and Opportunities

5.4.10. The following issues and opportunities have been identified in

5.4.11.

5.4.12.

[33] New Anglia, Local Enterprise Partnership for Norfolk and Suffolk
[34] New Anglia LEP (2024) Lasting legacy left by New Anglia LEP as functions are transferred to county councils
[35] Introduction - Great Yarmouth Borough Council (great-yarmouth.gov.uk) and Town_Deal_Brochure_Final.pdf (great-yarmouth.gov.uk)

5.4.13. Table 5-4 below.

Table 5-4 – Issues and Opportunities for Economy and Employment

Key Issues & Opportunities	Considerations for the TS
■ If employment remains more concentrated in urban centres, this could put increased pressure on transport systems as commuting distances increase. ■ The working age population is lower than the average and there are high levels of economic inactivity. ■ Retirement is one of the main factors contributing to economic inactivity in Great Yarmouth. ■ There is a low density of jobs within Great Yarmouth compared to regional and national averages.	■ Great Yarmouth is in a prime location for new and existing businesses; however, it is currently not well connected to other parts of the UK, especially by rail. Therefore, the TS provides an opportunity to improve these connectivity gaps. ■ There is the potential to improve connectivity between business which will help to improve access to the skills pool as well supporting improvements in productivity. ■ The impact of factors such as Brexit, Covid-19, new vehicle and energy technologies, disruptive digital technologies, changing working patterns and preferences and extreme climactic events will play a part in determining the types of transport investment which will most benefit the economy.

5.5 Community Safety

Summary of Current Baseline

5.5.1. On average across Great Yarmouth, 32.2 people (per 100,000 resident population) are killed or seriously injured (KSI) on the borough's roads each year, lower than the regional average (46.7 people per 100,000 resident population) and the national average (42.6 people per 100,000 resident population)[20].

5.5.2. According to the Department for Transport (DfT), in 2022, 75% of fatalities and 62% of casualties of all severities in Great Britain were male[36]. In addition, 25% of fatalities and 29% of casualties were aged 17 to 29 years old and 23% of fatalities and 7% of casualties were aged 70 years old and over. In Norfolk, 56.6% of all casualties of all severities in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old[37]. Just 11.5% of all casualties were aged over 70.

5.5.3. During the same time period, 46% of fatalities on Great Britain's roads were car occupants, 22% were pedestrians, 21% were motorcyclists and 5% were pedal cyclists[36].

5.5.4. The East of England is among the top 5 safest regions in England. The overall crime rate in the East of England in 2022 was 80 crimes per 1,000 people, and the most common crimes were violence and sexual offences, which happened to roughly every 33 out of 1,000 residents[38].

5.5.5. The borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2014 and 2023, incidents on average grew by 6.7% per year[39]. The overall crime rate in Great Yarmouth in 2023 was 129 crimes per 1,000 people, 98% higher than the Norfolk (county) average (65 per 1,000 residents) and East of England (regional) average (80 per 1,000 residents)[40].

5.5.1. Crime deprivation is one of seven domains that combine to produce the overall Index of Multiple Deprivation (IMD) and measures the risk of personal and material victimisation at local level. Levels of crime deprivation are relatively low in Great Yarmouth, ranking 121st out of 317 local authorities within the UK (an indicator of 1st being the most deprived neighbourhood, and 317 being the least deprived neighbourhood)[14]. These are shown in **Figure B-4** in **Appendix B**.

5.5.2. In 2021/22, the number of reported sexual offences committed on public transport in the UK decreased by 7.3% from 2019/20 (52.3% of these assaults were against females). The number of drug offences increased by 8.7% to 3,114 in 2021/22 (93% of these being possession of controlled drug)[41].

Future Baseline

5.5.3. The number of people killed or seriously injured on the roads in Great Yarmouth is lower than the regional and national averages. As the population increases, there are expected to

[36] DfT (2023) Reported road casualties Great Britain, provisional results: 2022
[37] Department for Transport, Road traffic statistics
[38] CrimeRate, East of England Crime Safety Statistics
[39] Great Yarmouth Crime | Crime Stats & Graphs (varbes.com)
[40] Great Yarmouth, Norfolk Crime and Safety Statistics | CrimeRate
[41] British Transport Police, Statistical Bulletin 2021/22

be a greater number of vehicles on the roads, which could result in an increase in the number of accidents.

5.5.4. National Highways has set a target to reduce the number of people KSI on the strategic road network by at least 50% by the end of 2025 against the 2005-2009 baseline, with a clear long-term goal to bring the number of people killed or injured on the network as close as possible to zero by 2040[42].

5.5.5. The Office for Rail and Road's annual assessment in 2020 reported that this target was met, with an estimated 905% of travel on roads rated at least 3-star in 2019[43]. This could help contribute to a reduction in serious road accidents in Great Yarmouth.

5.5.6. The TS presents an opportunity to reduce the number of accidents on roads in Great Yarmouth and reduce the number of people KSI. The improvement of routes for pedestrians and cyclists may contribute to reductions in anti-social behaviour through improving the public realm and lighting improvements.

5.5.7. Without the TS, there may be missed opportunities to incorporate designing out crime principles which reduces the vulnerability of people and property to crime by removing opportunities that may be provided inadvertently by the built environment. It also aims to reduce fear of crime and, in doing so, helps to improve people's quality of life.

Issues and Opportunities

5.5.8. The following issues and opportunities have been identified in **Table 5-5** below.

[42] Highways England (2020) Highways England Delivery Plan 2020-2025
[43] Office of Rail and Road (2020) Annual Assessment of Highways England End of Road Period 1 2015-2020

Table 5-5 – Issues and Opportunities for Community Safety

Key Issues & Opportunities	Considerations for the TS
▪ Crime on public transport in the UK is on the rise, particularly with regards to sexual assault, violent crimes and disruption. ▪ As the population within Great Yarmouth increases there are expected to be a greater number of vehicles on the borough's roads, which may result in an increase in the number of accidents and those KSI on roads. ▪ Children in the most deprived neighbourhoods are nearly three times more likely to be KSI as a pedestrian compared to non-deprived neighbourhoods[44]. ▪ There are opportunities to increase the safety of active transport modes such as cycling and walking. ▪ Vulnerable road users such as cyclist and pedestrians are more likely to be casualties.	▪ There are opportunities for TS proposals to include designing out crime principles, particularly in those areas with high crime rates and crime deprivation. ▪ There is a need to engage with communities and encourage the reporting of crimes as well as ensuring safety for all transport users. ▪ The TS should seek opportunities to increase the safety of active transport modes such as cycling and walking. ▪ The strategy should support the implementation of the Road Safety Strategy and a Safe Systems approach. ▪ There are also opportunities to improve safety on public transport across the borough, especially for women. ▪ The TS will need to ensure improvements to transport networks, including improving lighting, to ensure safety on networks.

5.6 Biodiversity and Natural Capital

Summary of Current Baseline

5.6.1. There are a large range of nationally and locally designated sites[45] within the GYBC including:

- 6 Sites of Special Scientific Interest (SSSI);
- 5 National Nature Reserves(NNR)
- 5 Local Nature Reserves (LNR)

5.6.2. In addition to these there are numerous internationally designated sites within GYBC, outlined below in **Table 5-6**.

[44] Centre for Transport Studies, Road Safety Research Briefing 1: Children and Traffic: Those in deprived areas still at disproportionate risk
[45] Natural England, Designated Sites View

Table 5-6 – International Designations in Great Yarmouth[45]

Ramsar	Special Area of Conservation (SAC)	Special Protection Areas (SPA)
▪ Broadland ▪ Breydon Water	▪ The Broads ▪ Winterton-Horsey Dunes ▪ Southern North Sea	▪ Breydon Water ▪ Outer Thames Estuary ▪ Greater Wash ▪ Broadland ▪ Great Yarmouth North Denes

5.6.3. All designated sites are shown on **Figure B-5** in **Appendix B**.

5.6.4. There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England under section 41 of the Natural Environment and Rural Community (NERC) Act 2006[46]. Priority habitats are a focus for conservation action in England. These habitats include (but are not limited to) coastal saltmarsh, coastal sand dunes, intertidal mudflats, saline lagoons, lowland calcareous grassland, lowland heathland, reedbeds, and lowland mixed deciduous woodland. The region's coastal habitats are particularly important, but it also contains some areas of ancient and semi-natural woodland, which are a valuable resource. As well as providing ecologically rich habitats for wildlife, woodlands play an important role in flood amelioration, soil conservation, carbon storage and climate regulation, recreation and tourism.

5.6.5. The UK National Ecosystem Assessment (UK NEA)[47] revealed that the loss, fragmentation and deterioration of natural habitats in the UK since the 1940s has caused a decline in the provision of many ecosystem services. **Table 5-7** shows Great Yarmouth's species richness data according to the Natural Environment Valuation Online (NEVO) tool[48].

[46] Natural Environment and Rural Community 2006. Available online at: https://www.legislation.gov.uk/ukpga/2006/16/contents
[47] UK National Ecosystem Assessment (2011) The UK National Ecosystem Assessment Technical Report. UNEP-WCMC, Cambridge.
[48] University of Exeter, Natural Environment Valuation Online tool (NEVO)

Table 5-7 – Species Richness in Great Yarmouth

Species	Great Yarmouth
Plants	13 / 38
Invertebrates	12 / 25
Birds	12 / 17
Mammals	11/ 14
Lichen	0 / 5
Herptiles	1 / 1
Total	**49 / 100**

5.6.6. The NEVO tool also indicates that out of the 16,600 ha comprising Great Yarmouth, 58.4% of the land cover is agriculture. Due to the high cover of agricultural land, food provision is an important ecosystem service within Great Yarmouth. In addition to primary agricultural products, farmland can help prevent soil erosion, support flood risk through surface water storage and runoff attenuation and sequester carbon.

5.6.7. Natural capital is a key theme in the Government's 25-year Environment Plan: A Green Future[49]. The UK's natural capital accounts[50] show that approximately 20-25 million tonnes of carbon have been sequestered by vegetation in the UK each year between 2007 and 2015, whilst around 1.5 million tonnes of air pollutants have been removed each year. This equates to a monetary value of approximately £1.5 billion for carbon sequestration and £1 billion for pollution removal in 2015. In 2020, air pollution accounted for £2.4 billion of regulating services and led to an estimated 2,001 deaths being avoided and prevented 49,126 life years being lost[51]. Natural capital therefore has a mitigating effect on the emissions of carbon and air pollutants associated with transport.

Future Baseline

5.6.8. The 2023 State of Nature Report[52] highlights the general decrease in biodiversity in the UK. Since 1970, species abundance has decreased by 193% and species distribution has decreased by 135%. Of the 8,431 species that have been assessed using the International Union for Conservation of

[49] A Green Future: Our 25 Year Plan to Improve the Environment (2018)
[50] Office for National Statistics (2019) UK natural capital accounts: 2019
[51] Office for National Statistics (2023) UK natural capital accounts: 2022
[52] NBN (2023) State of Nature Report

Nature (IUCN) Regional Red List criteria, 16.15% are currently threatened with extinction from Great Britain and 2% are already extinct. A rising population and associated need for development may cause further loss, fragmentation and degradation of habitats, causing a further decline in biodiversity.

5.6.9. Climate change presents another threat to ecosystem services and biodiversity. Current IPCC[53] predictions for temperature increases are expected to be 2°C by the middle of the 21st century. This increase in temperature is expected to lead to increases in flooding events and northward colonisation of species in the UK. In order to preserve biodiversity and natural habitats, soft engineering and nature-based solutions will need to be used over traditional hard engineering.

5.6.10. The Environment Act 2021[54] specifies a mandatory 10% increase in biodiversity net gain (BNG) for new developments. This has applied since February 2024 for developments that fall under the Town and Country Planning Act 1990[55], and from 2025 will apply to Nationally Significant Infrastructure Projects (NSIPs). Biodiversity on development sites will need to be preserved, with additional mitigation put in to increase biodiversity. Unless exempt, this will apply to small developments from April 2024.

5.6.11. This increase in biodiversity may be provided on site enhancement, or through off-site compensation. As part of this, counties are required to undertake Local Nature Recovery Strategies (LNRS). Strategies must agree priorities for recovery and identify the most valuable existing areas for nature, as well as areas which could become of particular importance, or where the recovery or enhancement of biodiversity could make a particular contribution to other environmental benefits. Norfolk County Council and Suffolk County Council received funding in 2023 to prepare a LNRS for their respective counties[56].

5.6.12. Great Yarmouth is a member of the Norfolk Green Infrastructure and Recreational Impact Avoidance and Mitigation Strategy (GIRAMS) strategic partnership, which aims to ensure no adverse effects are caused to European sites across Norfolk, either alone or in-combination from qualifying developments[57]. The Norfolk GIRAMS sets out a strategic, cross-boundary approach to mitigating the in-combination effects of development on these designated areas and allows strategic mitigation to be delivered across Norfolk, funded via developer contributions.

5.6.13. An increase in the number of private vehicles on the roads and associated increases in noise pollution, air pollution, and contaminated surface water run-off, could restrict the ability of existing roadside habitats (including trees) to reduce these impacts. Even with the transition towards electric vehicles, particulate emissions are predicted be problematic into the future due to the impacts of non-exhaust emissions.

5.6.14. However, there is also an increasing trend amongst governments and businesses to be “Future Ready”, which includes addressing issues surrounding biodiversity, resource use, and climate

[53] IPCC (2022) Climate Change 2022: Impacts, Adaptation and Vulnerability
[54] Environment Act (2021)
[55] Town and Country Planning Act 1990
[56] Norfolk County Council (2023) Norfolk and Suffolk councils given authority and funding to help nature's recovery
[57] Borough Council of King's Lynn & West Norfolk, Habitat Mitigation (GIRAMS)

change. Investing in natural capital and delivering resilient nature-based solutions is an effective way of addressing these issues simultaneously. As such, the multiple benefits that arise from taking a natural capital approach significantly contribute to sustainable development, often at lower cost than more conventional infrastructure[58].

5.6.15. There are opportunities that will help to conserve and enhance biodiversity and natural capital, and which would be expected to continue without the TS. However, there is potential that without the TS some sites and habitats could be threatened by development of infrastructure in inappropriate locations. The TS may also provide opportunities to increase biodiversity and natural capital assets including implementing green infrastructure (GI) along transport corridors.

Issues and Opportunities

5.6.16. The following issues and opportunities have been identified in **Table 5-8** below.

Table 5-8 – Issues and Opportunities for Biodiversity & Natural Capital

Key Issues & Opportunities	Considerations for the TS
■ There are a wide range of statutory local, national and international sites designated for nature conservation across Great Yarmouth, which may be affected by increased transport infrastructure development. Habitats and wildlife corridors outside of these protected areas are especially at risk of being lost, damaged or fragmented by transport development. ■ New transport routes will need to be carefully planned so that they do not cause adverse effects on ecosystems with high (potential) ecosystem services provision. ■ Given that ecosystem services are the benefits that nature provides to people, areas of high (potential) provision are often the green and blue spaces close to centres of population, as well as connecting habitats that link these with more remote designated habitats and landscapes.	■ TS presents opportunities to be strategic in the enhancement of biodiversity at the landscape scale through the use of GI and biophilic design. These can be combined with priorities for wider ecosystems services benefits to deliver landscape wide environment gain for biodiversity and people. ■ The TS present opportunities to achieve biodiversity net gain (BNG) through the development of its policies and schemes. ■ There is scope to encourage the redevelopment of existing assets as well as build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors in order to improve habitat connectivity. ■ Enhancing the quality of transport 'soft estate' can also help improve the resilience of the transport network to

[58] IPBES (2019) Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

Key Issues & Opportunities	Considerations for the TS
■ There is an opportunity for the TS to create and enhance ecological corridors along transport routes, to improve habitat connectivity between designated sites and fragmented habitats. ■ There is an opportunity to link biodiversity enhancement with carbon sequestration through creation and restoration of habitats including wetlands, woodlands and grasslands. ■ There is an opportunity to reduce road mortality of protected and priority species by incorporating wildlife crossings, such as underpasses and overpasses, where transport routes intersect with key habitats. ■ There is an opportunity to implement measures to reduce light and noise pollution from transport infrastructure, which can negatively impact nocturnal species such as bats and birds.	future climate change, for example by reducing flood risk and providing shading and cooling benefits. ■ Human health and quality of life can be improved by taking a natural capital approach to the TS. ■ Views of vegetation from other modes of transport (e.g. along roads and railways) can also enhance mental wellbeing, for example by reducing stress levels. ■ There is scope to encourage the redevelopment of existing assets as well as build new, to focus development away from areas of high biodiversity and ecosystem service provision, and to enhance the quality of the transport 'soft estate' alongside existing and new transport corridors in order to improve habitat connectivity.

5.7 Landscape and Townscape

Summary of Current Baseline

5.7.1. An Area of Outstanding Natural Beauty (AONB), now referred to as a National Landscape, is a designated landscape whose distinctive character and natural beauty are deemed precious enough to be safeguarded in the national interest. There is one National Landscape in Great Yarmouth: Norfolk Coast. This is shown in **Figure B-6** in **Appendix B.** The key qualities of natural beauty of the Norfolk Coast are[59]:

- Dynamic character and geomorphology of the coast;
- Strong and distinctive links between land and sea;
- Diversity and integrity of landscape, seascape and settlement character;
- Exceptionally important, varied and distinctive biodiversity, based on locally distinctive habitats;
- Nationally and internationally important geology;

[59] Norfolk Coast Partnership (2022) Management Plan 2019-2024

- Sense of remoteness, tranquillity and wildness; and
- Richness of archaeological heritage and historic environment, particularly that relating to the coast and its character.

5.7.2. Great Yarmouth falls within a number of Natural England's National Character Areas (NCAs)[60]. These are defined in **Table 5-9** below. **Figure B-7** in **Appendix B** shows the boundaries of these NCAs.

Table 5-9 – National Character Areas (NCAs) in Greater Yarmouth[60]

NCA	Description
82: Suffolk Coast and Heaths	A predominantly low-lying landscape with some areas along the coastal plain below or at sea level. Changes in relief are slight, but enough to distinguish the Sandlings, sandy rolling 'upland' between estuaries. It is a predominantly low-lying landscape with some areas along the coastal plain below or at sea level. Changes in relief are slight, but enough to distinguish the Sandlings, sandy rolling 'upland' between estuaries.
80: The Broads	Around 94 per cent of the NCA is open country and the remaining 6 per cent is urban. The landscape is low-lying with some areas below sea level and has characteristic open, extensive views over slow meandering rivers, drained marshland and coastal plain in the lower valley flood plain. Views inland are framed by the tree-lined valley ridge lines. Rivers dominate the landscape with the middle and lower river reaches flowing between flood banks, above the level of the surrounding land which is drained by dykes, ditches and pumps.
79: North East Norfolk and Flegg	A generally flat, low-lying landscape, compared to adjacent areas, which has limited topographic variation and slopes gently from west to east, becoming flatter as it merges with the Broads. Soils are deep, loamy and free draining. They are very fertile and support productive arable farming. Horticultural crops are grown on the lighter soils towards the coast

5.7.3. Trees and woodlands are important features of the landscape. Out of the total 16,600 ha of land cover of Great Yarmouth, 982ha is woodland area[48]. Key areas of woodland and open space in the borough include[61]:

- Blake Drive Woodland Area

[60] Natural England (2014) Corporate report: National Character Area profiles
[61] Parks & Gardens - Great Yarmouth (visitgreatyarmouth.co.uk)

- Crow Hall Green
- Victoria Road Park
- Blake Drive Woodland Area
- Beacon Park woodlands

5.7.4. The Norfolk Coast is visited annually by approximately 2.8 million people, with panoramic seascapes being a key feature of interest. The flat, low-lying, open and remote coastal plain dominates the North Norfolk Coast landscape (refer to **Table 5-9**) and is one of the few remaining examples of relatively undeveloped and unspoilt coastal areas of this character.

5.7.5. Key settlements in the borough include Great Yarmouth, Caister-on-sea, Bastwick, Belton, Bradwell, Browston Green, Burgh Castle and Burgh St Margaret. Many settlements developed because of their strategic importance in relation to geographical features, such as river crossings, coastal areas or valleys in ranges of hills.

Future Baseline

5.7.6. Designated landscapes, such as National Landscapes, are given the highest status of protection against development within their boundaries to conserve their landscape and scenic beauty. However, they may still be impacted indirectly through changes to their setting and tranquillity due to increased traffic flows, change in land use, visitor pressure and light and noise pollution. Climate change will also put pressure on landscape and seascape designations as new pests and diseases emerge sea levels rise, and extreme weather increase the stresses on nature conservation. Ongoing pressures on public finances and the need to reduce both central and local authority budgets will continue to have a direct impact upon the management of designations.

5.7.7. Climate change will also put pressure on the designations as new pests and diseases emerge and extreme weather increasing stresses on nature conservation. Ongoing pressures on public finances and the need to reduce both central and local authority budgets will continue to have a direct impact upon the management of designated areas.

5.7.8. Landscape, seascape and townscape character and quality is under threat from future development (including the construction and operation of transport infrastructure) through, for example, loss of tranquillity, increased lighting, visual intrusion, and the incremental loss of landscape features and characteristic elements.

5.7.9. Similarly, pressures from expanding populations put more strain on existing systems, and more pressure on recreational landscapes and tourist attractions.

5.7.10. Without the TS there may be reduced opportunities for new infrastructure to enhance and support the local landscape and townscape character through, quality design, provision of GI and/or habitat creation. The TS presents an opportunity to support vitality and placemaking among Great Yarmouth’s townscapes through encouraging good design and incorporating of green infrastructure (GI).

Issues and Opportunities

5.7.11. The following issues and opportunities have been identified in **Table 5-10** below.

Table 5-10 – Issues and Opportunities for Landscape and Townscape

Key Issues & Opportunities	Considerations for the TS
■ Transport infrastructure has the potential to cause direct and indirect impacts on designated landscapes, eroding the character and quality of the landscapes, increasing pollution and eroding the visual amenity for residents and visitors alike. ■ Future growth in some locations could risk compromising landscape, seascape and townscape character and features, however a landscape-led design with GI principles in place, could play a key role in the enhancement of the natural environment, visual amenity and physical and mental health of its people. ■ Climate change will also put pressure on the landscape and seascape designations as new pests and diseases emerge sea levels rise and extreme weather increasing the stresses on nature conservation.	■ The design of transport infrastructure requires a landscape-led approach to design, to ensure the best placement and integration of the proposed development into the existing landscape, especially in sensitive locations. Landscape-led designs can help contribute to the climate change agenda, health and wellbeing, and tackling pollution in all its forms (such as air, light and noise). ■ The TS must consider the importance of landscape, seascape and townscape character when outlining options, ensuring development does not erode the quality and key characteristics of the landscape and townscape, and instead respects it. ■ There is potential for transport to improve access to the countryside, to promote sustainable tourism and to provide greater awareness of the Norfolk Coast National Landscape. ■ Increasing access to the countryside, whilst increasing pressure on those resources, can greatly improve health and wellbeing, help combat air pollution, provide storm water management and reduce flooding (contributing to climate change adaption) and provide connectivity through urban built form to the countryside for wildlife. It can also bring new audiences to tourist attractions and enable better appreciation of historic assets through creating new views and vistas, providing information and enhancing access. ■ The incorporation of ‘Future Ready’ Landscape principles into landscape-led designs would help ensure transport

Key Issues & Opportunities	Considerations for the TS
	infrastructure is designed for longevity in the 21st century, for both its people and its natural environment.

5.8 Historic Environment

Summary of Current Baseline

5.8.1. There are a number of designated assets throughout GYBC including:

- 14 Scheduled Monuments;
- 432 Listed Buildings; and
- One Registered Parks and Gardens.

5.8.2. More details of these can be seen in Figure B-8 in Appendix B.

5.8.3. Local planning authorities are obliged to designate conservation for areas in their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. There are 19 conservation areas located in GYBC[62].

5.8.4. Historic England's Heritage at Risk (HAR) programme helps to understand the overall state of England's heritage sites. It identifies those sites that are most at risk of being lost as a result of neglect, decay or inappropriate development. In Great Yarmouth there are 25 heritage assets on the HAR register[63].

5.8.5. Since medieval times, Great Yarmouth has been surrounded by one of the most complete town walls in England. Eleven of the original towers - built between 1261 and 1400 - have survived. The quaysides along the river Yare showcase historic merchant houses, while the seafront offers one of the best collections of Edwardian entertainment architecture in the country[64].

5.8.6. Norfolk Coast National Landscape is also a rich archaeological resource, which was one of the key reasons for its designation. The National Landscape is rich in archaeological and historical sites, with remains and features dating back to the early Pleistocene[65]. The Norfolk Coast has one of the most important archaeological sites in Europe, the Happisburgh footprints. These are the oldest known hominid footprints outside of Africa and mark the location of the first known human presence in Britain[66].

5.8.7. Non-designated and unknown heritage assets may be present around Norfolk which may be of high value. These include, but are not limited to, locally listed buildings. The Norfolk Monuments Management project focuses on historic monuments that have no legal protection. Support is targeted on activities that have potential to harm heritage assets,

[62] Conservation areas - Great Yarmouth Borough Council (great-yarmouth.gov.uk)
[63] Historic England, Heritage at Risk. East of England Register 2022
[64] Introduction - Great Yarmouth Borough Council (great-yarmouth.gov.uk)
[65] Norfolk Coast Protected Landscape, Management Plan 2019-2024 (Revised 2022)
[66] Natural History Museum, Discovering the oldest human footprints in Europe

including agricultural, drainage and forestry operations and heathland, river and pond/moat restoration[67].

Future Baseline

5.8.8. Protection of the historic environment is firmly embedded in national and local planning policy, and this has been the case since 1990. This policy has developed independently of the European Union and is unlikely to change with the Retained EU Law Bill. However, whilst direct (physical) impacts on designated historical sites are strongly restricted, adverse effects on the setting of designated heritage assets does still occur, for example relating to visual intrusion, or aspects such as traffic, lighting and noise.

5.8.9. Historic England provides specific guidance on managing change within the settings of heritage assets, including archaeological remains and historic buildings, sites, areas, and landscapes, set against the background of the NPPF and the related guidance given in the Planning Practice Guide (PPG). In addition to the visual setting, 'setting' can also include intangible characteristics such as sound, smells and historic associations / relationship.

5.8.10. One trend over the last few years which may well continue is the reduction in funding for Historic England and county and local authorities, with increased pressure on the case workload of Archaeological Officers, Conservation Officers and Historic England advisors. This can have an impact on the response times for the provision of planning advice.

5.8.11. The number of vehicles on the roads is likely to increase as Great Yarmouth's population rises, increasing air pollution and road traffic. This has the potential to impact and degrade the fabric and settings of listed buildings, scheduled monuments and parks and gardens.

5.8.12. Expansion of roads and the development of new residential and commercial areas, to accommodate the increased number of private vehicles, road traffic, and population increase, will put pressure on land space and could result in land take from historical assets.

5.8.13. Protection of the historic environment is likely to be maintained through existing local, regional and national plans and policies, however without the TS there may be reduced opportunities for new development to enhance and support the local heritage character and strike the right balance between protection and enhancement the need for development. The TS presents opportunities to reduce the number of vehicles on local roads, reducing the degradation of heritage assets.

[67] Norfolk Heritage Explorer. The Norfolk Monuments Management Project, 2019

Issues and Opportunities

5.8.14. The following issues and opportunities have been identified in **Table 5-11** below.

Table 5-11 – Issues and Opportunities for Historic Environment

Key Issues & Opportunities	Considerations for the TS
▪ There is potential for development to encroach on assets, particularly affecting the settings of assets through increased noise and visual effects. ▪ New and/or upgraded transport infrastructure across Great Yarmouth has the potential to affect the survival, fabric, condition and setting of cultural heritage assets (both above and below ground) in addition to increased pressure from population growth. ▪ Highly significant archaeological remains, whether designated or not, normally require preservation in situ. This clearly has implications and can represent a significant constraint to future scheme design, which should respect, retain and protect the remains (e.g. through avoidance and redesign). ▪ Vehicle damage and pollution can adversely affect both listed buildings and scheduled monuments, so reducing vehicle movements within historic urban areas is also an important area to address.	▪ There are opportunities for enhancing the setting of heritage assets through the development of schemes to reduce traffic noise and enhance accessibility through active modes and asset settings. ▪ The TS should preserve and enhance the current settings of above ground heritage assets.

5.9 Water Environment

Summary of Current Baseline

5.9.1. Great Yarmouth is predominantly underlain by three Principal Aquifers[68]: Crag, Chalk, Lower Greensand and Oolites. A Principal Aquifer usually provides a high level of water storage. It may support water supply and/or river base flow on a strategic scale, however these have high vulnerability to pollution. The chalk is the major aquifer of southern and eastern England and has a well-developed interconnected network of fractures.

5.9.2. The borough falls within the Anglian River Basin District, and the following Management Catchments and Operational Catchments:

- Broadland Rivers Management Catchment (Bure Operational Catchment and Waveney Operational Catchment)
- Anglian TraC

5.9.3. The Water Framework Directive (WFD)[69] sets an objective of aiming to achieve at least 'good' status for all waterbodies by a set deadline specific for each waterbody. Most of the monitored waterbodies are 'main rivers' that are under the jurisdiction of the Environment Agency.

[68] British Geological Survey, Principal aquifers in England and Wales
[69] Department for Environment, Food & Rural Affairs (2014) Water Framework Directive implementation in England and Wales: new and updated standards to protect the water environment

5.9.4. Of the 32 water bodies across Great Yarmouth, just 3.1% are achieving 'good' ecological status, falling far short of the WFD target for 100%. The percentage of water bodies achieving 'moderate' status was 81%, whilst 12.5% had 'poor' status. All water bodies failed based on their chemical status.

5.9.5. The reasons for not achieving good is predominantly due to agriculture and rural land management, sewage discharge by the water industry, and urban and transport issues, whereby there is pollution from rural areas, towns, cities and transport, and physical modification which change the natural flow of the river.

5.9.6. In the UK, the Environment Improvement Plan (EIP)[70] is the first revision of the 25 Year Environment Plan (25YEP)[71]. The EIP includes the following targets and commitments:

- Reduce nitrogen, phosphorus and sediment pollution from agriculture into the water environment by at least 40% by 2038, compared to a 2018 baseline, with an interim target of 10% by 31 January 2028, and 15% in catchments containing protected sites in unfavourable condition due to nutrient pollution by 31 January 2028.
- Restore 75% of our water bodies to good ecological status.
- Require water companies to have eliminated all adverse ecological impact from sewage discharges at all sensitive sites by 2035, and at all other overflows by 2050.

5.9.7. The Anglian river basin district river basin management plan, developed in 2016, and updated in 2018, states that 42.6% (257) of water bodies have an objective of maintaining of aiming to achieve good ecological status by 2027[72].

5.9.8. National flood zone data correlates with the location of main rivers and ordinary watercourses as areas with the greatest risk of flooding. The government's flood map[73] for planning shows that a considerable portion of the borough, specifically in the flat and low-lying coastal plain of the southwest region, lies within in flood risk zone 3, meaning it has a high probability of flooding.

5.9.9. There are numerous records of historic flooding affecting the borough. The floods of January 1953 badly affected the east coast of England, when a storm surge occurred at the same time as a high spring tide[74]. Recorded flood outlines and areas on flood risk zones 2 and 3 (at highest risk of flooding) can be seen in **Figure B-9** in **Appendix B**.

[70] Department for Environment, Food & Rural Affairs (2023) Environmental Improvement Plan 2023
[71] Department for Environment Food & Rural Affairs (2018) 25 Year Environment Plan (Updated 2023)
[72] Department for Environment, Food & Rural Affairs and Environment Agency (2016) Anglian river basin district river basin management plan (Updated 2018)
[73] Environment Agency, Flood Map for Planning
[74] Met Office, Storm surge

5.9.10. Norfolk's Local Flood Risk Management Strategy (LFRMS) identifies 37,000 properties are at risk of flooding during a rainfall event in a 1-in-200-year flood risk[75]. The strategy indicates Great Yarmouth as the second most likely Norfolk settlement (after Norwich) to be affected by surface water flood risk (with 1300 properties at risk).

5.9.11. The Great Yarmouth Strategic Flood Risk Assessment (SFRA) provides further detail on the extent of flood risk associated with main rivers and the sea in the borough. Great Yarmouth borough is partially covered by the Waveney, Lower Yare and Lothingland Internal Drainage Boards (IDB) and the Water Management Alliance. The Water Management Alliance covers five IDBs; the Broads IDB partially covers the borough. The SFRA details the specific standard of protection for the 18 IDBs within the borough and summarises a high-level review identifying the main settlements where flood risks and extents are more prominent.

5.9.12. The Anglian Water regions has the highest level of water consumption from business and industry in the country - 15% of all water taken from the environment is used for non-household supply. Business and industry in this region are higher-than-average water users, consuming on average around 0.6 litres of water per day relative to economic output, compared to 0.5 litres for England as a whole[76].

Future Baseline

5.9.13. In terms of water quality, the requirements of the WFD should lead to continued improvements to water quality in watercourses. However, water quality is also likely to continue to be affected by pollution incidents; runoff from urban, transport and agricultural areas; the presence of non-native species; and physical modifications to water bodies.

5.9.14. Meeting water supply demand over the next 25 years will be challenging in the East of England. Deficits may develop across England by the 2050s due to climate change alone; these would be exacerbated by population growth. There are significant competing demands on scarce water resources, with the needs of different users having to be traded-off against each other.

5.9.15. At a regional level, the future implications of climate change projections include: increased coastal and flood-plain flood events leading to damage to property and disruption to economic activity; water shortages; and higher incidence of damage to transportation, utilities, property and communications infrastructure caused by an increase in the number of extreme weather events (e.g. heat, high winds and flooding).

5.9.16. The TS presents opportunities to provide a targeted approach to addressing flood risk and water quality issues. It could support sustainable urban drainage systems (SUDs) and GI

[75] Norfolk County Council (2015) Local Flood Risk Management Strategy
[76] Anglian Water, Thriving East

requirements within new infrastructure developments in order to adapt to climate change and counteract flood risk.

Issues and Opportunities

5.9.17. The following issues and opportunities have been identified in **Table 5-12** below.

Table 5-12 – Issues and Opportunities for Water Environment

Key Issues & Opportunities	Considerations for the TS
■ The physical and chemical quality of water resources is an important aspect of the natural environment and can be adversely affected by pollution associated with surface water runoff from new or existing transport infrastructure, as well as by changes to waterbodies which can affect their quality as a habitat. ■ Of the 32 water bodies, just 3.1% are achieving 'good' status, falling far short of the WFD target. ■ Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk in Great Yarmouth. ■ Increased development (including transport infrastructure) can increase flood risk on a local and catchment scale. ■ There are significant competing demands on scarce water resources, with the needs of different users having to be traded-off against each other. ■ Upgrading existing infrastructure provides the opportunity to improve pollution control, include the reduction of litter. ■ Upgrading existing infrastructure provides an opportunity to strategically review existing infrastructure, and to improve its resilience to flooding and climate change through locating, designing, and building infrastructure with long term resilience in mind. ■ Possible opportunity to reduce flood risk through design of new transport infrastructure, e.g. embankments, tree planning, and flood management.	■ New transport infrastructure could result in improved drainage, reducing discharge from roads and surface water flooding. ■ The TS should ensure that development in close proximity to a watercourse should include provision of natural, undeveloped buffer zones. These can help contribute to natural flood management whilst also allowing access for maintenance and emergency works. ■ The TS could seek to incorporate sustainable urban drainage systems (SUDs) and GI requirements within new developments in order to adapt to climate change and counteract flood risk. GI can also reduce surface water runoff and have water quality co-benefits.

5.10 Air Quality

Summary of Current Baseline

5.10.1. Air quality plays an important role in human health. Poor air quality can have large impacts on health through short term exposure, but particularly through long term exposure, see **Section 5.3** of this Report. According to the World Health Organization (WHO), air quality is one of the greatest environmental risks to human health. Reducing air pollution can result in reductions in stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma. In 2019, 99% of the world's population were living in places where the WHO air quality guidelines levels were not met, and that ambient air pollution caused 4.2 million premature deaths worldwide in 2019[77].

5.10.2. In the UK, The Environmental Improvement Plan 2023[78] shows that air quality in the UK has improved significantly in recent decades. Between 2010 and 2020 emissions of fine particulate matter ($PM_{2.5}$) decreased by 18%; emissions of nitrogen oxides (NO_x) decreased by 44%; sulphur dioxide (SO_2) by 70%, non-methane volatile organic compounds by 14%, and ammonia (NH_3) by 0.2%. Reductions in these pollutants have produced significant benefits for human health and the environment. However, air pollution continues to be the biggest environmental risk to human health, with particular hotspots in some urban areas.

5.10.3. Poor air quality also contributes to the deterioration of ecological receptors. Ecosystems are negatively impacted by air pollution, particularly emissions such as sulphur and nitrogen, as it affects their ability to function and grow[79].

5.10.4. The most significant air pollutants from the transport sector are NO_X and PM. Transport contributed a substantial portion of these air pollutants to the UK's domestic total: a third of nitrogen oxides, 14% of $PM_{2.5}$ emissions, and 12% of PM_{10} emissions came from transport in 2020[80].

5.10.5. Great Yarmouth has a lower levels of air pollution compared to the UK overall[81]. The average annual mean for nitrogen dioxide in the majority of the borough is below 12 µg m^{-3}. In Great Yarmouth, the average annual mean is predominantly 8 – 27 µg m^{-3}, which is still lower than the UK air quality objective (AQO)[82] of 40 µg m^{-3}. The borough does not exceed the AQO for either PM10 or PM2.5.

[77] World Health Organisation (2022) Ambient (outdoor) air pollution
[78] Environmental Improvement Plan 2023
[79] UNECE. Air Pollution, Ecosystems and Biodiversity
[80] Department for Transport (2022) Transport and environment statistics
[81] Defra. UK Air Information Resource. UK Ambient Air Quality Interactive Map
[82] Defra. UK Air Information Resource. UK Air Quality Limits

5.10.6. Where air quality objectives are not likely to be achieved, an Air Quality Management Area (AQMA) must be declared. These are predominantly associated with vehicle traffic and emissions, principally NOx, although a few have been declared for SO_2. As such, AQMAs are mostly located within urban areas and sections of the road network which are heavily trafficked and frequently congested.

5.10.7. There are no Air Quality Management Areas within the borough and therefore no specific Air Quality Action Plan is in effect. However, a number of measures forward over recent years to improve air quality, and to reduce the exposure of the public to adverse air quality.[83] Where Key completed measures are:

- Improvement of a safer cycle and walking route between Great Yarmouth Train Station and the town centre;
- Refuse collection route optimisation (this will continue to be periodically reviewed);
- Review of street lighting and removal of unnecessary units; and
- Encourage behavioural changes to more sustainable modes of transport.

Future Baseline

5.10.8. The UK Clean Air Strategy outlines plans to reduce emission of pollutants and improve air quality by the year 203084. This will include reductions in public exposure to particulate matter, ammonia, nitrogen oxides, sulphur dioxide, and non-methane volatile organic compounds. However, the 29% increase in road traffic from 1990 and 2018 and 6% increase in GHG emission from 1990 to 2017 is likely to continue.

5.10.9. The number of vehicles on the roads is likely to increase as the population rises, putting air quality at further risk of degradation. More severe and frequent heat episodes (associated with the changing climate) can also worsen air quality, and therefore asthma, respiratory diseases and allergic reactions, without further intervention.

5.10.10. The UK wide ban on the new petrol and diesel vehicle sales by 2035 is expected to lead to a reduction in emissions from vehicles. This will improve air quality, particularly across urban areas, and further the improvements to emissions reductions. Electric and hybrid vehicles are expected to become dominant (with the ban on hybrid vehicle sales in the UK by 2035).

5.10.11. Overall, increases in population and urbanisation have the possibility to degrade air quality, while higher standards for air pollutants and vehicle emissions have the potential to improve air quality. These opposing trends may balance each other out in future.

5.10.12. The TS presents significant opportunities to reduce air pollution, particularly through providing alternative transport modes within congested areas. This is likely to aid in

[83] Great Yarmouth 2021 Air Quality Annual Status Report
[84] Defra (2019) Clean Air Strategy

encouraging a modal shift away from private car use, which supports Government initiatives to reduce vehicle emissions.

Issues and Opportunities

5.10.13. The following issues and opportunities have been identified in **Table 5-13** below.

Table 5-13 – Issues and Opportunities for Air Quality

Key Issues & Opportunities	Considerations for the TS
■ The number of vehicles on the roads is likely to increase as the population rises, putting air quality at further risk of degradation. ■ More severe and frequent heat episodes as a result of climate change can contribute to the worsening of air quality. ■ Whilst electric cars should have positive effects for air quality in terms of NO2 reductions, there is concern that electric vehicles, which are currently heavier than 'conventional' vehicles, may generate more particulate (PM10) pollution from brake and tyre wear. ■ Air quality issues across Great Yarmouth can be addressed via a modal shift towards less polluting methods of transport (low carbon transport initiatives) and inclusive of active transport (e.g. cycling, walking etc.) thereby leading to a higher standard of air quality.	■ There is the potential that improved transport links will facilitate traffic flows, reduce idling times and thus improving air quality locally. However, an improved highway network could also result in increased usage, thus increasing emissions. ■ A modal shift to sustainable transport modes (public transport and active transport), must be an objective of the TS to aid in reducing emissions and car dependency. ■ There is a potential for improvements to support the development of electric charging facilities in line with the UK Government's plan to end the sale all new conventional petrol and diesel cars and vans by 2035. ■ The TS should aim to improve congested areas of Great Yarmouth, minimising excess emissions where possible and aiding in improving air quality. ■ Improved traffic management can decrease congestion having a beneficial effect on air quality. This is because "accelerating or decelerating too rapidly leads to inefficient driving and fuel consumption with harmful emissions being released into the environment unnecessarily"[85].

[85] National Institute for Health and Care Excellence (2016) Drive Smoothly to Reduce Harmful Effects of Air Pollution

5.11 Climate Change and Greenhouse Gases

Summary of Current Baseline

5.11.1. In 2021, an estimated 26% of greenhouse gas emissions (GHGs) in the UK were from the transport sector, 20% energy supply, 18% business and 16% residential, with carbon dioxide (CO2) being the most prominent gas from these sectors. In 2021, transport accounted for 109.5 MtCO2e of GHG emissions, which represents a 10% increase from 2020, but an 11% decrease compared with 2019 figures. The impact of the pandemic in 2020 caused transport emissions to fall, attributable to lockdown measures introduced.

5.11.2. In 2021, a total of 408.5 ktCO2e emissions[86] were generated by Great Yarmouth, with the greatest number of emissions arising from Domestic usage (Gas, electricity and others) (33.0%), followed by transportation (29.4%) and commercial (6.1%). **Table 5-14** shows the breakdown of emissions generated by Great Yarmouth compared to regional and national averages.

Table 5-14 – Carbon Emissions, 2020

Area	Total Emissions (kt CO2e)	Transport Related Emissions (kt CO2e)	Per Capita Emissions (tCO2e)
Great Yarmouth	408.5	120.2	4.1
East of England	38,062.6	12489.1	6
England	309,040.0	94,359.3	5.5

5.11.3. Great Yarmouth have a higher emission of carbon compared to the overall UK[87]. The average annual mean for carbon dioxide as carbon in the majority of the borough, is > 1995 tonnes/1x1km. The highest levels of carbon dioxide emissions are located within the town centre of Great Yarmouth.

5.11.4. During the most recent decade (2009-2018) the UK has been on average 0.3°C warmer than the 1981-2010 average and 0.9°C warmer than 1961-1990. All of the top ten warmest

[86] Department for Business, Energy & Industrial Strategy (2023) UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021
[87] National Atmospheric Emissions Inventory. UK Emissions Interactive Map

years have occurred since 2002. In the past few decades there has been an increase in annual average rainfall over the UK, for which the most recent decade (2009–2018) has been on average 5% wetter than 1961–1990 and 1% wetter than 1981-2010[88].

5.11.5. Sea level rises, coastal erosion, increased storminess and changes in temperatures are key factors to changes in coastlines. Majority of Great Yarmouth brough have a risk of water level of 1.0 meters above the high tide line could be reached through combinations of sea level rise, tides, and storm surge. Projections for future flood levels indicate that vast areas of the coastline and the low-lying coastal plain, reaching from Hunstanton to as far south as Feltwell, could be below the annual flood level and at risk from sea level rise from the start of the next decade in 2030[89].

Future Baseline

5.11.6. The UK is committed to legally binding GHG emissions reduction targets of 80% by 2050, compared to 1990 levels, as set out in the Climate Change Act 2008[90]. The UK ratified the 2015 Paris Agreement, which set out a GHG emission reduction target of at least 40% by 2030, compared to1990 with a long-term strategy for net zero emissions by 2050[91]. However, a more ambitious target was set by the UK in 2020 to reduce greenhouse gas emissions by at least 68% by 2030, compared to 1990 levels[92]. Currently there is widespread criticism as to whether the UK is on track to meet these ambitions.

5.11.7. Working towards these targets means changes to technology as well as ways in which people travel. For example, prior to the 26th Conference of the Parties (COP26) Summit in 2021, the UK brought forward its ban on the selling of new petrol, diesel, or hybrid cars from 2040 to 2030. The last decade has seen a remarkable surge in demand for electric vehicles in the UK. The number of licensed ultra-low emission vehicles (ULEVs) in the UK has increased by 71% between the end of March 2021 to the end of March 2022, a jump from 487,000 ULEVs to 833,000 ULEVs[93].

5.11.8. Since the 27th Conference of the Parties (COP27) Summit in 2022, the UK has pledged to triple its contributions to adaptation finance by 2025[94], in recognition of the existential threat climate change is posing globally. The most recent UN climate summit, COP28, held in

[88] Met Office, UK Climate Projections: Headline Findings, 2022
[89] Climate Central, Coastal Risk Screening Tool
[90] Climate Change Act (2008) Available online at: https://www.legislation.gov.uk/ukpga/2008/27/contents
[91] Paris Agreement (2015) Available online at: https://ec.europa.eu/clima/policies/international/negotiations/paris_en
[92] Department for Business, Energy and Industrial Strategy (2020) Press Release: UK Sets Ambitious New Climate Target Ahead of UN Summit. Available online at: https://www.gov.uk/government/news/uk-sets-ambitious-new-climate-target-ahead-of-un-summit
[93] Vehicle licensing statistics: January to March 2022 - GOV.UK (www.gov.uk)
[94] House of Commons (2023) What was agreed at COP27? Available at: https://commonslibrary.parliament.uk/what-was-agreed-at-cop27/

November/December 2023, took stock of its progress on the Paris Agreement through the first Global Stocktake[95].

5.11.9. GYBC has established a sustainability strategy with target to achieve net zero by 2035 and to reduce the Borough's overall footprint. The strategy focus on areas having most opportunity to make impactful change and have set-out goals as Climate and Decarbonisation Goal, Nature Goals and Waste Goal to deliver the strategy.

5.11.10. Despite this, the current estimate for temperature increases and changes to rainfall patterns are unlikely to alter significantly in the near future, given the timescales associated with climate change. This being the case, there will be an increasing need to implement climate change mitigation and adaptation measures in light of changing environmental conditions.

5.11.11. The TS would allow for better designed infrastructure which are more resilient to the effects of climate change, reduce GHGs construction and operation (including embodied carbon). It will likely support sustainable transport modes, including active and public transport, which in turn will aid in reducing the amount of greenhouse gases the transport network produces.

Issues and Opportunities

5.11.12. The following issues and opportunities have been identified in

5.11.13.

5.11.14.

5.11.15. Table 5-15 below.

[95] COP28 UAE - United Nations Climate Change Conference

Table 5-15 – Issues and Opportunities for Climate Change & Greenhouse Gases

Key Issues & Opportunities	Considerations for the TS
▪ Transport is the largest contributor to greenhouse gas emissions in the UK, with the largest contributor being domestic transport. ▪ There is a need to ensure climate resilience of the transport infrastructure in Great Yarmouth. The extent of future climate change will be strongly affected by the amount of greenhouse gases that the population chooses to emit. ▪ In rural areas of Great Yarmouth, particularly, where there are limited local facilities and fewer public transport services, many people are reliant on private transport which contributes to greenhouse gas emissions.	▪ There is a need to plan for and implement/ facilitate climate change adaptation, in respect of rising temperatures, water scarcity and extreme weather events, particularly heavy rainfall/ flooding. ▪ There is a need to support the continued increase in infrastructure to support the demand in electric cars, as well as the modal shift to more sustainable transport (active transport and public transport). ▪ There is a need to support the reduction of GHG emissions within the transport industry towards net-zero through the better provision of sustainable transport. ▪ Site selection should account for future climate change and consider locating transport infrastructure away from areas of high flood risk, or where road drainage may impact on water quality issues. ▪ TS could maximise opportunities to integrate connected blue and GI along transport corridors. GI in urban areas can ameliorate the warming effects of climate change and the urban heat island (UHI) effect .

5.12 Noise

Summary of Current Baseline

5.12.1. Noise Important Areas (NIAs) are hotspots where the highest 1% of noise levels from roads and railway at residential locations can be found. The location of these can be seen in **Figure B-11** in **Appendix B**.

5.12.2. There are a number of NIAs through the town centres and along major roads. Data from the England Noise Viewer[96] shows that the A149, A47, A1064 and A143 create significant noise with noise levels exceeding 55 decibels (dB) in areas within 1km of the source (Day Night Average Sound Level (Lden), 24-hour annual average noise levels with weightings applied for the evening and night periods). Areas affected are exacerbated where major roads merge.

5.12.3. Noise pollution is a prevalent issue across Europe, with about 40% of the population in EU countries exposed to road traffic noise at levels exceeding 55dB[97]. Noise has been linked to health problems including high blood pressure, disturbed sleep, and increased release of stress hormones. More recently, a study has found an association between excessive traffic noise and increases in heart disease risk markers[98]. In the UK, the estimated medical cost of noise-related hypertension and associated conditions is £1.09 billion a year[99].

Future Baseline

5.12.4. Given the projections for an increasing population, and the current preference for cars as the main mode of transport, there is potential that noise levels will increase along major roads. However, more congestion may lead to slower moving traffic which may reduce noise levels. Furthermore, recent vehicle innovations such as hybrid and electric cars have led to quieter vehicles and this trend is expected to continue with greater uptake.

5.12.5. Future trends in noise targets are expected to focus on more stringent criteria, where the link between health effects and noise begins to be better understood. Additionally, future climate change effects will likely result in an increase in ambient temperatures and for longer periods, creating a need to seek thermal relief, which generally with existing housing stock tends to be satisfied by opening of windows, thus increasing exposure to noise.

5.12.6. The TS presents opportunities to reduce congestion and the number of vehicles on the borough's roads as well as encouraging sustainable transport modes, therefore reducing noise pollution.

[96] Extrium, England Noise and Air Quality Viewer
[97] World Health Organization (2010) Noise
[98] Imperial College London (2017) Noise from busy roads might increase heart disease risk, finds new study
[99] Harding, et al. (2013) The cost of hypertension-related ill-health attributable to environmental noise

Issues and Opportunities

5.12.7. The following issues and opportunities have been identified in

5.12.8.

5.12.9.

5.12.10. Table 5-16 below.

Table 5-16 – Issues and Opportunities for Noise

Key Issues & Opportunities	Considerations for the TS
■ Increased transport development and infrastructure may adversely impact sensitive receptors and increase current noise levels in areas adjacent to roads and rail lines. ■ Excessive noise exposure from transport can cause stress and sleep disturbance and is often perceived as a nuisance. This can result in adverse effects on human health. ■ Transport noise can adversely affect biodiversity including nesting and feeding habits of many species. ■ Increased noise exposure can also have negative impacts on designated sites including the National Landscapes, and other designated sites with road or rail noise reducing amenity within these areas.	■ There exists an opportunity to reforecast the understanding of transport noise profiles and exposure, accounting for the benefits from low-noise electrified road vehicles and reactions to climate change, to develop a plan that accounts for the future and realises benefits for Great Yarmouth. ■ The TS should take consideration for areas with existing high noise exposure.

5.13 Material Assets (including Soils)

Summary of Current Baseline

Land, Soils and Geology

5.13.1. According to Natural England's Agricultural Land Classification[100], majority of the land is classified as urban. In the south of the borough, there is relatively small area of land in the rural space rated as excellent for agriculture.

5.13.2. Great Yarmouth is underlain by three Principal Aquifers[101]. The crag, the chalk and the lower greensand. Chalk and lower greensand extends beneath the majority of Great Yarmouth. The Chalk is prone to diffuse pollution from nitrate and pesticides associated with agricultural activity at the land surface and more locally by point source pollution, for example from leakage or spillage of industrial chemicals and petroleum hydrocarbons, and lower greensand provides an average yield of 50 l/sec the water is typically soft and iron rich.

5.13.3. The bedrock geology across Great Yarmouth consists of Crag Group- Sand and gravel formed between the Neogene and Quaternary periods. And the superficial deposit composed of Blown Sand – Sand, North Denes Formation - Sand and gravel, Marine Beach Deposits - Sand and gravel indicating sedimentary deposits[102].

Transport Infrastructure

5.13.4. Great Yarmouth is well served with transport connections, between and through the main urban areas. It is well connected to the national motorway network and national rail lines, as well as having a strong local public transport network.

5.13.5. Major transport routes include:

- Major trunk roads into Norfolk are the M11, A11, A47 (previously the A12) and A14
- A47, A143 and B1370;
- Intercity rail services between Norwich and London Liverpool Street and Local links from Norwich to Great Yarmouth;
- Sea links to northern and eastern Europe and an extensive system of navigable waterways.

5.13.6. Additional local long distance cycle routes include:

- Wind and wave Cycle route
- Historic Churches Cycle route

[100] Regional Agricultural Land Classification Maps
[101]: British Geological Survey, Principal aquifers in England and Wales
[102] British Geological Survey, Geology Viewer

- Big Beach Cycle route
- Acle Adventure Cycle route
- Heritage Cycle Circular route
- Grand Estate Cycle route

5.13.7. Long distance walking routes such as:

- Angel Way
- Weavers' Way
- Cross-Norfolk Trail
- Wherryman's Way

Energy

5.13.8. The commitment made by Great Yarmouth Borough Council to become net zero by 2035 will require commitments to increasing the supply of renewable energy across the borough and as per the Great Yarmouth Local Plan 2021, the council encourage renewable energy sources wherever feasible.

5.13.9. There are a total of 2256 renewable energy sites across GYBC[103], which is dominated by photovoltaic energy production (99.4% of sites). These sites have a combined installed capacity of 88.9 megawatts and generating 27661 megawatt hours.

Waste

5.13.10. The UK generated 222 million tonnes of waste in 2018. The Great Yarmouth is part of the Norfolk Waste Partnership[104]. In Norfolk, the total household waste collected for 2021/22 was 421,493 tonnes. Of this, 235,233 tonnes were residual waste, and 186,260 tonnes was recycled.

5.13.11. As per the Great Yarmouth Sustainability Appraisal (2021)[105], the percentage of household waste sent for reuse, recycling or composting was 31.9%. This is significantly less than the figures recorded for the eastern region of England (49%), and the UK as a whole (43.2%). Hence the council is The Council is adapting waste collection services to meet the requirements of the Environment Act 2021.

Future Baseline

5.13.12. GYBC has established a sustainability strategy with target to achieve net zero by 2035 and to reduce the Borough's overall footprint. The strategy focus on areas having most

[103] Defra (2022) Regional Renewable Statistics
[104] Norfolk Waste Partnership (2022) Annual Report 2021/22
[105] Great Yarmouth Sustainable Strategy (2021)

opportunity to make impactful change and have set-out goals as Climate and Decarbonisation Goal, Nature Goals and Waste Goal to deliver the strategy.

5.13.13. Due to projected population trends, there will be a need for development (including transport infrastructure) to support this growth. Without the TS, transport infrastructure may not be well aligned to growth areas and the key places where infrastructure is required. There may also be missed opportunities for upgrading the existing transport infrastructure.

5.13.14. Agricultural areas are also at risk from climate change. Projections of increased flooding (including that caused by sea-level rise) and drought may lead to the loss of important agricultural areas, through compaction, waterlogging and erosion of soil.

5.13.15. Similarly, climate change poses a threat to transport infrastructure. Increased levels of rain and storminess is likely to increase the prevalence of flooding, which can overwhelm road drainage, cause landslips and increase the number of potholes. Both extreme heat in the summer and extreme cold in the winter can also pose threats to transport infrastructure. High temperatures can result in expansion (which can lead to cracking), asphalt bleeding and increase the frequency of droughts, which can cause drying of soil and plants, leading to earthwork problems. Cold weather can lead to ice and snow which can also increase potholes and weather-related delays.

5.13.16. The growing population and associated need for development are also likely to increase use of mineral resources and waste generation. As such, it will be necessary to apply resource efficiency and waste management measures, including the re-use and recycling of materials. The Norfolk Minerals and Waste Development Framework aims to reduce the impact of mineral extraction and associated development and waste management facilities on the transport system.

Issues and Opportunities

5.13.17. The following issues and opportunities have been identified in **Table 5-17** below.

Table 5-17 – Issues and Opportunities for Material Assets

Key Issues & Opportunities	Considerations for the TS
■ It is important that any future development of the transport network across Great Yarmouth does not have adverse impacts or lead to the degradation or sterilisation of the best and most versatile land, as this is important for the UK's self-sufficiency in food production. ■ Minerals are a finite resource and materials will be required for any new transport infrastructure, with subsequent waste produced. ■ There is currently a large reliance on road transport for importing and exporting minerals across the UK, which is unlikely to change. ■ There is a continued increase in renewable energy supplies across the borough, of which needs to be managed efficiently to ensure the capacity requirements of this transition are met.	■ Where land take is required to support the emerging TS schemes, the region's best and most valuable land should be avoided. ■ Resource efficiency is important in the reduction of waste and conservation of resources. ■ The TS could promote opportunities to support a green economy. ■ There are opportunities for TS schemes to incorporate renewable energy and upgrade the electric vehicle (EV) charging network. ■ The TS should incorporate resource efficiency and waste management measures. ■ There is a need to ensure that transport infrastructure is resilient to the effects of climate change.

6 Sustainability Framework

6.1 Introduction

6.1.1. This section sets out the Sustainability Appraisal Framework which will be used in the SEA assessment process. The SEA assessment will involve the appraisal of the transport aspirations and priorities (once finalised), identifying their environmental and social sensitivities and the potential for significant effects.

6.2 SEA Framework

6.2.1. While not specifically required by the SEA Regulations, sustainability objectives are a recognised way of considering the environmental, social and economic effects of a plan or programme and comparing the effects of alternatives. The objectives are developed using the sustainability issues identified in **Section 5**. The objectives will be used to assess the options in the TS and identify likely sustainability effects.

6.2.2. Sustainability objectives were developed using:

- The review of key policy documents;
- The baseline data collation;
- An assessment of future trends; and
- The identification of sustainability issues and opportunities.

Table 6-1 below sets out the sustainability objectives that have been created from this Scoping Report.

Table 6-1 – SEA Appraisal Framework

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Population & Equalities	▪ Transport issues affect different groups to varying extents, and there is evidence showing that the barriers to accessing and using transport can be exacerbated by age, ethnicity and gender. ▪ The rural nature of some parts of Great Yarmouth could pose significant challenges in providing good services for all rural residents. There will, therefore, be a need for increased access to transport. ▪ The population of Great Yarmouth is predicted to increase in number resulting in a change in the age profile. ▪ Changing work habits such as remote, internet-based jobs and working from home are likely to reduce transport demand, but may also increase social isolation, which could increase reliance on alternative social interaction. ▪ With an increasing ageing population in Great Yarmouth, there is likely to be additional strain on the area's services and infrastructure particularly health and social care. ▪ The change in working habits has also affected traditional 5/2-day shift patterns for public transport with one in 10 local bus services in the UK cancelled in 2022 This further exacerbated by reductions in local authority subsidies. ▪ Population growth in Great Yarmouth between 2011 and 2021 was lower than the average for Norfolk, and England and Wales. ▪ Great Yarmouth has a shorter than average travel to work distance compared to national averages, and a high proportion of people living in its main urban area.	**SEA1:** To increase the inclusivity, capacity and connectivity of the transportation network to support future demographic changes for both rural and urban populations.	Will the TS: ▪ Help to reduce inequalities, particularly for those people and communities most vulnerable? ▪ Improve access to services, facilities and transport for all inclusively (including disabilities, hidden disabilities, dementia, and autism)? ▪ Proportionately support both rural and urban communities ▪ Support diversity? ▪ Support population growth?
Human Health	▪ The population of the area is ageing; older people may not have access to appropriate forms of private transport to access healthcare, community, and social care facilities. ▪ There are high levels of physical inactivity and obesity across Great Yarmouth. ▪ Social isolation can lead to loneliness which has the potential to undermine well-being thereby impacting negatively on people's quality of life. ▪ There are higher levels of loneliness in Great Yarmouth than the surrounding area.	**SEA2:** To protect and enhance both physical and mental health and wellbeing through better access to public transport, supporting active travel and encouraging healthy lifestyles.	Will the TS: ▪ Promote healthier lifestyles? ▪ Increase walking and cycling? ▪ Promote health enhancing environments, behaviours and activities for local communities? ▪ Help prevent risks to human health, which arise from noise and air pollution? ▪ Help prevent social isolation in both the rural and urban setting?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Economy & Employment	▪ If employment remains more concentrated in urban centres, this could put increased pressure on transport systems as commuting distances increase. ▪ The working age population is lower than the average and there are high levels of economic inactivity. ▪ Retirement is one of the main factors contributing to economic inactivity in Great Yarmouth. ▪ There is a low density of jobs within Great Yarmouth compared to regional and national averages.	**SEA3:** To provide greater connectivity across Great Yarmouth to support key sectors, attract inward investment and support economic success.	Will the TS: ▪ Support economic growth? ▪ Support access to jobs and training opportunities? ▪ Improve access to employment centres? ▪ Support regeneration of town and district centres? ▪ Support the tourism industry?
Community Safety	▪ Crime on public transport in the UK is on the rise, particularly with regards to sexual assault, violent crimes and disruption. ▪ As the population within Great Yarmouth increases there are expected to be a greater number of vehicles on the borough's roads, which may result in an increase in the number of accidents and those KSI on roads. ▪ Children in the most deprived neighbourhoods are nearly three times more likely to be KSI as a pedestrian compared to non-deprived neighbourhoods. ▪ There are opportunities to increase the safety of active transport modes such as cycling and walking. ▪ Vulnerable road users such as cyclist and pedestrians are more likely to be casualties.	**SEA4:** To promote safe transport through reducing accidents, improving safety and reducing crime across the transport network.	Will the TS: ▪ Improve safety? ▪ Ensure that residents feel safe, particularly after dark? ▪ Support designing out crime principals? ▪ Reduce levels of crime deprivation? ▪ Improve road safety and reduce the number of people KSI on the roads, particularly children from deprived backgrounds?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Biodiversity & Natural Capital	▪ There are a wide range of statutory local, national and international sites designated for nature conservation across Great Yarmouth, which may be affected by increased transport infrastructure development. Habitats and wildlife corridors outside of these protected areas are especially at risk of being lost, damaged or fragmented by transport development. ▪ New transport routes will need to be carefully planned so that they do not cause adverse effects on ecosystems with high (potential) ecosystem services provision. ▪ Given that ecosystem services are the benefits that nature provides to people, areas of high (potential) provision are often the green and blue spaces close to centres of population, as well as connecting habitats that link these with more remote designated habitats and landscapes. ▪ There is an opportunity for the TS to create and enhance ecological corridors along transport routes, to improve habitat connectivity between designated sites and fragmented habitats. ▪ There is an opportunity to link biodiversity enhancement with carbon sequestration through creation and restoration of habitats including wetlands, woodlands and grasslands. ▪ There is an opportunity to reduce road mortality of protected and priority species by incorporating wildlife crossings, such as underpasses and overpasses, where transport routes intersect with key habitats. ▪ There is an opportunity to implement measures to reduce light and noise pollution from transport infrastructure, which can negatively impact nocturnal species such as bats and birds. ▪ UK Government objectives aim to halt biodiversity loss by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042 and to protect 30% of our land and sea also by 2030.	**SEA5:** To protect and enhance habitats, species and valuable ecological networks that contribute to ecosystem functionality and contribute to environmental and biodiversity net gain.	Will the TS: ▪ Cause damage to locally and nationally designated sites though infrastructure provision, traffic or maintenance? ▪ Maintain and enhance biodiversity in the borough? ▪ Seek opportunities for at least 10% biodiversity net gain through green infrastructure? ▪ Increase provision of ecosystem services from the borough's natural capital? ▪ Prevent fragmentation of habitats and promote ecological networks? ▪ Result in developments which will improve biodiversity on site? ▪ Support UK Government biodiversity objectives, including halting biodiversity loss, improve species abundance and protect the land and sea?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Landscape & Townscape	▪ Transport infrastructure has the potential to cause direct and indirect impacts on designated landscapes, eroding the character and quality of the landscapes, increasing pollution and eroding the visual amenity for residents and visitors alike. ▪ Future growth in some locations could risk compromising landscape, seascape and townscape character and features, however a landscape-led design with GI principles in place, could play a key role in the enhancement of the natural environment, visual amenity and physical and mental health of its people. ▪ Climate change will also put pressure on the landscape and seascape designations as new pests and diseases emerge sea levels rise and extreme weather increasing the stresses on nature conservation.	**SEA6:** To protect and enhance townscapes, seascapes and landscapes of visual importance.	Will the TS: ▪ Respect, maintain and strengthen local character and distinctiveness? ▪ Improve the quality and condition of the townscape and landscape? ▪ Incorporate green infrastructure into design? ▪ Protect and enhance the special character of designated National Landscapes?
Historic Environment	▪ There is potential for development to encroach on assets, particularly affecting the settings of assets through increased noise and visual effects. ▪ New and/or upgraded transport infrastructure across Great Yarmouth has the potential to affect the survival, fabric, condition and setting of cultural heritage assets (both above and below ground) in addition to increased pressure from population growth. ▪ Highly significant archaeological remains, whether designated or not, normally require preservation in situ. This clearly has implications and can represent a significant constraint to future scheme design, which should respect, retain and protect the remains (e.g. through avoidance and redesign). ▪ Vehicle damage and pollution can adversely affect both listed buildings and scheduled monuments, so reducing vehicle movements within historic urban areas is also an important area to address.	**SEA7:** To protect and enhance the historic environment, including heritage assets (designated and non-designated) and their unique settings.	Will the TS: ▪ Conserve and/or enhance heritage assets, their setting and the wider historic environment? ▪ Improve the quality and condition of the historic environment? ▪ Respect, maintain and strengthen local character and distinctiveness? ▪ Result in the loss of buried and unknown historic assets and artifacts?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Water Environment	▪ The physical and chemical quality of water resources is an important aspect of the natural environment and can be adversely affected by pollution associated with surface water runoff from new or existing transport infrastructure, as well as by changes to waterbodies which can affect their quality as a habitat. ▪ Of the 32 water bodies, just 3.1% are achieving 'good' status, falling far short of the WFD target. ▪ Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk in Great Yarmouth. ▪ Increased development (including transport infrastructure) can increase flood risk on a local and catchment scale. ▪ There are significant competing demands on scarce water resources, with the needs of different users having to be traded-off against each other. ▪ Upgrading existing infrastructure provides the opportunity to improve pollution control, include the reduction of litter. ▪ Upgrading existing infrastructure provides an opportunity to strategically review existing infrastructure, and to improve its resilience to flooding and climate change through locating, designing, and building infrastructure with long term resilience in mind. ▪ Possible opportunity to reduce flood risk through design of new transport infrastructure, e.g. embankments, tree planning, and flood management.	**SEA8:** To reduce the risk and vulnerability to flooding. **SEA9:** To maintain and enhance water quality by reducing levels of pollution form the transport network.	Will the TS: ▪ Reduce the risk of flooding? ▪ Increase surface runoff? ▪ Result in the reduction of water quality? ▪ Support the protection and enhancement of water bodies?
Air Quality	▪ The number of vehicles on the roads is likely to increase as the population rises, putting air quality at further risk of degradation. ▪ More severe and frequent heat episodes as a result of climate change can contribute to the worsening of air quality. ▪ Whilst electric cars should have positive effects for air quality in terms of NO2 reductions, there is concern that electric vehicles (EVs), which are currently heavier than 'conventional' vehicles, may generate more particulate (PM10) pollution from brake and tyre wear. ▪ Air quality issues across Great Yarmouth can be addressed via a modal shift towards less polluting methods of transport (low carbon transport initiatives) and inclusive of active transport (e.g. cycling, walking etc.) thereby leading to a higher standard of air quality.	**SEA10:** To protect and enhance air quality by reducing emissions from the transport network.	Will the TS: ▪ Support measures to reduce levels of air pollution? ▪ Support measures for the reduction of congestion and traffic levels particularly in AQMAs and congestion hot spots?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Climate Change & Greenhouse Gases	▪ Transport is the largest contributor to greenhouse gas emissions in the UK, with the largest contributor being domestic transport. ▪ There is a need to ensure climate resilience of the transport infrastructure in Great Yarmouth. The extent of future climate change will be strongly affected by the amount of greenhouse gases that the population chooses to emit. ▪ In rural areas of Great Yarmouth, particularly, where there are limited local facilities and fewer public transport services, many people are reliant on private transport which contributes to greenhouse gas emissions. Transport is the largest contributor to greenhouse gas emissions in the UK, with the largest contributor being domestic transport. ▪ There is a need to ensure climate resilience of the transport infrastructure in Great Yarmouth. The extent of future climate change will be strongly affected by the amount of greenhouse gases that the population chooses to emit. ▪ In rural areas of Great Yarmouth, particularly, where there are limited local facilities and fewer public transport services, many people are reliant on private transport which contributes to greenhouse gas emissions.	**SEA11:** Ensure that Great Yarmouth and its transport infrastructure are resilient to the effects of climate change. **SEA12:** To reduce greenhouse gas emissions across the transport network, support national and local decarbonisation initiatives and incorporate climate change adaptation to help maximise resilience.	Will the TS: ▪ Support low carbon and energy efficient design? ▪ Increase the resilience of transport infrastructure to the impacts of climate change (including flood risk, extreme weather, heat and cold)? ▪ Support the councils' Net Zero ambitions by 2030 and 2040? ▪ Support low carbon, energy efficient design? ▪ Reduce levels of embodied carbon?
Noise	▪ Increased transport development and infrastructure may adversely impact sensitive receptors and increase current noise levels in areas adjacent to roads and rail lines. ▪ Excessive noise exposure from transport can cause stress and sleep disturbance and is often perceived as a nuisance. This can result in adverse effects on human health. ▪ Transport noise can adversely affect biodiversity including nesting and feeding habits of many species. ▪ Increased noise exposure can also have negative impacts on designated sites including the National Landscapes, and other designated sites with road or rail noise reducing amenity within these areas.	**SEA13:** To reduce exposure to transport related noise and vibration, including noise pollution and nuisance.	Will the TS: ▪ Support measures to reduce levels of noise pollution? ▪ Support measures for the reduction of congestion and traffic levels particularly in areas with sensitive noise receptors?

SEA Objective	Issues & Opportunities	Proposed Objective	Supporting Appraisal Question – Will the TS…
Material Assets	▪ It is important that any future development of the transport network across Great Yarmouth does not have adverse impacts or lead to the degradation or sterilisation of the best and most versatile land, as this is important for the UK's self-sufficiency in food production. ▪ Minerals are a finite resource and materials will be required for any new transport infrastructure, with subsequent waste produced. ▪ There is currently a large reliance on road transport for importing and exporting minerals across the UK, which is unlikely to change. ▪ There is a continued increase in renewable energy supplies across the borough, of which needs to be managed efficiently to ensure the capacity requirements of this transition are met.	**SEA14:** To reduce the amount of waste produced and promote sustainable use of resources. **SEA15:** To ensure the efficient use of land. **SEA16:** To ensure that critical infrastructure is protected, enhanced and increased to meet the demands of the population now and in the future.	Will the TS: ▪ Support the use of sustainable materials? ▪ Support the reuse of existing infrastructure? ▪ Promote a circular economy? ▪ Minimise the amount of waste? ▪ Support the use of brownfield land? ▪ Protect and enhance land quality? ▪ Result in the loss of agricultural land? ▪ Ensure that critical infrastructure is resilient to the effects of climate change?

7 Next Steps

7.1.1. NCC has sought the views of statutory bodies on the scope of the SEA and revised this Scoping Report to reflect the responses received. Consultation at this stage helps to ensure that the SEA will provide a robust assessment of the TS.

7.1.2. The next step in the SEA is the assessment stage (Stage B) during which emerging options and policies will be assessed.

7.1.3. The TS timetable is set out in **Table 7-1** below. The SEA report will be available for consultation alongside the draft TS as it is prepared.

Table 7-1 – TS and SEA Timetable

TS Activity	Timeframe
Scoping Consultation	February – March 2025
Consultation Draft TS	July 2025
SEA Assessment	May to July 2025
SEA Report and TS Consultation	TBC
Publication of TS and Final SEA	TBC
Post Adoption Statement	TBC

Appendix A

Review of Plans, Policies and Programmes

This appendix presents the findings of the review of legislation, policies and plans including relevant international, national and regional documents undertaken as a part of the evidence gathering exercise for the Scoping Report.

Details of relevant legislation, policies and plans per topic are provided below in **Table A-1 to Table A-12**.

Table A-1 - Review of Legislation, Policy and Plans for Population and Equalities

Messages/Issues for the development of the Transport Strategy	Document
National	**No subheading needed**
The Equality Act legally protects people from discrimination in the workplace and in wider society. It is against the law to discriminate against anyone because of: ■ Age; ■ Being or becoming a transsexual person; ■ Being married or in a civil partnership; ■ Being pregnant or having a child; ■ Disability; ■ Race including colour, nationality, ethnic or national origin; ■ Religion, belief or lack of religion/belief; ■ Sex; and ■ Sexual orientation	Equality Act (2010)
When delivering new schemes, applicants must avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the UK Government's planning guidance. Applicants should provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes.	National Planning Policy Framework (NPPF) (2024)

Messages/Issues for the development of the Transport Strategy	Document
The Action Plan sets what the UK Government is doing to ensure people from all communities in society have the option to use public transport. The main aim of the report is to '*deliver better access to jobs and key services through an accessible and socially inclusive transport system, by removing the barrier to travel and ensuring that social impacts are addressed in policy development and service delivery*'.	Department for Transport, Transport for Everyone: an action plan to promote equality (2012)
Deliver better public services through involving and consulting users more fully, providing better information about local standards and managing services at neighbourhood level.	Strong and Prosperous Communities: The Local Government White Paper (2006)
As the number of older adults increases substantially in the UK over the next six decades, the existing urban and rural infrastructure will need to be adapted so that the needs of these people are met. For example, issues of access, transport, amenity and security will substantially affect the wellbeing of older people.	Foresight Mental Capital and Wellbeing Project (2008). Final Project report, The Government Office for Science.
Transport is a key factor shaping experiences of poverty. The ability of households in poverty to find paid work often depends on access to affordable, regular and reliable transport. Residents of low-income neighbourhoods generally have a significant reliance on bus services. This can create issues regarding variable frequency, timing, reliability and range of places served. There is considerable evidence that transport issues affect different groups to varying extents and in particular ways, especially in terms of gender. A distinguishing feature of low-income neighbourhoods is the relatively low incidence of motor vehicle ownership. This means that residents have a much higher reliance on public transport than those living in middle and high-income areas. Difficulties in meeting the costs of transport from current incomes have given rise to the concept of 'transport poverty'.	Addressing Transport Barriers to work in Low Income Neighbourhoods, Sheffield Hallam University (2017)

Messages/Issues for the development of the Transport Strategy	Document
The Marmot Review identified that the levels of social, environmental and economic inequality in society are damaging health and well-being. This report identifies that as the UK emerges from the pandemic it would be a mistake to attempt to re-establish the status quo that existed before the pandemic. The reductions in car traffic during the pandemic resulted in cleaner air and reduction in emission of greenhouse gases. Walking and cycling as modes of transport became both necessary and desirable. As the pandemic is brought under control and public transport again becomes safe, a future for our cities based on reduction in vehicle traffic and made safe for walking and cycling in addition to public transport is a future we can both imagine and realise. Building Back Fairer requires a sizeable reduction in private car use and greater active travel and use of public transport. Efforts to support this are required urgently and would help to reduce Greenhouse Gas Emissions and lead to a more sustainable environment.	Build Back Fairer: The Covid-19 Review (2020)

Messages/Issues for the development of the Transport Strategy	Document
Although the initial strategy is based in London, the approach is becoming more widely adopted nationally. The Healthy Streets Approach puts people and their health at the centre of decisions about how we design, manage and use public spaces. It aims to make our streets healthy, safe and welcoming for everyone. The Approach is based on 10 Indicators of a Healthy Street which focus on the experience of people using streets. These are as follows: ■ Pedestrians from all walks of life; ■ Easy to cross; ■ People chose to walk, cycle and use public transport; ■ Clean air; ■ People feel safe; ■ Not too noisy; ■ Places to stop and rest; ■ Shade and shelter; ■ People feel relaxed; and ■ Things to see and do.	TfL, Healthy Streets for London (2017)
Regional/Local	

Messages/Issues for the development of the Transport Strategy	Document
The Equality policy outlines the arrangements the council has put in place to ensure they comply with the requirements of the Equality Act. The Council's four equality priorities are: ■ Understanding and supporting our communities ■ Leadership, partnership and organisational commitment ■ Responsive services and customer care ■ Diverse and engaged workforce The Council's Equality, Diversity and Inclusion Strategy sets out the Council's commitment and priorities to further equality and inclusion within the community of Great Yarmouth and its workforce. Together with the accompanying Equality action plan, it describes the Council's way to remove and reduce barriers that may prevent people from fully participating in the social, cultural, political and economic life of the borough.	Great Yarmouth Borough Council – Equality Action Plan 2021 to 2023 and Great Yarmouth Equality, Diversity and Inclusion Strategy 2022-2025

Messages/Issues for the development of the Transport Strategy	Document
The Core strategy establishes the spatial vision and objectives for how the borough (outside of the Broads Authority Executive Area) will develop and grow in the future. It also sets out a series of strategic policies and site allocations, called 'Core Policies' and 'Key Sites', which provide the strategic context for future Local Plan Documents, Supplementary Planning Documents and Neighbourhood Development Plans. Policy CS3 of the plan aims to ensure that new residential development in the borough meets the housing needs of local people, the Council and its partners will seek to: ■ Make provision for at least 7,140 new homes over the plan period. This will be achieved by; ■ Encourage the effective use of the existing housing stock in line with the Council's Empty Homes Strategy; ■ Encourage the development of self-build housing schemes and support the reuse and conversion of redundant buildings into housing where appropriate and in accordance with other policies in the Local Plan; ■ Ensure that new housing addresses local housing need by incorporating a range of different tenures, sizes and types of homes to create mixed and balanced communities; ■ Support the provision of housing for vulnerable people and specialist housing provision, including nursing homes, residential and extra care facilities in appropriate locations and where there is an identified need; ■ Encourage all dwellings, including small dwellings, to be designed with accessibility in mind, providing flexible accommodation that is accessible to all and capable of adaptation to accommodate lifestyle changes, including the needs of the older generation and people with disabilities; and ■ Promote design-led housing developments with layouts and densities that appropriately reflect the characteristics of the site and surrounding areas and make efficient use of land. However, there is an emerging new local plan which is currently in consultation and will eventually replace the Core Strategy and the Local Plan Part 2.	Great Yarmouth Local Plan: Core Strategy 2013-2030 (Policy CS3: Addressing the borough's housing need)

Messages/Issues for the development of the Transport Strategy	Document
Policy CS5 of the plan aims to supports Sufficient housing provision that must be made to meet the needs of the whole community. To help satisfy the current and expected demand for Gypsy, Traveller and Travelling Show people pitches, the Council will: ■ Safeguard the existing travellers site at Gapton Hall (25 pitches) for use by gypsies and travellers; ■ Seek to identify 10 additional permanent pitches for use by gypsies and travellers within the borough; ■ Use a 'plan, monitor and manage' approach, based on the Annual Monitoring Report and updates of the Strategic Housing Land Availability Assessment, to ensure the continuous maintenance of a five-year rolling supply; ■ Ensure that in identifying land or determining planning applications, proposals for potential sites/pitches comply with national policy in the Planning Policy for Traveller Sites document or successor publications; and Seek to ensure that sites are made available on a temporary basis for travelling show people, as and when they are required.	Great Yarmouth Local Plan: Core Strategy 2013-2030 (Policy CS5: Meeting the needs of gypsies, travellers and travelling show people)

Messages/Issues for the development of the Transport Strategy	Document
Part 2 of the Local Plan builds upon and supplements the policies within the Core Strategy and adds detail to them. It includes both Strategic and Non-Strategic Policies. Policy C1 supports the retention of existing community facilities and the provision of new facilities, particularly in areas with poor levels of provision and in areas of major growth, will be encouraged. Development leading to the loss of an existing community facility will only be permitted where it is demonstrated that either: ■ it is to be replaced by a facility of equal or greater quality in a suitable location to meet the day-to-day needs of existing users; or ■ the area currently served by it would remain suitably provided following the loss; or it is no longer viable or feasible to retain the premises in a community facility use as demonstrated by marketing evidence which covers at least a 12-month period of marketing.	Great Yarmouth Local Plan Part 2 Adopted 2021 (Policy C1: Community facilities)
The Housing Strategy covers all housing, rented and owned, and recognises the contribution the right mix of good quality and well-managed housing (and good advice and support) can make to residents. The Borough is keen to take a positive approach to actively making things happen in the borough, not just leaving it to the open market. We have identified four strategic objectives to meet current and future housing requirements in Great Yarmouth: ■ New homes: ensuring there are enough good quality new homes ■ Our homes: improving the quality and use of the council's housing stock ■ Decent homes: providing a good mix of decent homes across all tenures ■ Healthy homes: meeting the needs of vulnerable households	Great Yarmouth Borough Council Housing strategy (2018-2023)

Messages/Issues for the development of the Transport Strategy	Document
Flourishing in Norfolk is our partnership strategy for children and young people. It is based on the Flourish ambition and shows its shared commitment to making its ambition a reality. The strategy sets out how it will: ■ Respond to the needs and aspirations of children and young people in Norfolk; ■ Work together so that all children and young people have access to the services and support they need to achieve their potential.	Flourishing in Norfolk A children and young people partnership strategy 2021-2025
The plan describes how Public Health specialist staff within the council contribute to achieving Norfolk County Council's vision for Norfolk to be the place where everyone can start life well, live well and age well, and where no one is left behind. Its vision is for Norfolk to be the place where everyone can start life well, live well and age well, and where no one is left behind. Its mission looks to improve the health and wellbeing of the people of Norfolk and reduce health inequalities. Informed by best practice and evidence, it will lead the system in Norfolk to develop and focus a prevention approach to improve and sustain good health and wellbeing. It will identify opportunities to accelerate health and social care integration to ensure that people remain healthy and independent for as long as possible. It will work to improve and protect their population's health by promoting healthy lifestyles, supporting people to make healthy choices, working in partnership, and providing high quality public health service.	Public Health Strategic Plan 2022

Messages/Issues for the development of the Transport Strategy	Document
The strategy includes the following vision: '*Norfolk should be the place where everyone can start life well, live well and age well, and where no one is left behind.* *The economy must be vibrant, entrepreneurial and sustainable, supported by the right jobs, skills, training and infrastructure.* *The communities must feel safe, healthy, empowered and connected, their individual distinctiveness respected and preserved*' The strategy also includes better opportunities for children and young people, as well as families. Additionally, it includes community priorities to improve communities and opportunities.	Norfolk County Council, Better Together for Norfolk, Norfolk County Council Strategy 2021-25
The Joint Core Strategy DPD (JCS DPD) adopted 2011, amendments adopted January 2014, sets out policies in the Greater Norwich Area, which is developed in partnership between Broadland, Norwich and South Norfolk Councils.	Joint core strategy for Broadland, Norwich and South Norfolk (Adopted March 2011, amendments adopted January 2014)

Table A-2 – Review of Legislation, Policy and Plans for Human Health

Messages/Issues for the development of the Transport Strategy	Document
National	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
Reducing health inequalities is a matter of fairness and social justice. In England, the many people who are currently dying prematurely each year as a result of health inequalities would otherwise have enjoyed, in total, between 1.3 and 2.5 million extra years of life. Ensure a healthy standard of living for all; Create and develop healthy and sustainable places and communities; and Strengthen the role and impact of ill health prevention.	Fair Society, Healthy Lives: The Marmot Review: Strategic review of health inequalities in England post (2012)
The Marmot Review identified that the levels of social, environmental and economic inequality in society are damaging health and well-being. This report identifies that as the UK emerges from the pandemic it would be a mistake to attempt to re-establish the status quo that existed before the pandemic. The reductions in car traffic during the pandemic resulted in cleaner air and reduction in emission of greenhouse gases. Walking and cycling as modes of transport became both necessary and desirable. As the pandemic is brought under control and public transport again becomes safe, a future for our cities based on reduction in vehicle traffic and made safe for walking and cycling in addition to public transport is a future we can both imagine and realise. Building Back Fairer requires a sizeable reduction in private car use and greater active travel and use of public transport. Efforts to support this are required urgently and would help to reduce Greenhouse Gas Emissions and lead to a more sustainable environment.	Build Back Fairer: The Covid-19 Marmot Review (2020)

Messages/Issues for the development of the Transport Strategy	Document
Paragraph 96 of the NPPF states: *'Planning policies and decisions should aim to achieve healthy, inclusive and safe places which:* *a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;* *b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of attractive, well-designed, clear and legible pedestrian and cycle routes, and high-quality public space, which encourage the active and continual use of public areas; and* *c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.'*	National Planning Policy Framework (NPPF) (2024)
Poorly located and designed new development seriously hinders healthy lifestyles. Physical inactivity directly contributes to one in six deaths in the UK, drives rising levels of obesity, and is the fourth largest cause of disease and disability. It costs society an estimated £7.4 billion a year and places the national healthcare system under increasing financial strain. By enabling compact, higher density, and mixed-use patterns of development. This encourages more people to incorporate physical activity into their daily journeys, improving productivity and dramatically reducing ill health.	Chartered Institute of Highways & Transportation (CIHT), Better planning, better transport, better places (2019)

Messages/Issues for the development of the Transport Strategy	Document
There are three main mechanisms that link transport and health and wellbeing: ■ Transport and access: Transport plays a key role in improving access to health services, particularly for vulnerable groups like older people. ■ Mode of transport: Mode of transport affects physical and mental health, via mechanisms including physical activity and commuting time. ■ Wider effects of transport and infrastructure: Transport can facilitate social interactions and promote social inclusion.	Transport, health and wellbeing: An evidence review for the Department for Transport (2019)
Regular physical activity provides a range of physical and mental health and social benefits, including: ■ Reducing the risk of many long-term conditions ■ Helping manage existing conditions ■ Ensuring good musculoskeletal health ■ Developing and maintaining physical and mental function and independence ■ Supporting social inclusion ■ Helping maintain a healthy weight ■ Reducing inequalities for people with long-term conditions The CMOs' Physical Activity Guidelines state that for good physical and mental health, adults should aim to be physically active every day. Any activity is better than none, and more is better still. Regular physical activity can help to prevent and manage a range of chronic conditions and diseases, many of which are on the rise and affecting people at an earlier age.	Public Health England (2020) Health Matters, Physical Activity: Prevention and management of long-term conditions
Regional/Local	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
The strategy includes the following vision: '*Norfolk must be the place where everyone can start life well, live well and age well, and where no one is left behind.* *The economy must be vibrant, entrepreneurial and sustainable, supported by the right jobs, skills, training and infrastructure.* *The communities must feel safe, healthy, empowered and connected, their individual distinctiveness respected and preserved*' ■ The strategy also includes priorities for the population to live healthy, fulfilling and independent lives. This includes levelling up health, prioritising living well, and improving local services.	Norfolk County Council, Better Together for Norfolk, Norfolk County Council Strategy 2021-25

Messages/Issues for the development of the Transport Strategy	Document
This Policy aims to protect all children, young people and adults who need safeguarding (including employees, apprentices, and those on work experience); those who use our services or are cared for by others who use our services; and those with whom our staff, councillors, volunteers, commissioned contractors and consultants have contact. Appendix 2 sets out the types of potential abuse encapsulated under safeguarding. This Policy aims to: ▪ Provide guidance for staff, councillors, volunteers, contractors and consultants acting on behalf of Great Yarmouth Borough Council, protecting the Council and those individuals from failing to take safeguarding actions ▪ Ensure a person-centred approach which puts people's own needs and wishes first, hears their voice, respects their views, and upholds their human rights but recognises some safeguarding concerns will be required to be raised without consent ▪ Achieve the best possible outcomes for all individuals, including enabling all children and young people to Stay Safe, Be Healthy, Enjoy and Achieve, Make a Positive Contribution and Achieve Economic Wellbeing (Children Act 2004). ▪ Secure stable relationships with professionals built on trust but with respectful challenge if required ▪ Provide consistent support to help people to meet their individual needs, with all decisions taken in line with the Mental Capacity Act 2005 & Mental Capacity (Amendment) Act (MCA) 2019 ▪ Ensure that everyone gets the support they need ▪ Provide a proportionate, timely, supportive, informed and professional response to anyone experiencing abuse or neglect. ▪ Ensure that the Council plays its full role in safeguarding and promoting the health and welfare of all children, young people and adults, at all times ▪ Create a safe and healthy environment within all of our services, avoiding situations where abuse or allegations of abuse may occur	Great Yarmouth Borough Council Safeguarding policy

Messages/Issues for the development of the Transport Strategy	Document
In order to deliver the vision for the borough, a set of strategic objectives has been established. These objectives provide a more specific direction to the Core Policies. In addition, these objectives will be monitored during the implementation of the Core Strategy to determine its effectiveness and whether or not it needs to be reviewed. Strategic objective 2 - Addressing social exclusion and reducing deprivation by: ▪ Promoting the regeneration and renaissance of Great Yarmouth's Waterfront area ▪ Addressing social exclusion and inequalities in healthcare, education, skills and training by ensuring good quality health, education and community support and cultural facilities are accessible to the borough's residents of all ages ▪ Improving access to, and the provision of, community, sports and cultural facilities, together with sufficient local infrastructure to ensure healthier and stronger communities develop ▪ Nurturing stronger and safer communities, increasing people's safety and wellbeing by designing out crime, reducing disorder and its causes, encouraging community involvement and instilling civic pride.	Great Yarmouth Local Plan: Core Strategy 2013 – 2030
The council's aim is to ensure the collective services support the residents by preventing avoidable issues, and by making available early intervention advice and support at the right time to avoid escalation that requires higher cost re-active interventions including provision of statutory services. The Four thematic priorities of the council includes: 1. Health and Well-being 2. Low Educational Attainment, Skills and Aspirations 3. Vulnerability and Exploitation 4. Loneliness, Isolation and Social Exclusion	Great Yarmouth Locality Strategy (2021-2026)

Messages/Issues for the development of the Transport Strategy	Document
The strategy has an overall vision to 'create a healthier and greener Norfolk by enabling people to walk, wheel and cycle more often and as the natural choice for shorter journeys, or as part of a longer journey, supporting Government's target for 50% of the journeys in towns and cities to be completed by walking, wheeling and cycling by 2030'. It aims to do this by: ■ Engage with local communities and enable behavioural change ■ Create a safe, connected and well-maintained walking, wheeling, and cycling network for all that gets people where they need to be ■ Build healthy places, spaces and communities ■ Support multi-modal journeys ■ Embrace new technology ■ Remove barriers to provide a network that is accessible, inclusive and considers the needs of all users ■ Work with partners to achieve common ambitions	Walking, wheeling and cycling strategy for Norfolk
LCWIPs play an integral role in delivery of the overall transport strategy for Norfolk. At an individual level, the Plan has the purpose of identifying and prioritising improvement schemes in Great Yarmouth to enhance current levels of cycling and walking over the short, medium, and long term.	Great Yarmouth Local Cycling and Walking Infrastructure Plan (LCWIP)

Table A-3 - Review of Legislation, Policy and Plans for Economy and Employment

Messages/Issues for the development of the Transport Strategy	Document
National	**No subheading needed**
The Act allows the modification or discharge of the affordable housing elements of section 106 agreements in order to make developments more viable. Contains measures to extend permitted development rights to allow single-storey extensions of up to eight metres. Reduces the volume of extra paperwork required with a planning application; removing over-lapping development consent regimes that require multiple extra permissions from different Government agencies.	Growth and Infrastructure Act (2013)
Paragraphs 62 and 64 of the NPPF states that to determine the minimum number of homes needed, strategic policies should be informed by a local housing need assessment, conducted using the standard method in national planning guidance. In addition to the local housing need figure, any needs that cannot be met within neighbouring areas should also be taken into account in establishing the amount of housing to be planned for. Within this context of establishing need, the size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies, including, but not limited to: ■ Those who require affordable housing; ■ Families with children; ■ Older people; ■ Students; ■ People with disabilities; ■ Service families; ■ Travellers; ■ People who rent their homes; and ■ People wishing to commission or build their own homes.	National Planning Policy Framework (NPPF) (2024)

Messages/Issues for the development of the Transport Strategy	Document
Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future.	National Planning Policy Framework (NPPF) (2024)
The Enterprise Act includes measures to: ■ Establish a Small Business Commissioner to help small firms resolve issues. ■ Extend the Primary Authority scheme to make it easier for businesses to access tailored and assured advice from local authorities, giving them greater confidence to invest and grow. ■ Protect and strengthen apprenticeships by introducing targets for apprenticeships in public sector bodies in England, and establish an Institute for Apprenticeships – an independent, employer-led body that will make sure apprenticeships meet the needs of business.	The Enterprise Act (2016)
The Industrial Strategy sets out a long term plan to boost the productivity and earning power of people throughout the UK. It sets out how the UK Government is working towards building a Britain fit for the future – how they will help businesses create better, higher-paying jobs in every part of the UK with investment in the skills, industries and infrastructure of the future. The strategy includes five foundations: ■ Ideas: the world's most innovative economy ■ People: good jobs and greater earning power for all ■ Infrastructure: a major upgrade to the UK's infrastructure ■ Business environment: the best place to start and grow a business ■ Places: prosperous communities across the UK The UK Government will use this strategy to work with industry, academia and civil society over the coming years to build on the UK's strengths, make more of untapped potential and create a more productive economy that works for everyone across the UK.	UK Industrial Growth Strategy (2017)

Messages/Issues for the development of the Transport Strategy	Document
This Strategy sets out a comprehensive set of policies and proposals that aim to accelerate the pace of “clean growth”, i.e. deliver increased economic growth and decreased emissions. The Strategy has two guiding objectives: 1. To meet our domestic commitments at the lowest possible net cost to UK taxpayers, consumers and businesses; and, 2. To maximise the social and economic benefits for the UK from this transition. In order to meet these objectives, the UK will need to nurture low carbon technologies, processes and systems that are as cheap as possible.	The Clean Growth Strategy (2017)
Regional/Local	**No subheading needed**
Great Yarmouth Borough Council’s Economic Strategy (2020-2025) integrates with the New Anglia Local Enterprise Partnership’s Local Industrial Strategy, and the Economic Strategy for Norfolk & Suffolk. Drawing directly from The Plan, Outcome 4 of the Economic Strategy sets out regeneration, growth and investment intentions in the context of a thriving visitor economy: *“A thriving visitor economy with an extended season beyond the peak summer period.”* Traditional tourism remains a bedrock of the economy, with up to 30% of total employment in the Borough reliant on the industry. We are also the third most important seaside resort in the UK and the second largest visitor economy in Norfolk, after Norwich. In order to foster a more resilient, year-round visitor economy, we must create and/or attract new tourism markets to reflect and anticipate consumer trends, such as out-of-season vacationing. We must also capitalise upon our strengths in culture in order to maximise our offer to both residents and visitors.	Great Yarmouth Economic strategy (2020-2025)

Messages/Issues for the development of the Transport Strategy	Document
The Council's Tourism strategy focusses on four key trends: ▪ Great Yarmouth will capitalise on people are taking shorter, but more frequent breaks - using the weekends to bridge the gap between their main vacations. ▪ People are looking for exciting, one-off experiences - especially the young. People are prepared to spend their time and pay for these, from concerts to social occasions to athletic events and quirky experiences during the day or at night. The Council will provide the opportunities for the visitors to create, share and capture memories through experiences. ▪ Culture is a growing tourist sector and cultural activities play a significant role in the regeneration of many towns and cities. This is already happening in Great Yarmouth, and the council will promote this sector to enable it to grow further and showcase what's on offer. ▪ Business tourism is a significant opportunity - Business tourism is not seasonal and tends to attract a wealthier demographic. The Council's aim to capture this market, even if these visitors are staying for just one night in Great Yarmouth.	Great Yarmouth's Culture, Heritage and Tourism strategy (July 2020)
The Core Strategy sets out an agreed set of planning policies which steer and safeguard permitted development. The specifically objective SO5 provides for the aspirations of this Strategy: SO5 Capitalising on the successes of the local visitor economy by: ▪ Extending the Borough's leisure/visitor offer by promoting its cultural and environmental assets. ▪ Using tourism where appropriate as a means to support and enhance local services and facilities, especially in the Borough's primary and secondary villages. ▪ Securing the provision of high-quality accommodation and support facilities in the Borough to satisfy demands from businesses. ▪ Enhancing Great Yarmouth's Golden Mile through the expansion of existing attractions and the creation of new attractions. ▪ Promoting navigational links to the Broads and beyond.	Great Yarmouth Local Plan: Core Strategy 2013-2030

Messages/Issues for the development of the Transport Strategy	Document
The strategy includes the following vision: '*Norfolk must be the place where everyone can start life well, live well and age well, and where no one is left behind.* *The economy must be vibrant, entrepreneurial and sustainable, supported by the right jobs, skills, training and infrastructure.* *The communities must feel safe, healthy, empowered and connected, their individual distinctiveness respected and preserved*' The strategy also includes priorities for building a vibrant and sustainable economy.	Norfolk County Council, Better Together for Norfolk, Norfolk County Council Strategy 2021-25
The Norfolk & Suffolk Economic Strategy outlines ambitious plans for future growth across Norfolk and Suffolk. It includes the following vision: *'The ambition is to transform our economy into a globally recognised, technology-driven and inclusive economy which is leading the transition to a zero-carbon economy through sustainable food production, clean energy generation and consumption and digital innovation; becoming one of the best places in the world to live, work, learn and succeed in business.'* The Strategy aims for Norfolk and Suffolk to be: ■ A higher-performing, clean, productive and inclusive economy. ■ An inclusive economy with an appropriate and highly skilled workforce, where everyone benefits from clean economic growth. ■ The place where high-growth businesses with aspirations choose to be. ■ A well-connected place, locally, nationally and internationally. ■ An international-facing economy with high-value exports. ■ A centre for the UK's clean energy sector. ■ A place with a clear, defined, ambitious offer to the world.	New Anglia Local Enterprise Partnership's (LEP) Norfolk and Suffolk Economic Strategy (2022)

Messages/Issues for the development of the Transport Strategy	Document
The Local Growth Plan sets out Norfolk's Economic Strategy from 2024 to 2029. The Plan aims to improve productivity, drive growth, and ultimately improve living standards. The Plan sets out the vision for Norfolk to be: ■ A more inclusive, higher productivity economy ■ A UK Leader in offshore clean energy production and climate change adaptation ■ A centre of excellence for research and innovation ■ A major cluster for the UK's agri-food and Agri-tech sector, with a flourishing supply chain of local firms and farmers ■ A European leader in financial services ■ A major growth location and extension of the London to Cambridge growth corridor ■ An international and domestic tourism destination for the UK with growing value and expanding offer ■ An economy that prioritises growth alongside health and wellbeing	Norfolk Local Growth Plan

Table A-4 - Review of Legislation, Policy and Plans for Community Safety

Messages/Issues for the development of the Transport Strategy	Document
National	**No subheading needed**
Paragraph 116 of the NPPF states that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe..	National Planning Policy Framework (NPPF) (2024)

Messages/Issues for the development of the Transport Strategy	Document
Paragraphs 3.10 – 3.12 of the NN NPS advise that “scheme promoters are expected to take opportunities to improve road safety, including introducing the most modern and effective safety measures where proportionate”, and that it is the UK Government’s policy to ensure that risks of rail passenger and workforce accidents are reduced so far as reasonably practicable.	National Networks National Policy Statement (NN NPS) (2014)
Although there has been an ongoing reduction of people Killed or Seriously Injured (KSI) on UK roads has generally been declining since 2005, over the last few years the number of fatalities has remained fairly consistent with a small increase in KSIs in 2013. National Highways recognise that they must continue to improve safety by investing in the road network, both to prevent incidents from occurring and to reduce the severity of those that do. By the end of 2025, they aim to continue to reduce the number of KSIs on the Strategic Road Network to support a decrease of at least 50%, against the 2005-2009 average baseline.	National Highways Delivery Plan 2020-2025 (2020)
Safety is an important consideration for road users owing to the significant impact of serious and fatal accidents. A considerable economic cost is also associated with collisions on all roads, estimated at £15 billion annually to the UK economy. The strategy outlines what the Strategic Road Network (SRN) should be like in 2050 and the steps to achieve this. Traffic growth on the SRN is predicted to be between 29% and 59% by 2050 though it has been recognised that overall trips rates for the majority of trip purposes have been declining and there is a trend of more young people not learning to drive. This has been outweighed however by the increase in journeys made by older drivers and the expectation of a continued rise in total population. National Highways is still working towards an ongoing reduction in the number of people killed or seriously injured (KSI) on the SRN to support a decrease of at least 50% by the end of 2025 (against the 2005-09 baseline) through means of increased investment and maintenance of the network whilst also working towards achieving reductions of effects on the wider environment.	Department for Transport, Road Investment Strategy: 2020-2025 (2020)

Messages/Issues for the development of the Transport Strategy	Document
Road deaths in Britain have been reducing over the past 30 years because of multiple factors such as – safer infrastructure, new vehicle technologies, hazard perception testing, tougher enforcement, shifting social attitudes and better trauma care. Part of the United Nations' 2010 Global Plan for Road Safety promotes a five pillar approach for managing road safety – road safety management, safer roads and mobility, safer vehicles, safer road users, post-crash response.	Working together to build a safer road system: British Road Safety Statement. Department for Transport (2015)
Regional/Local	**No subheading needed**
The Implementation Plan is firmly focussed on achieving the strategic ambitions of our adopted LTP4 strategy. The plan includes 7 objectives to achieve the ambitions of the LTP4: ■ Embracing the future ■ Delivering a sustainable Norfolk ■ Enhancing Connectivity ■ Enhancing Norfolk's quality of life ■ Increasing accessibility ■ Improving Transport Safety 'Objective 6: Improving Transport Safety' includes the target to work in partnership to achieve casualty reductions on the transport network using the Safe Systems approach.	Norfolk County Council, Local Transport Plan 4 – Implementation Plan

Messages/Issues for the development of the Transport Strategy	Document
The NCCSP's role is to work together to create safe communities for people to live, work and visit. This plan sets the direction for the Norfolk County Community Safety Partnership (NCCSP) for the next three years. The NCCSP will strengthen its response to community safety locally. To do this it will deliver its plan using evidence led approach, with the Public Health Model of prevention at its heart. The NCCSP has four strategic themes. To deliver on these themes the strategy will: ■ Increase the understanding of key community safety issues locally, ■ Increase awareness of key issues amongst professionals and the public, ■ Prevent community safety issues from happening where possible, and ■ Responding in the right way when they do.	Norfolk County Community Safety Partnership (2021) Safer Norfolk Plan 2021-24

Table A-5 - Review of Legislation, Policy and Plans for Biodiversity and Natural Capital

Messages/Issues for the development of the Transport Strategy	Document
International	**No subheading needed**
The convention has three main aims which are stated in Article 1: ■ To conserve wild flora and fauna and their natural habitats; ■ To promote cooperation between states; and ■ To give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species.	Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)

Messages/Issues for the development of the Transport Strategy	Document
The identification of a European network of Sites of Community Importance (SCIs) to be designated as Special Areas of Conservation (SACs). A SA would need to report on any potential effects on SACs and all development plans should aim to avoid adverse effects on them.	Conservation of Natural Habitats and Wild Fauna & Flora (the 'Habitats Directive') (1992)
The 8th EAP guides EU environmental policy up to 2030 and sets ambitions for 2050. The Programme sets the following as a long-term priority objective: *The long-term priority objective is that, by 2050 at the latest, Europeans live well, within planetary boundaries, in a well-being economy where nothing is wasted. Growth will be regenerative, climate neutrality will be a reality, and inequalities will have been significantly reduced.* There are also six other priority objectives to 2030: ■ achieving the 2030 greenhouse gas emission reduction target and climate neutrality by 2050 ■ enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change ■ advancing towards a regenerative growth model, decoupling economic growth from resource use and environmental degradation, and accelerating the transition to a circular economy ■ pursuing a zero-pollution ambition, including for air, water and soil and protecting the health and well-being of Europeans ■ protecting, preserving and restoring biodiversity, and enhancing natural capital ■ reducing environmental and climate pressures related to production and consumption (particularly in the areas of energy, industry, buildings and infrastructure, mobility, tourism, international trade and the food system)	EU (2022) 8th Environment Action Programme (EAP) to 2030

Messages/Issues for the development of the Transport Strategy	Document
This strategy is a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. The strategy aims to put Europe's biodiversity on a path to recovery by 2030 and contains specific actions and commitments. These include: ■ Establishing a larger EU-wide network of protected areas on land and at sea; ■ Launching an EU nature restoration plan; ■ Introducing measures to enable the necessary transformative change; and ■ **Introducing measures to tackle the global biodiversity challenge.**	EU (2020) EU Biodiversity Strategy to 2030
The Ramsar Convention covers all aspects of wetland conservation. It has three main pillars of activities: ■ The designation of wetlands of international importance as Ramsar sites; ■ The promotion of the wise use of all wetlands in the territory of each country; and ■ International co-operation with other countries to further the wise use of wetlands and their resources. While the initial emphasis was on selecting sites of importance to waterbirds, now non-bird features are increasingly taken into account, both in the selection of new sites and when reviewing existing sites.	Ramsar Convention on the Conservation on Wetlands of International Importance (1971)
National	**No subheading needed**
The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. The Biodiversity Gain objective requires the biodiversity value attributable to a development to exceed pre-development biodiversity value by at least 10%.	The Environment Act (2021)

Messages/Issues for the development of the Transport Strategy	Document
The 25 Year Environment Plan (YEP) outlines the UK Government's ambition: 'To leave the environment in a better state than found and the steps proposed to take to achieve that ambition.' The Plan includes ten key targets of which two focus on biodiversity. <u>Thriving plants and wildlife:</u> ■ Restoring 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition, securing their wildlife value for the long term; ■ Creating or restoring 500,000 hectares of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits; ■ Taking action to recover threatened, iconic or economically important species of animals, plants and fungi and where possible to prevent human-induced extinction or loss of known threatened species in England and the Overseas Territories; ■ Increasing woodland in England in line with our aspiration of 12% cover by 2060: this would involve planting 180,000 hectares by end of 2042. <u>Enhancing biosecurity:</u> ■ Managing and reducing the impact of existing plant and animal diseases; lowering the risk of new ones and tackling invasive non-native species; ■ Reaching the detailed goals to be set out in the Tree Health Resilience Plan of 2018; ■ Ensuring strong biosecurity protection at our borders, drawing on the opportunities leaving the EU provides; and ■ Working with industry to reduce the impact of endemic disease.	25 Year Environment Plan, HM Government (2018)

Messages/Issues for the development of the Transport Strategy	Document
The Environmental Improvement Plan (EIP) 2023 for England is the first revision of the 25YEP. It builds on the 25YEP vision with a new plan setting out how Defra will work with landowners, communities and businesses to deliver each of the goals for improving the environment, matched with interim targets to measure progress. Taking these actions will help us restore nature, reduce environmental pollution, and increase the prosperity of our country. This improvement plan sets out the interim targets and the plan to deliver those goals, including measures such as: ■ A comprehensive delivery plan to halt the decline in nature by 2030; ■ A commitment to creating and restoring at least 500,000 hectares of wildlife habitat, with 70 new projects including 25 new or expanded National Nature Reserves; ■ A new pledge on access to nature with everyone to live no more than a 15 minutes' walk from a green or blue space; ■ The Species Survival Fund for domestic species at risk, like the red squirrel; and ■ Five-year interim targets to drive progress towards our long-term targets.	Department for Environment, Food & Rural Affairs (2023) Environmental Improvement Plan 2023
The Wildlife and Countryside Act 1981 consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) in Great Britain (NB Council Directive 79/409/EEC has now been replaced by Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version). The act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) and the protection of wildlife.	Wildlife and Countryside Act (as amended 1981)

Messages/Issues for the development of the Transport Strategy	Document
The Biodiversity Strategy for England sets a fundamental shift in train by ensuring that biodiversity considerations become embedded in all the main sectors of economic activity, public and private. The Strategy capitalises on the opportunities presented by the report of the Policy Commission on Food and Farming and the current review of the Common Agricultural Policy. The Strategy sets out a programme for five years for the other main policy sectors, to make the changes necessary to conserve, enhance and work with the grain of nature and ecosystems rather than against them. It takes account of climate change as one of the most important factors affecting biodiversity and influencing policies.	Working with the grain of nature: A Biodiversity Strategy for England (2002)
The aim of the White Paper is to set out a clear framework for protecting and enhancing the things that nature gives us for free. Four core themes: 1. Protecting and improving our natural environment 2. Growing a green economy 3. Reconnecting people and nature 4. International and EU leadership	The Natural Environment White Paper (2011)
Species and habitats should be restored and enhanced in comparison with 2000 levels. Improve the long term sustainability of ecological and physical processes that underpin the functioning of ecosystems, thereby enhancing the capacity of ecosystem services. Provide accessible natural environments rich in wildlife for people to enjoy and experience.	Making Space for Nature: A review of England's Wildlife Sites and Ecological Network: Chaired by Professor Sir John Lawton CBE FRS (2010)

Messages/Issues for the development of the Transport Strategy	Document
Protect and enhance biodiversity through Nature Improvement Areas (NIAs), biodiversity offsetting, Local Nature Partnerships and phasing out peat use. Place natural capital at the centre of economic decision making to avoid the unintended environmental consequences that arise from undervaluing natural assets.	The Natural Choice: Securing the value of nature: HM Government (2011)
NN NPS states that development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation to counteract impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought. Paragraphs 3.2 to 3.5 of the NN NPS state that not only should national road and rail networks be designed to minimise social and environmental impacts, but that they should also seek to improve quality of life. In part this may be achieved by "reconnecting habitats and ecosystems […] improving water quality and reducing flood risk, […] and addressing areas of poor air quality." Paragraph 5.162 recognises the potential for developments to provide positive environmental and economic benefits through the provision of green infrastructure. Paragraph 5.175 of the NN NPS highlights that green infrastructure identified in development plans should be protected and, where possible, enhanced.	National Networks National Policy Statement (NN NPS) (2014)

Messages/Issues for the development of the Transport Strategy	Document
Paragraphs 187 and 192 to 195 of the NPPF require development to protect and safeguard biodiversity, and advise that development should aim to conserve, restore and enhance biodiversity adequately through mitigation or, as a last resort, using compensation. Proposals which aim to conserve or enhance biodiversity should be supported. Recognise the wider benefits of ecosystem services; minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the UK Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Paragraph 187 of the NPPF requires that planning decisions should be taken to enhance the natural environment by recognising the wider benefits from natural capital and ecosystem services. Further, Paragraph 181 requires plans to take a strategic approach to maintaining and enhancing green infrastructure networks and improving natural capital at a catchment or landscape scale.	National Planning Policy Framework (NPPF) (2024)
The report identifies that: ■ Some assets are currently not being used sustainably and the benefits that we derive from them are at risk; ■ There are major economic benefits to be gained from natural capital and that their value should be incorporated into decision making; and ■ A long-term restoration plan is necessary to maintain and improve natural capital for future generations.	The State of Natural Capital: Restoring our Natural Assets; Natural Capital Committee (2014)

Messages/Issues for the development of the Transport Strategy	Document
In the report, the Natural Capital Committee sets out: ■ Despite some improvements, only limited progress has been made towards the 25 Year Environment Plan's goals. ■ Its advice to Government that biodiversity net gain should be expanded to environmental net gain. ■ Its advice that an England wide baseline of natural capital assets should be established to measure progress towards environmental goals. Natural capital should be seen as infrastructure in its own right, in recognition of its contribution to economic wellbeing.	The State of Natural Capital; Natural Capital Committee (2020)
Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.	Natural Environment and Rural Communities Act (2006)
The Eel Regulations allow the EA to establish measures for the recovery of European eel stocks. The regulations have implications for operators of abstractions and discharges. The TS should ensure that there are no adverse impacts on eels as a result of transport measures.	The Eels Regulations (England and Wales) 2009
The Marine and Coastal Access Act sets out a number of measures including the establishment of Marine Conservation Zones (MCZs) and Marine Spatial Plans. It also includes amendments to the Salmon and Freshwater Fisheries Act, 1975. The TS and its SEA should consider the effects of the TS on coastal areas.	Marine and Coastal Access Act 2009
The act encompasses fishing regulation, as well as illegal obstruction of migratory pathways and prohibited modes of destroying fish. The act allows the salmon to maintain an environmentally stable population and support the fishing industry. The TS and its SEA should consider potential impacts on, and the protection of, salmon and freshwater fish.	Salmon and Freshwater Fisheries Act 1975

Messages/Issues for the development of the Transport Strategy	Document
These regulations consolidate all the various amendments made to the Conservation (Natural Habitats) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites. Under the Regulations, competent authorities i.e. any Minister, government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the EC Habitats Directive. New provisions implement aspects of the Marine & Coastal Access Act 2009. These provisions provide for: ■ the transfer of certain licensing functions from Natural England to the Marine Management Organisation (MMO); ■ Marine Enforcement Officers to use powers under the Marine Act to enforce certain offences under the Habitats Regulations. The 2019 (EU Exit) amendment to the Regulations ensures that the habitat and species protection and standards derived from EU law will continue to apply after Brexit. The TS must ensure full compliance with the Regulations and the SEA should account for the effects of the strategy on biodiversity.	Conservation of Habitats and Species Regulations 2017 and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Messages/Issues for the development of the Transport Strategy	Document
The framework sets out UK priorities for work on the Convention on Biological Diversity and follows on from the 1994 UK Biodiversity Action Plan. It sets out a vision that, 'by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people'. The goals and activities to meet this aim are grouped under the categories of International / European context; facilitating and contributing to common country approaches and solutions; evidence provision; and reporting. The TS should support the protection and enhancement of biodiversity within its area, and the SEA should include criteria relating to the protection of species and habitats.	UK Post-2010 Biodiversity Framework (2012)
The Act: ■ makes provision about bodies concerned with the natural environment and rural communities; ■ makes provision in connection with wildlife, sites of special scientific interest, National Parks and the Broads; ■ amends the law relating to rights of way; ■ makes provision as to the Inland Waterways Amenity Advisory Council; and ■ provides for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes. The TS and its SEA should have regard to protected wildlife sites and species and rights of way.	Natural Environment and Rural Communities Act (2006)
Regional/Local	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
The vision of the Great Yarmouth Local Plan is to make Great Yarmouth a more attractive and aspirational place to live, work and play, with strong links to Lowestoft, the Broads, Norwich, rural Norfolk and the wider New Anglia (Norfolk and Suffolk) Local Enterprise Partnership area. Strategic objectives of the plan relating to the environment include: ■ Minimising the impact on the environment ■ Protecting and enhancing the quality of the local environment	Great Yarmouth Local Plan, 2021
This policy includes a number of goals relating to biodiversity: ■ Encouraging a thriving plant and wildlife community ■ Enhancing beauty, heritage and engagement with the natural environment ■ Enhancing biosecurity	Norfolk County Council, Environmental Policy (2019)

The strategy will provide a blueprint for how Norfolk's local communities, landowners, land managers, local authorities, private companies and government bodies can work together to broaden protection for nature in the planning system, and restore and recover it on the ground. This will include: ■ **Creating Ecological Networks**: Establishing a 'Nature Recovery Network' to connect isolated habitats, creating corridors that promote species migration, genetic exchange, and adaptation to climate change. This approach recognises that a connected landscape is more resilient and beneficial for both wildlife and people. ■ **Enhancing Biodiversity**: The protection and restoration of local wildlife, creating and improving habitats for native species. ■ **Green Space Access and Connection**: Improving access to, and the quality of, green spaces and natural areas for local residents and tourists. This is both for the physical and mental health benefits they provide and to foster a deeper connection with, and appreciation for, the natural world. ■ **Using Land Sustainably**: Promoting land use practices that are sustainable and nature-friendly. Including encouraging everything from sustainable agriculture and forestry practices to nature-based solutions in urban planning and development. ■ **Engaging With Communities and Partners**: Involving local communities, landowners, land managers, local authorities, private companies, business, the third sector, and government bodies in the nature recovery process. This will ensure strategies are locally grounded, widely supported, and that they offer social, economic and environmental benefits. ■ **Climate Change Mitigation and Adaptation**: Using natural solutions to combat climate change, such as increasing tree cover to remove carbon from the atmosphere, restoring wetlands and peatlands, and changing the way farmland is managed. ■ **Opportunities for Education**: Providing opportunities for environmental education and citizen science. This will help to increase community awareness and understanding of biodiversity issues and the importance of healthy ecosystems.	Norfolk County Council, Local Nature Recovery Strategy

Table A-6 - Review of Legislation, Policy and Plans for Landscape and Townscape

Messages/Issues for the development of the Transport Strategy	Document
International	**No subheading needed**
The Council of Europe Landscape Convention promotes the protection, management and planning of the landscapes and organises international co-operation on landscape issues. Specific measures include: ■ raising awareness of the value of landscapes among all sectors of society and of society's role in shaping them; ■ promoting landscape training and education among landscape specialists, other related professions and in school and university courses; ■ the identification and assessment of landscapes, ■ analysis of landscape change, with the active participation of stakeholders; ■ setting objectives for landscape quality, with the involvement of the public; and ■ the implementation of landscape policies through the establishment of plans and practical programmes.	European Landscape Convention (2000) (became binding March 2007)
National	**No subheading needed**
Goal 6: Enhancing beauty, heritage and engagement with the natural environment, is to "safeguard and enhance the beauty of our natural scenery and improving its environmental value while being sensitive to considerations of its heritage."	25 Year Environment Plan (2018)
Paragraph 5.149 states that when judging the impact of a project on landscape, the decision is dependent on the nature of the existing landscape likely to be affected and the nature of the effect likely to occur. The project should aim to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.	National Policy Statement for National Networks (NN NPS) (2014)

Messages/Issues for the development of the Transport Strategy	Document
Paragraph 180 of the NPPF requires developments to protect and enhance valued landscapes and recognise the intrinsic character and beauty of the countryside. Paragraph 182 of the NPPF states that great weight should be given to conserving and enhancing landscape and scenic beauty in National parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas. Paragraph 183 of the NPPF states that when considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest.	National Planning Policy Framework (NPPF) (2024)
The Landscape Institute's most recent position statement, 'Green Infrastructure LI Position Statement 2013' sets out why GI is crucial to our sustainable future. The publication showcases a range of successful GI projects and shows how collaboration is key to delivering multifunctional landscapes. It also illustrates why landscape professionals should take the lead on the integration of GI.	Green Infrastructure: An integrated approach to landscape use. Landscape Institute Position Statement (2013)
Communities should identify green infrastructure requirements in their local area through addition to or creative enhancement of the existing network. Look to enhance local landscape character, heritage and biodiversity and ensure long term management is included in an overall strategy.	Local Green Infrastructure: helping communities make the most of their landscape: Landscape Institute for Green Infrastructure Partnership (2011)

Messages/Issues for the development of the Transport Strategy	Document
Fields in Trust guidance, first published in the 1930s, is based on a broad recommendation that 6 acres (2.4 hectares) of accessible green space per 1,000 head of population enables residents of all ages to participate in sport and play; 75% of local authorities adopt this or an equivalent standard (2014 Fields in Trust / David Lock Associates Survey).	Guidance for Outdoor Sport and Play (2015)
English Nature (now Natural England) recommends that provision should be made of at least 2 ha of accessible natural greenspace per 1000 population according to a system of tiers into which sites of different sizes fit: ■ No person should live more than 300m from their nearest area of natural greenspace; ■ There should be at least one accessible 20ha site within 2km from home; ■ There should be one accessible 100ha site within 5km; and ■ There should be one accessible 500ha site within 10km.	Accessible Natural Green Space Standards in Towns and Cities: A review and Toolkit for their implementation (2003) and Nature Nearby: Accessible Green Space Guidance (2010)
Regional/Local	**No subheading needed**
The vision of the Great Yarmouth Local Plan is to make Great Yarmouth a more attractive and aspirational place to live, work and play, with strong links to Lowestoft, the Broads, Norwich, rural Norfolk and the wider New Anglia (Norfolk and Suffolk) Local Enterprise Partnership area. Strategic objectives of the plan relating to the environment include: ■ Minimising the impact on the environment ■ Protecting and enhancing the quality of the local environment	Great Yarmouth Local Plan, 2021
This policy includes a number of goals relating to biodiversity: ■ Encouraging a thriving plant and wildlife community ■ Enhancing beauty, heritage and engagement with the natural environment Enhancing biosecurity	Norfolk County Council, Environmental Policy (2019)

Messages/Issues for the development of the Transport Strategy	Document
The strategy will provide a blueprint for how Norfolk's local communities, landowners, land managers, local authorities, private companies and government bodies can work together to broaden protection for nature in the planning system, and restore and recover it on the ground. This will include: ■ **Creating Ecological Networks**: Establishing a 'Nature Recovery Network' to connect isolated habitats, creating corridors that promote species migration, genetic exchange, and adaptation to climate change. This approach recognises that a connected landscape is more resilient and beneficial for both wildlife and people. ■ **Enhancing Biodiversity**: The protection and restoration of local wildlife, creating and improving habitats for native species. ■ **Green Space Access and Connection**: Improving access to, and the quality of, green spaces and natural areas for local residents and tourists. This is both for the physical and mental health benefits they provide and to foster a deeper connection with, and appreciation for, the natural world. ■ **Using Land Sustainably**: Promoting land use practices that are sustainable and nature-friendly. Including encouraging everything from sustainable agriculture and forestry practices to nature-based solutions in urban planning and development. ■ **Engaging With Communities and Partners**: Involving local communities, landowners, land managers, local authorities, private companies, business, the third sector, and government bodies in the nature recovery process. This will ensure strategies are locally grounded, widely supported, and that they offer social, economic and environmental benefits. ■ **Climate Change Mitigation and Adaptation**: Using natural solutions to combat climate change, such as increasing tree cover to remove carbon from the atmosphere, restoring wetlands and peatlands, and changing the way farmland is managed. **Opportunities for Education**: Providing opportunities for environmental education and citizen science. This will help to increase community awareness and understanding of biodiversity issues and the importance of healthy ecosystems.	Norfolk County Council, Local Nature Recovery Strategy

Table A-7 - Review of Legislation, Policy and Plans for Historic Environment

Messages/Issues for the development of the Transport Strategy	Document
International	**No subheading needed**
This convention sets out a framework for the identification and designation of cultural or natural heritage sites of ‘outstanding universal value’ as World Heritage Sites.	UNESCO, The World Heritage Convention (1972)
This convention outlines protection measures for archaeological heritage assets, including the development and maintenance of an inventory of sites. The aim of this convention is to protect sites for future study, outlines the requirements to report ‘chance finds’, as well as controlling excavations. The input of expert archaeologists into the making of planning policies and decisions is also required under this convention.	The Valetta Convention (1992)

Messages/Issues for the development of the Transport Strategy	Document
The main purpose of the Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It affirms the needs for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. The convention considers comprising the following permanent properties, which are stated in Article 1: ■ Monuments: all buildings and structures of conspicuous historical, archaeological, artistic, scientific, social or technical interest, including their fixtures and fittings; ■ Groups of buildings: homogenous groups of urban or rural buildings conspicuous for their historical, archaeological, artistic, scientific, social or technical interest, which are sufficiently coherent to form topographically definable units; and ■ Sites: the combined works of man and nature, being areas which are partially built upon and sufficiently distinctive and homogenous to be topographically definable and are of conspicuous historical, archaeological, artistic, scientific, social or technical interest.	Convention for the Protection of the Architectural Heritage of Europe, Granada (1985)
National	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
Paragraph 203 of the NPPF requires plans to set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. Paragraph 208 of the NPPF states that local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. Paragraph 212 of the NPPF states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be).	National Planning Policy Framework (NPPF) (2024)
Paragraph 5.149 states that when judging the impact of a project on landscape, the decision is dependent on the nature of the existing landscape likely to be affected and the nature of the effect likely to occur. The project should aim to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.	National Policy Statement for National Networks (NN NPS) (2014)
Regional/Local	**No subheading needed**
This report provides committee Members with the rationale to create a new Tourism and Cultural Strategy for Great Yarmouth, and presents an overview of how this strategy will be developed, concluding that final approval of this strategy will be made by Members during December 2018.	Tourism and Culture Strategy Development Plan, Great Yarmouth, 2018

Messages/Issues for the development of the Transport Strategy	Document
The Culture, Heritage and Tourism strategy involves the following themes: • Infrastructure – protect and enhance the environment to support culture and tourism, and attract investment; • Experiences – a greater diversity of people experiencing and creating culture in the Borough; • Develop the right Conditions - to support and sustain culture for all; Open for Business Year round – Great Yarmouth is open 12 months of the year;	Culture, Heritage and Tourism strategy, Great Yarmouth, 2020

Table A-8 - Review of Legislation, Policy and Plans for Water Environment

Messages/Issues for the development of the Transport Strategy	Document
International	**No subheading needed**
The main aims of the Water Framework Directive (WFD) are to: ▪ prevent deterioration and enhance status of aquatic ecosystems, including groundwater ▪ promote sustainable water use ▪ reduce pollution ▪ contribute to the mitigation of floods and droughts The WFD requires the creation of River Basin Management Plans (RBMPs). Statutory objectives are set for Scottish waters through River Basin Management Planning. These objectives are based on ecological assessments and economic judgments. The plans cover all types of water body, e.g. rivers, lochs, lakes, estuaries, coastal waters and groundwater.	Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (“The Water Framework Directive”) (2000)

Messages/Issues for the development of the Transport Strategy	Document
Requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk.	Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (2007)
This Directive establishes a regime which sets groundwater quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater. The directive establishes quality criteria that takes account local characteristics and allows for further improvements to be made based on monitoring data and new scientific knowledge.	Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration (2006)
National	**No subheading needed**
Paragraph 170 "… inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere".	National Planning Policy Framework (NPPF) (2024)

Messages/Issues for the development of the Transport Strategy	Document
The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. Objectives for targets under consideration: ■ reduce pollution from agriculture, in particular phosphorus and nitrate ■ reduce pollution from wastewater, in particular phosphorus and nitrate ■ reduce water demand ■ improve the quality of habitat on land, including freshwater and coastal sites, expressed through the condition of our protected sites (SSSIs) ■ improve the overall status of species populations on land and in freshwaters	The Environment Act (2021)
Paragraph 5.105 "… if there is no reasonably available site in Flood Zones 1 or 2, then national networks infrastructure projects can be located in Flood Zone 3, subject to the Exception Test. Both elements of the test will have to be passed for development to be consented…"	National Policy Statement for National Networks (2014)
Paragraph 5.109 "Any project that is classified as 'essential infrastructure' and proposed to be located in Flood Zone 3a or 3b should be designed and constructed to remain operational and safe for users in times of flood; and any project in Zone 3b should result in no net loss of floodplain storage and not impede water flows".	National Policy Statement for National Networks (2014)
Paragraph 5.224 "Activities that discharge to the water environment are subject to pollution control"	National Policy Statement for National Networks (2014)
Paragraph 5.225 "… impacts on the water environment should be given more weight where a project would have adverse effects on the achievement of the environmental objectives established under the Water Framework Directive".	National Policy Statement for National Networks (2014)

Messages/Issues for the development of the Transport Strategy	Document
“Improve at least three quarters of our waters to be close to their natural state as soon as is practicable by: […] Reaching or exceeding objectives for rivers, lakes, coastal and ground waters that are specially protected, whether for biodiversity or drinking water”.	A Green Future: Our 25 Year Plan to Improve the Environment (2018) - Goal 2 ‘Clean and plentiful water’
The Environment Agency regularly assesses the water quality of the UK’s waterbodies, however many of these are not achieving the required standards and are often prevented by a number of factors and are described as ‘Reasons for Not Achieving Good Status (RNAGS)’. Such pressures include pollution from towns, cities and transport affecting 18% of water bodies.	Water Targets: Detailed Evidence Report, Department for Environment Food and Rural Affairs (2022)
Regional/Local	**No subheading needed**
The aim of a SWMP is to understand and resolve complex and high risk surface water flooding problems in urbanised areas. A SWMP brings together key local partners, with responsibility for surface water and drainage in their areas, to collaborate to investigate the causes of surface water flooding and agree the most cost effective way of managing surface water flood risk.	Great Yarmouth Borough Surface Water Management Plan, 2012
Describes the pressures facing the water environment and the actions that will address them, particularly in relation to water quality. The environmental objectives covered by the plan are: ■ preventing deterioration of the status of surface waters and groundwater ■ achieving objectives and standards for protected areas ■ aiming to achieve good status for all water bodies ■ reversing any significant and sustained upward trends in pollutant concentrations in groundwater ■ cessation of discharges, emissions and losses of priority hazardous substances into surface waters ■ progressively reducing the pollution of groundwater and preventing or limiting the entry of pollutants	Environment Agency (2022) Anglian river basin district (RBD) river basin management plan

Messages/Issues for the development of the Transport Strategy	Document
The Local Flood Risk Management Strategy aims to inform all groups and individuals who may have an interest in, or an ability to influence or manage flood risk, including householders, businesses, landowners, developers and risk authorities. The Local Flood Risk Management Strategy seeks to: ■ explain what flooding is, its dangers, and how flood risk can be managed; ■ inform about the extent and characteristics of flood risk in Norfolk and signpost other sources of information about flood risk in the county; ■ clarify which Risk Management Authorities are responsible for which flood risk management activities; ■ indicate the objectives of the strategy and make commitments in respect of the actions that will be taken by the Lead Local Flood Authority and other Risk Management Authorities; ■ establish a framework of policies that will ensure that riparian owners, businesses, developers and authorities apply a consistent and strategic approach to flood management; ■ outline a series of proactive measures which will increase understanding of local flood risk and identify further measures to manage those risk; ■ clarify how flood risk management is to be funded in Norfolk; ■ indicate how flood risk management activities will be monitored and how the strategy will be reviewed; The existing policies in the Local Flood Risk Management Strategy was reviewed in 2021 against new and emerging national strategies and policies. This has resulted in 3 new policies and minor updates to our existing policies.	Norfolk County Council (2015) Flood Risk Management Strategy

Messages/Issues for the development of the Transport Strategy	Document
Great Yarmouth Borough Council adopted the current Shoreline Management Plan (SMP) in 2012. This sets out the high-level policy aims for the coastline from North Norfolk to Waveney including Great Yarmouth. With a changing coastline there is a need, from time to time, to review the policies and management methods. This report sets out the reasons that a review is appropriate and is consistent with the SMP. As per the report, the beaches along the majority of Great Yarmouth's frontage have been accreting for last forty years or so and it is not predicted to change in the near future. The sea walls were constructed over a prolonged time period and probably to differing designs. Areas that can be accessed are shown to be fair condition although there are sections where the coping has failed and will require repairs. It is intended to include this frontage to consider changes to sea level rise and to complete management plan for the Great Yarmouth borough coastline	Coastal Strategy for Winterton to Great Yarmouth, 2016
The catchment flood management plan (CMFP) provides an overview of flood risk in the Broadland Rivers catchment, and how this will be managed long term (50 to 100 years). The TS and its SEA will need to consider flood risk, and its management, for any planned infrastructure development.	Broadland Rivers: Catchment flood management plan (2009)
Shoreline Management Plans outline how the impact of coastal processes will be managed within a designated area, with an aim to reduce the risk to people, and the developed, historic and natural environments, and identify a sustainable approach to managing risks. Sections 3 and 4 of the Kelling Hard to Lowestoft SMP6 cover the TS area, therefore the TS and its SEA should consider the actions laid out in the plan when considering new infrastructure.	Kelling Hard to Lowestoft SMP6 (2012)

Messages/Issues for the development of the Transport Strategy	Document
Surface Flood Risk Assessments provide information and guidance on flood risk for a defined area, determining variations in risk from all sources of flooding, accounting for climate change and current national planning policy. The North Norfolk and Great Yarmouth SFRAs cover the TS area, therefore the TS and its SEA should account for their objectives when considering new infrastructure.	SFRA's, North Norfolk and Great Yarmouth (2017)
The SPD sets out principles and standards designing development in the borough, focusing on the priority aspects of design. As a code, it signposts users to other sources of regulation, guidance, assessment tools and best practice. This covers flooding within Great Yarmouth, that should be considered by the TS and its SEA.	Great Yarmouth Design Code Supplementary Planning Document (2024)
The document describes the requirements for assessment and management of the impacts that road projects can have on the water environment. The TS and its SEA should consider these.	DMRB LA 113 Road drainage and the water environment (202)

Table A-9 - Review of Legislation, Policy and Plans for Air Quality

Messages/Issues for the development of the Transport Strategy	Document
International	**No subheading needed**
The Ambient Air Quality Directive provides the current framework for the control of ambient concentrations of air pollution in the EU. The control of emissions from mobile sources, improving fuel quality and promoting and integrating environmental protection requirements into the transport and energy sector are part of these aims.	Ambient Air Quality Directive (2008)
National	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. Objectives for targets under consideration: ■ Reducing the annual mean level of fine particulate matter (PM2.5) in ambient air (as required by the Environment Bill) ■ In the long-term, reducing population exposure to PM2.5	The Environment Act (2021)
With regards to the transport sector, the 25 Year Environment Plan identifies four 'early' priorities through the 'Future of Mobility Grand Challenge'. These include encouraging new modes of transport; addressing the challenges of moving from hydrocarbon to zero emission vehicles; and Preparing for a future of new mobility services, increased autonomy, journey-sharing and a blurring of the distinctions between private and public transport.	25 Year Environment Plan, HM Government (2018)
This Strategy sets out a comprehensive set of policies and proposals that aim to accelerate the pace of "clean growth", i.e. deliver increased economic growth and decreased emissions. Key Policies and Proposals in the Strategy: ■ Develop world leading Green Finance capabilities; ■ Develop a package of measures to support businesses to improve their energy ■ productivity, by at least 20 per cent by 2030; ■ Improving the energy efficiency of our homes; ■ Rolling out low carbon heating; ■ Accelerating the shift to low carbon transport; ■ Delivering clean, smart, flexible power emissions; and ■ Enhancing the benefits and value of our natural resources.	The Clean Growth Strategy (2017)

Messages/Issues for the development of the Transport Strategy	Document
Paragraph 5.12 - Accords air quality considerations substantial weight where, after taking into account mitigation, a scheme would lead to a significant air quality impact in relation to Environmental Impact Assessment (EIA) and/ or where they lead to deterioration in air quality in a zone/ agglomeration.	National Policy Statement for National Networks (2014)
Addresses action to reduce emissions from transport “as a significant source of emissions of air pollution”, in-particular oxides of nitrogen (NOx) – which is responsible for high levels of NO2 in ambient air, especially in urban areas - and particulate (PM10 and PM2.5) emissions.	Clean Air Strategy (2019)
Regional/Local	**No subheading needed**
Currently, the borough does not have Air Quality Action Plans as there are no Air Quality Management Areas. However the local plan core strategy emphasis on the air quality management and indicate as follows: - ■ Policy A1, Amenity:- Development proposals will be approved if they safeguard or enhance the quality of amenity to guarantee a suitable living environment in the area, which points on preserving or improving air quality. ■ Policy E6: Pollution and hazards in development: - Development proposals will be supported provided the potential for the generation of risks and pollution—including air and light pollution—has been properly avoided or minimised.	Great Yarmouth Local Plan Part 2 (2021)

Table A-10 - Review of Legislation, Policy and Plans for Climate Change and Greenhouse Gases

Messages/Issues for the development of the Transport Strategy	Document
International	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
The Ambient Air Quality Directive provides the current framework for the control of ambient concentrations of air pollution in the EU. The control of emissions from mobile sources, improving fuel quality and promoting and integrating environmental protection requirements into the transport and energy sector are part of these aims.	Ambient Air Quality Directive (2008)
Aims to limit the global warming change to below 2°C above pre-industrial levels. However, countries aim to limit the increase to 1.5°C to reduce the impacts of global warming. The EU has committed to a binding target of a reduction of at least 40% in greenhouse gas emissions by 2030 compared to 1990	The Paris Agreement (2015)
National	**No subheading needed**
Paragraph 164 of the NPPF states that "New development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the UK Government's policy for national technical standards."	National Planning Policy Framework (NPPF) (2024)
Improve carbon management and help the transition towards a low carbon economy in the UK. Demonstrate strong UK leadership internationally, showing the commitment to taking shared responsibility for reducing global emissions in the context of developing negotiations on a post-2012 global agreement at Copenhagen in 2009. Greenhouse gas emission reductions through action in the UK and abroad of at least 80% by 2050, and reductions in CO2 emissions of at least 26% by 2020, against a 1990 baseline.	The Climate Change Act (2008)

Messages/Issues for the development of the Transport Strategy	Document
Paragraph 4.38 of the NN NPS states that “New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the provision of green infrastructure.” The NN NPS also requires carbon impacts to be considered as part of the appraisal of scheme options, and an assessment of any likely significant climate factors in accordance with the requirements in the EIA Directive. It goes on to state that “it is very unlikely that the impact of a road project will, in isolation, affect the ability of UK Government to meet its carbon reduction plan targets.”	Department for Transport, National Policy Statement for National Networks (NN NPS) (2014)
The 25 Year Environment Plan outlines the UK Government’s ambition to leave our environment in a better state than we found it and the steps proposed to take to achieve that ambition. Mitigating and adapting to climate change: ■ Continuing to cut greenhouse gas emissions including from land use, land use change, the agriculture and waste sectors and the use of fluorinated gases. The UK Climate Change Act 2008 commits us to reducing total greenhouse gas emissions by at least 80 per cent by 2050 when compared to 1990 levels; ■ Making sure that all policies, programmes and investment decisions take into account the possible extent of climate change this century; and ■ Implementing a sustainable and effective second National Adaptation Programme	A Green Future: Our 25 Year Plan to Improve the Environment (2018)

Messages/Issues for the development of the Transport Strategy	Document
The UK has committed to an 80% reduction in its greenhouse gas emissions by 2050. In order to help meet this target, the UK Committee on Climate Change (CCC) has devised a series of interim UK "carbon budgets" as follows: ■ 1st carbon budget (2008 to 2012): 23% reduction; ■ 2nd carbon budget (2013 to 2017): 29% reduction; ■ 3rd carbon budget (2018 to 2022): 35% reduction by 2020; ■ 4th carbon budget (2023 to 2027): 50% reduction by 2025; ■ 5th carbon budget (2028 to 2032): 57% reduction by 2030.	UK Committee on Climate Change, Interim UK Carbon Budgets
The document presents the first step in the UK Government's policy development around decarbonising transport, in order to reach net zero targets. It outlines six strategic priorities: ■ Accelerating modal shift to public and active transport ■ Decarbonisation of road vehicles ■ Decarbonising how we get our goods ■ Place-based solutions ■ UK as a hub for green transport technology and innovation ■ Reducing carbon in a global economy	Decarbonising Transport: Setting the Challenge

Messages/Issues for the development of the Transport Strategy	Document
This plan sets out how the UK aims to deliver emission reductions set out in ‘Decarbonising Transport: Setting the Challenge’, and the benefits that this will bring across the UK. The document commits the UK to: ■ Increasing walking and cycling ■ Decarbonising railways ■ Zero emission buses and coaches ■ A zero emission fleet of cars, vans, motorcycles, and scooters ■ Accelerating maritime decarbonisation ■ Accelerating aviation decarbonisation ■ Delivering a zero emission freight and logistics sector ■ Maximising the benefits of sustainable low carbon fuels ■ Delivering decarbonisation through places ■ Hydrogen’s role in a decarbonised transport system ■ Future transport – more choice, better efficiency ■ Supporting UK research and development as a decarbonisation enabler	Decarbonising Transport: A Better, Greener Britain
Regional/Local	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
The Norfolk County Council acknowledges the significant consequences of climate change on a worldwide scale and the imperative for immediate measures. The policy focus on 7 area where the Council will use its powers and influence to address climate change which includes: - ■ Focus area 1: Reduce estate emissions. ■ Focus area 2: Reduce indirect emissions. ■ Focus area 3: Addressing Norfolk's County wide emissions. ■ Focus area 4: Promoting a green economy for Norfolk. ■ Focus area 5: Climate adaptation. ■ Focus area 6: Ensure nature has space to recover and grow. ■ Focus area 7: Engage and collaborate.	Norfolk County Council's Climate Policy (2024)
The policy outlines the following targets relating to climate change mitigation and adaptation: - ■ Integrating a comprehensive approach to address climate change, specifically within local planning frameworks, into the strategic planning for land use and management. ■ Planting more trees to improve biodiversity and as a potential mitigation measure for climate change in appropriate locations.	Norfolk County Council, Environmental Policy (2019)

Messages/Issues for the development of the Transport Strategy	Document
The plan includes the following objectives on climate change:- ■ Strategic Objective SO1 - Designing local environments so that they are of a high quality, more resilient to a changing climate and benefit from integrated environmental systems for drainage and waste management. ■ Policy CS1 - Focusing on a sustainable future - Favour developments that favour environmentally friendly neighbourhoods that are located and designed to help address and where possible mitigate the effects of climate change and minimise the risk of flooding.	Great Yarmouth Local Plan Part 2 (2021)
This Strategy outlines the Council's commitment to tackline climate change and sustainable development. The strategy adopted is pragmatic, focusing on areas where the Council possesses the highest capacity to effect change. The policy focus on mitigating carbon emissions, overseeing natural habitats to bolster biodiversity, and advocating for sustainable practices within the local community by prioritising three main sustainability goal: - ■ Priority 1 - The Climate Challenge: GYBC becomes Net Zero by 2035 ■ Priority 2 - The Nature Challenge: GYBC works to protect and enhance the Natural Environment of the Borough ■ Priority 3 - The Waste Challenge: GYBC works to reduce waste created in the Borough	Great Yarmouth Sustainable Strategy (2023)
The Strategy includes the following aim: ■ Climate Change Mitigation and Adaptation: Using natural solutions to combat climate change, such as increasing tree cover to remove carbon from the atmosphere, restoring wetlands and peatlands, and changing the way farmland is managed.	Norfolk County Council, Local Nature Recovery Strategy

Messages/Issues for the development of the Transport Strategy	Document
The Local Growth Plan sets out Norfolk's Economic Strategy from 2024 to 2029. The Plan aims to improve productivity, drive growth, and ultimately improve living standards. The Plan aims to reduce negative environmental impacts while supporting long term economic growth. To do this, it contains three objectives relating to climate change: ■ Decarbonise the economy and seize the economic benefits of the emerging green economy ■ Build resilience to the impacts of climate change ■ Ensure that future development is sustainable and protects and enhances our natural environment	Norfolk Local Growth Plan
The strategy proposes how Norfolk County Council aim to support the uptake of electric vehicle use and how to enable infrastructure to best evolve, to meet the needs of those travelling in the future into the future. The strategy recognises that electric vehicles will play an important role in reducing carbon emissions, a key aim of the council's plans.	Norfolk County Council Electric Vehicle Strategy

Table A-11 - Review of Legislation, Policy and Plans for Noise and Vibration

Messages/Issues for the development of the Transport Strategy	Document
National	**No subheading needed**
Paragraph 198 state planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life.	National Planning Policy Framework (NPPF) (2024)
Paragraph 5.193 states that developments must be undertaken in accordance with statutory requirements for noise. Due regard must have been given to the relevant sections of the Noise Policy Statement for England, National Planning Policy Framework and the UK Government's associated planning guidance on noise. Paragraph 5.192 states that the Secretary of State should not grant development consent unless satisfied that the proposals will meet, the following aims, within the context of UK Government policy on sustainable development: ■ avoid significant adverse impacts on health and quality of life from noise as a result of the new development; ■ mitigate and minimise other adverse impacts on health and quality of life from noise from the new development; and ■ contribute to improvements to health and quality of life through the effective management and control of noise, where possible.	National Networks National Policy Statement (NN NPS) (2014)
The long-term vision for the Noise Policy Statement for England is to "promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development."	Noise Policy Statement for England (2010)

Table A-12 - Review of Legislation, Policy and Plans for Material Assets

Messages/Issues for the development of the Transport Strategy	Document
National	**No subheading needed**
The Environment Act, which became law in 2021, acts as the UK's new framework of environmental protection. The Environment Act allows the UK to enshrine better environmental protection into law. It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. Objectives for targets under consideration ■ increase resource productivity ■ reduce the volume of 'residual' waste we generate	The Environment Act (2021)
Paragraph 187 states: "… contribute to and enhance the natural and local environment by: ■ Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils…; ■ Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability…; and ■ Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate". Paragraph 215 to 223 also seeks to facilitate the sustainable use of minerals. Paragraph 216 encourages so far as practicable, planning policies should *"take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously".*	National Planning Policy Framework (NPPF) (2024)

Messages/Issues for the development of the Transport Strategy	Document
Paragraph 5.117 requires land stability to be considered in respect of new development. Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land instability. Paragraph 5.168 states *"Applicants should also identify any effects, and seek to minimise impacts, on soil quality, considering any mitigation measures proposed. Where possible, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination and how it is proposed to address this".* Paragraph 5.19 states *"Evidence of appropriate mitigation measures (incorporating engineering plans on configuration and layout and use of materials) in both design and construction should be presented".*	National Policy Statement for National Networks (NN NPS) (2014)
Goal 5 'Clean and plentiful water' involves using resources from nature more sustainably and efficiently. The plan states: *"Improve our approach to soil management: by 2030 we want all of England's soils to be managed sustainably, and we will use natural capital thinking to develop appropriate soil metrics and management approaches".*	A Green Future: Our 25 Year Plan to Improve the Environment (2018)
Sets out how the UK Government aims to preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy in England.	Out Waste, Our Resources: A Strategy for England (2018)
Regional/Local	**No subheading needed**

Messages/Issues for the development of the Transport Strategy	Document
The policy includes the following objectives relating to materials, resources, and waste: ■ Using resources from nature more sustainably and efficiently ■ Minimising waste ■ Managing exposure to chemicals The policy also includes policies relating to utilising land sustainably, increasing resource efficiency and reducing pollution and waste.	Norfolk County Council, Environmental Policy (2019)
The Strategy aims to provide the foundations for an integrated, total transport solution which serves the growing economy, links people and their activities with developing Priority Places and is fit for agile digital, socio-economic and transport developments.	Integrated Transport Strategy for Norfolk and Suffolk 2018
The Implementation Plan is firmly focussed on achieving the strategic ambitions of our adopted LTP4 strategy. The plan includes 7 objectives to achieve the ambitions of the LTP4: ■ Embracing the future ■ Delivering a sustainable Norfolk ■ Enhancing Connectivity ■ Enhancing Norfolk's quality of life ■ Increasing accessibility ■ Improving Transport Safety	Norfolk County Council, Local Transport Plan 4 – Implementation Plan

Messages/Issues for the development of the Transport Strategy	Document
In planning for mineral extraction and waste management facilities to meet Norfolk's future needs in the most sustainable way, the Core Strategy will: ■ Help to reduce emissions of greenhouse gases and thus mitigate climate change and ensure that Norfolk is seen as a leader in this area; ■ Protect Norfolk's special and distinctive natural and cultural heritage, especially in areas such as the Broads, the North Norfolk Coast and the Brecks, and help to develop the county's ecological network; ■ Minimise adverse impacts on the transport system and promote opportunities for more sustainable transport; ■ Maintain the amenity and well being of people living in close proximity to mineral extraction and associated development and waste management facilities through effective mitigation measures and provide long term benefits through restoration; and ■ Safeguard important and finite mineral resources from inappropriate development, particularly the nationally-significant deposits of silica sand in the county. The Strategy also outlines a number of aims and objectives, including: ■ To meet minerals and waste requirements in a sustainable manner and help to deliver sustainable growth; ■ To reduce the impact of mineral extraction and associated development and waste management facilities on the transport system; ■ To protect and enhance the natural, historic and built environment in relation to mineral extraction and associated development and waste management facilities; ■ To mitigate climate change; ■ To promote social inclusion and human health and wellbeing.	Norfolk County Council (2010) Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2010-2026

Messages/Issues for the development of the Transport Strategy	Document
This Strategy outlines the objectives of waste and material management, which are as follows: ■ Producing less waste and recycling more is crucial to dealing with the waste crisis we face both nationally and globally. Reuse and recycling help to conserve natural resources by keeping materials circulating for longer and reducing the need to produce raw material, thus saving energy, and reducing GHG emissions from production.	Great Yarmouth Sustainable Strategy (2023)
The local plan establish and outlines the policy for the utilisation of natural resources under Policy CS12 – Utilising natural resources, which indicates that: - ■ The use and protection of natural resources is essential to the overall quality of life of the borough and to support wider social and economic sustainability objectives.	Great Yarmouth Local Plan Part 2 (2021)

Appendix B

Figures

Figure B-1 - Population Density

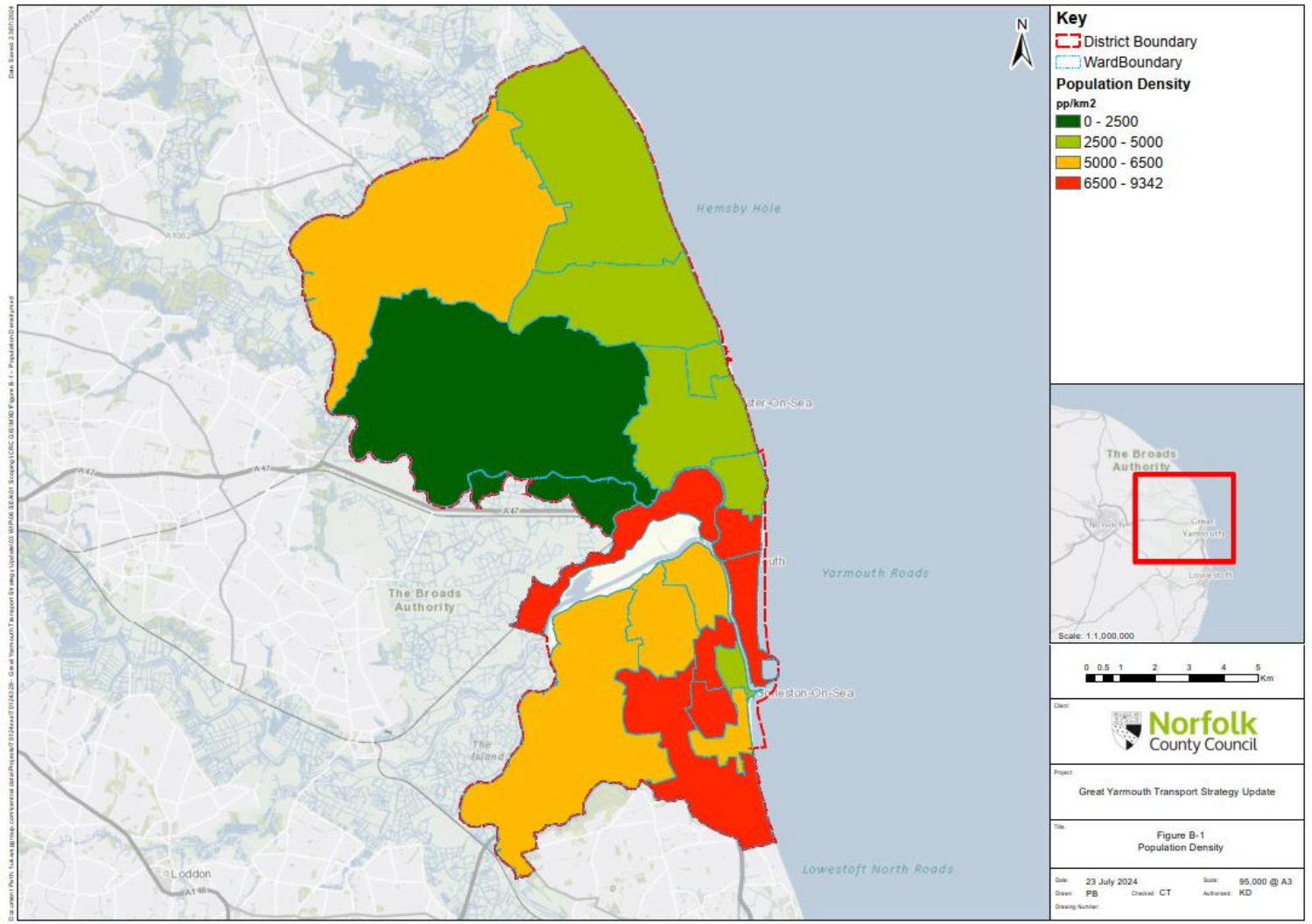


Figure B-2 - Index of Multiple Deprivation (IMD) 2019 – Overall

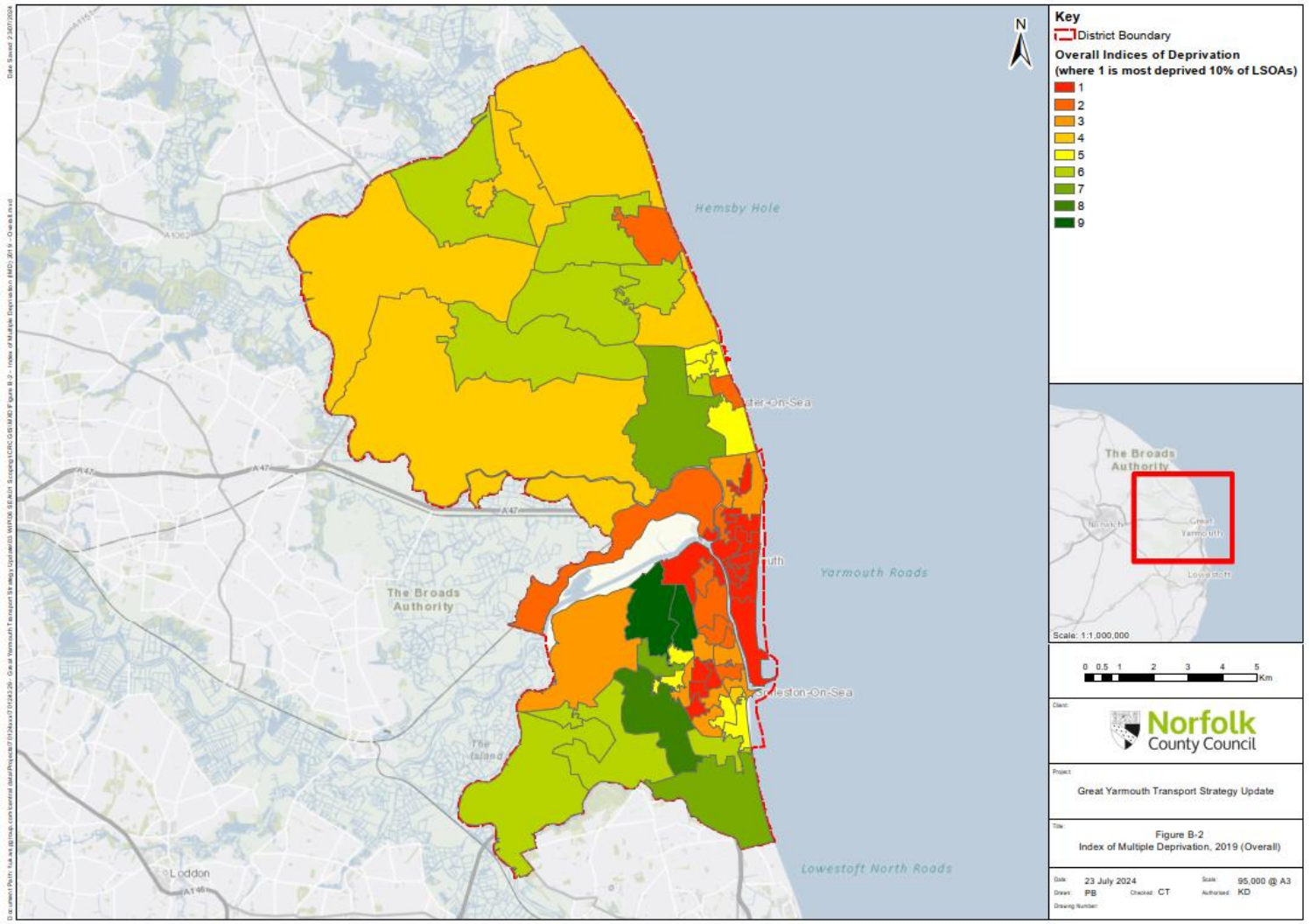


Figure B-3 - Index of Multiple Deprivation (IMD) 2019 – Health

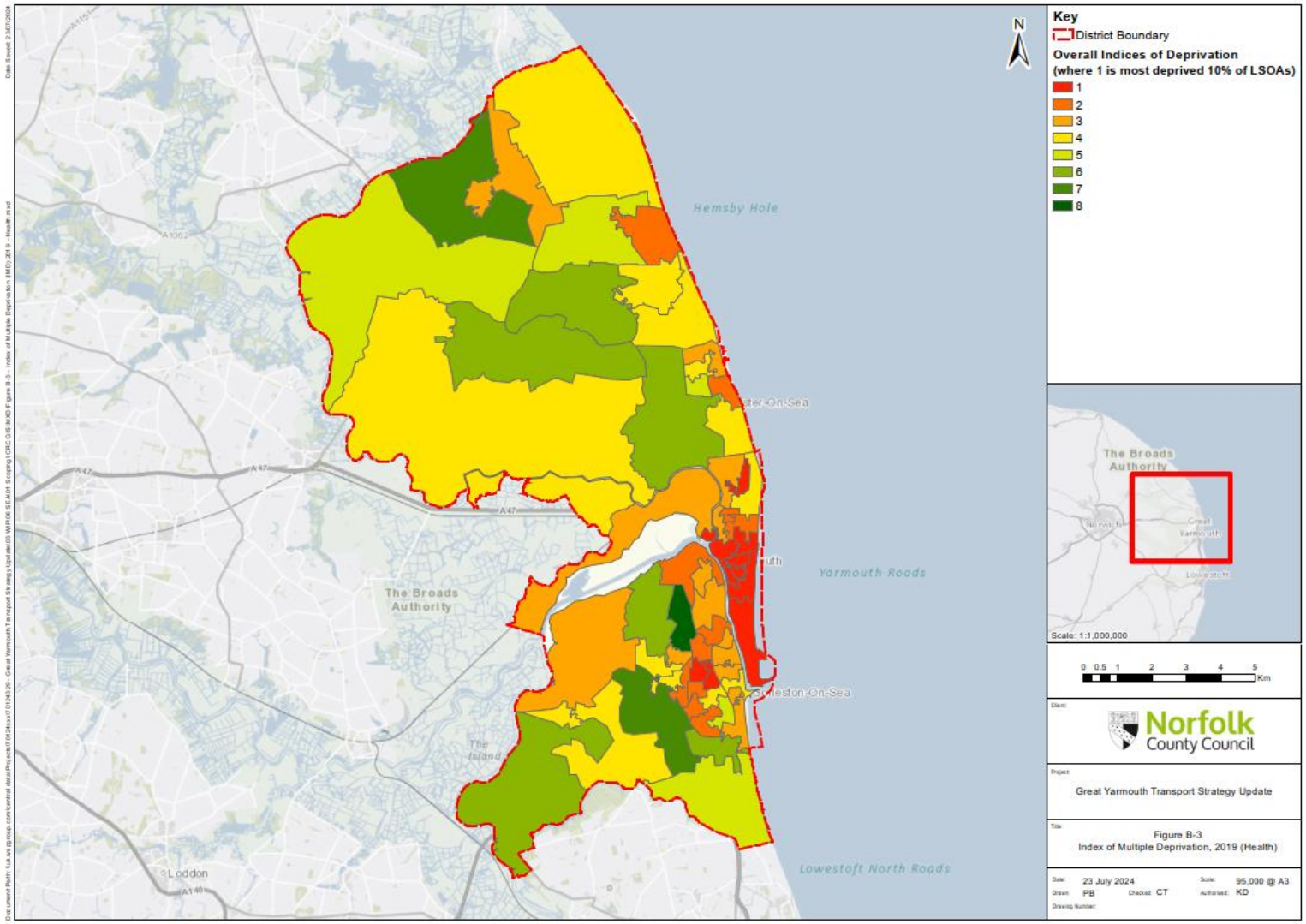


Figure B-4 - Index of Multiple Deprivation - (IMD) 2019 – Crime

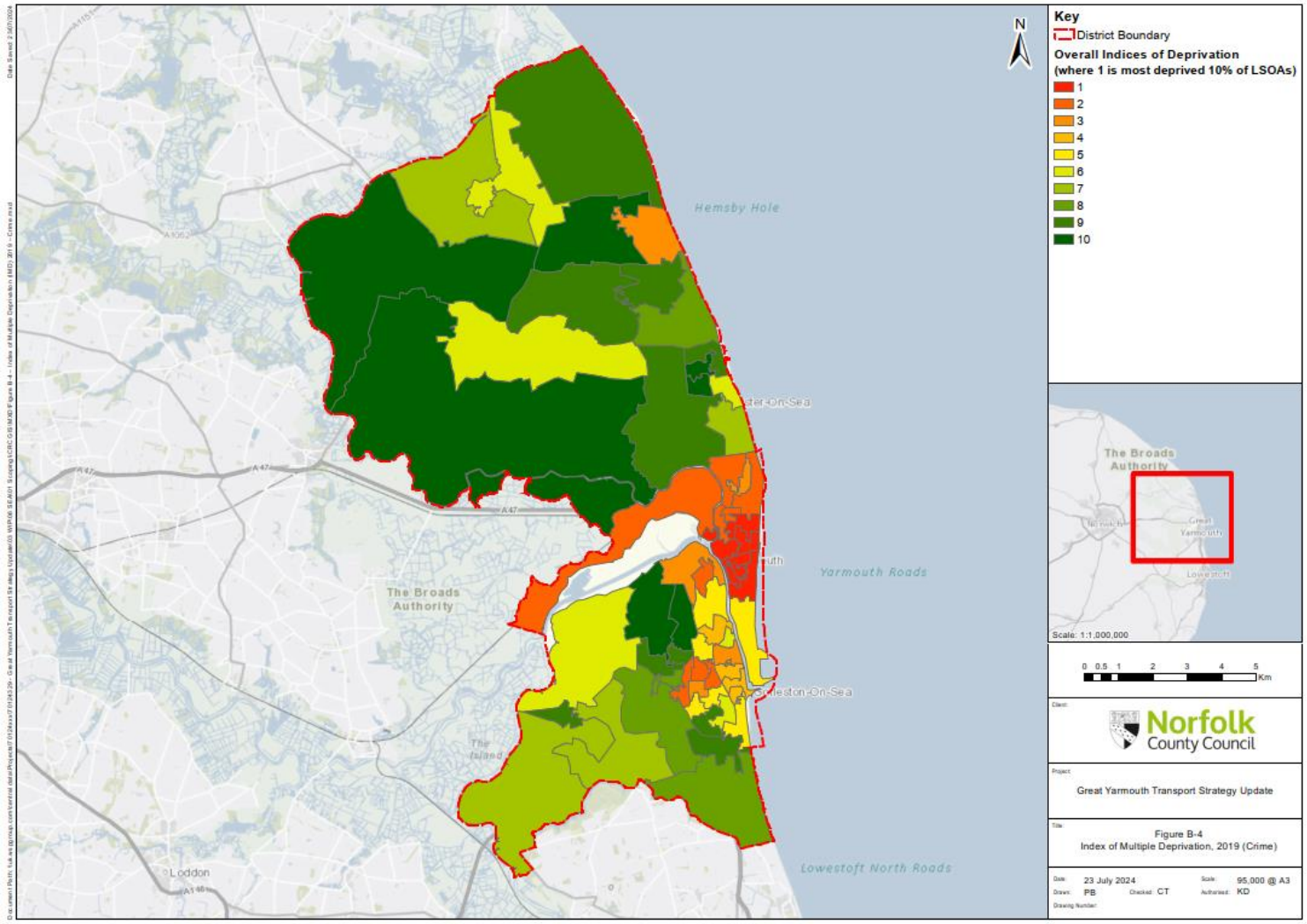


Figure B-5 - Biodiversity Designated Sites

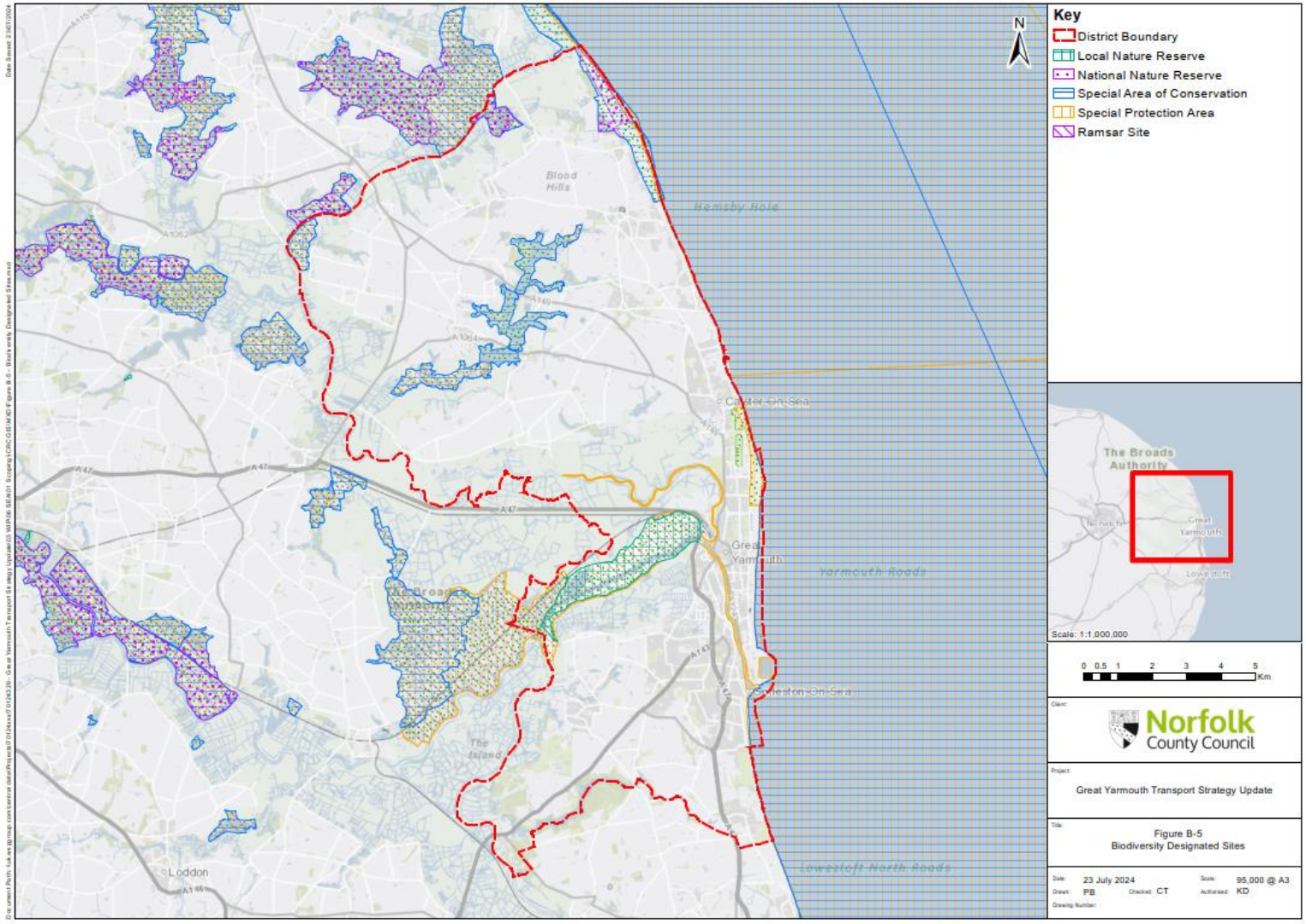


Figure B-6 - Landscape Designations

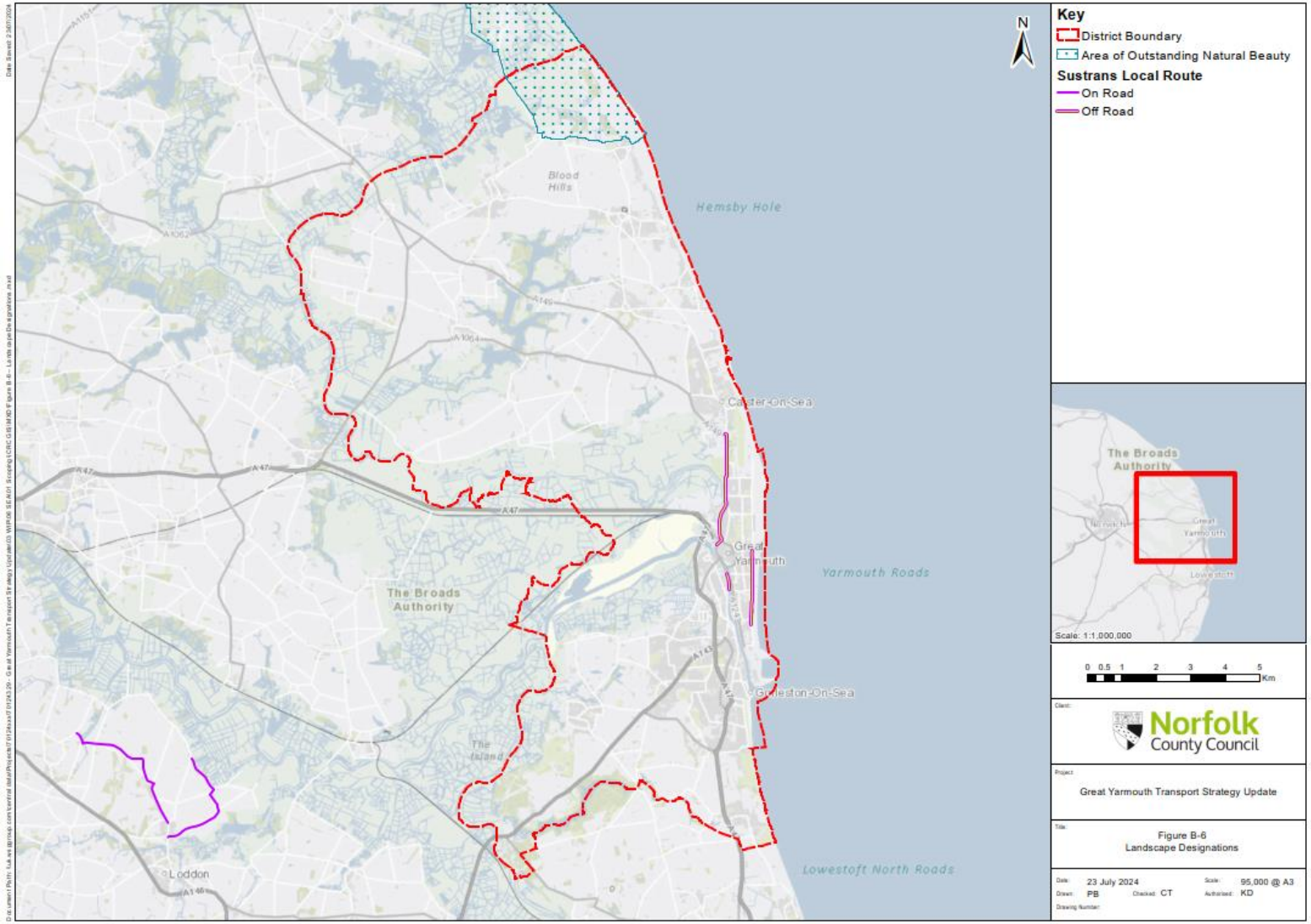


Figure B-7 - Landscape Character Areas

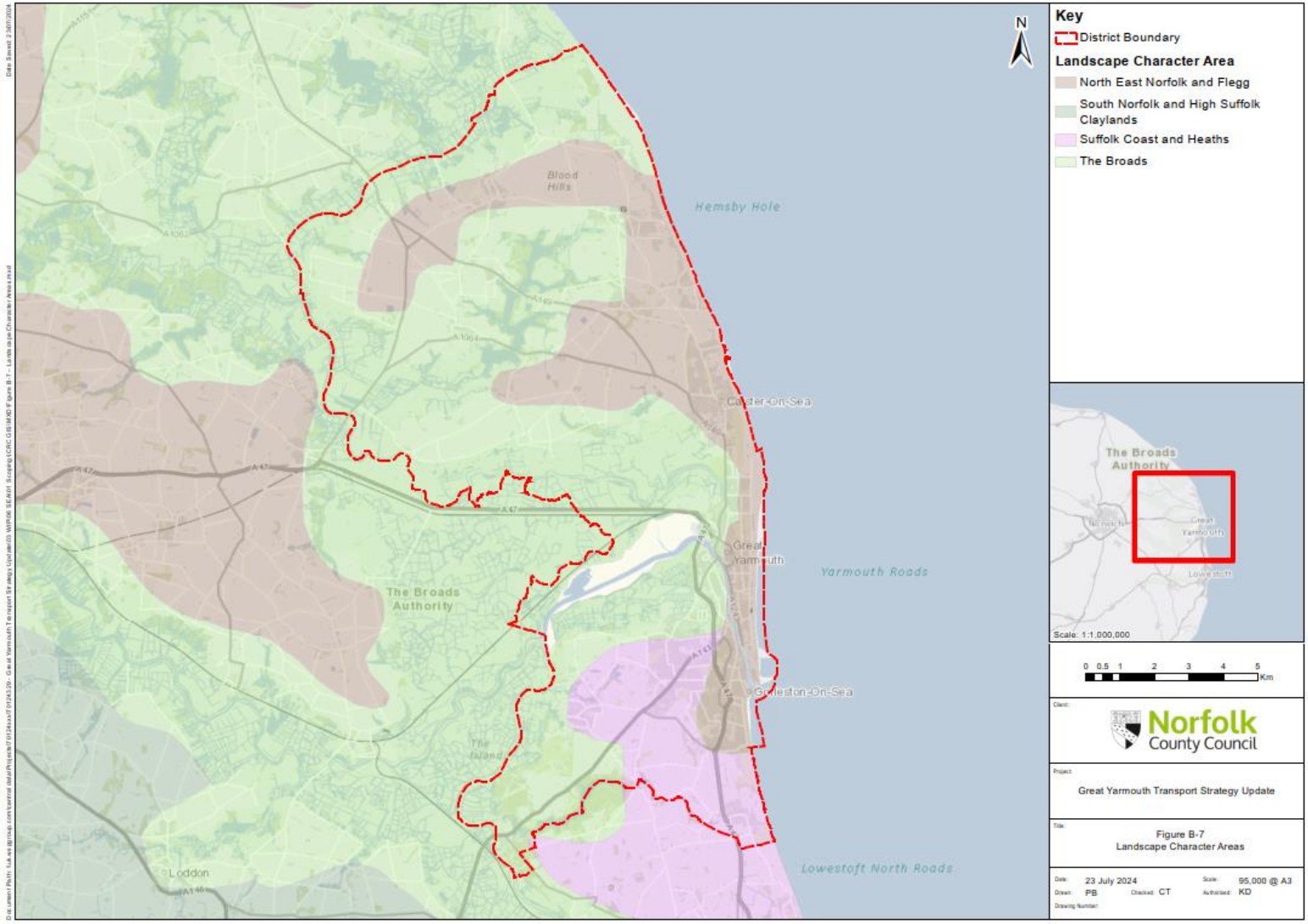


Figure B-8 - Historic Environment Designations

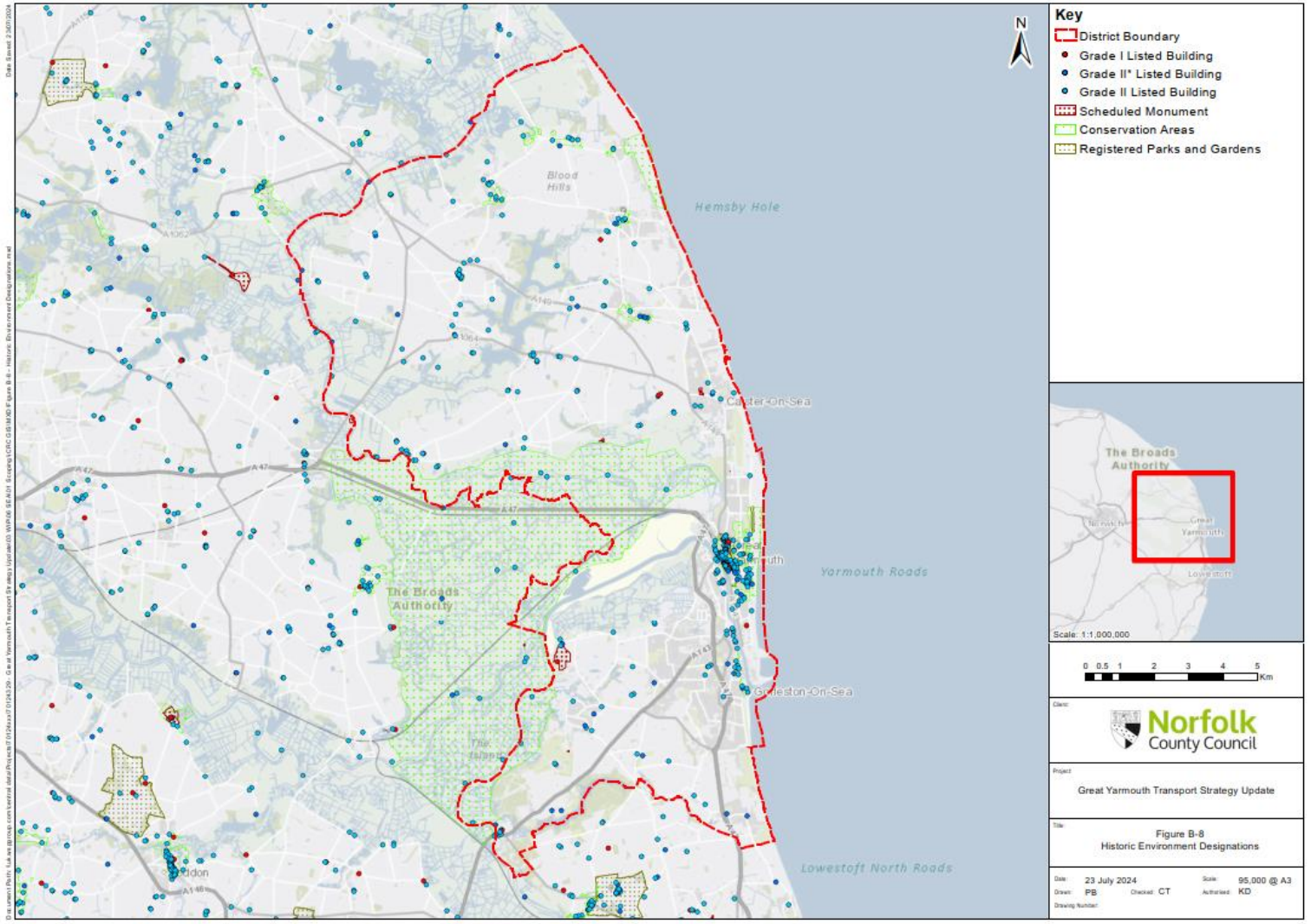


Figure B-9 - Water Environment Designations

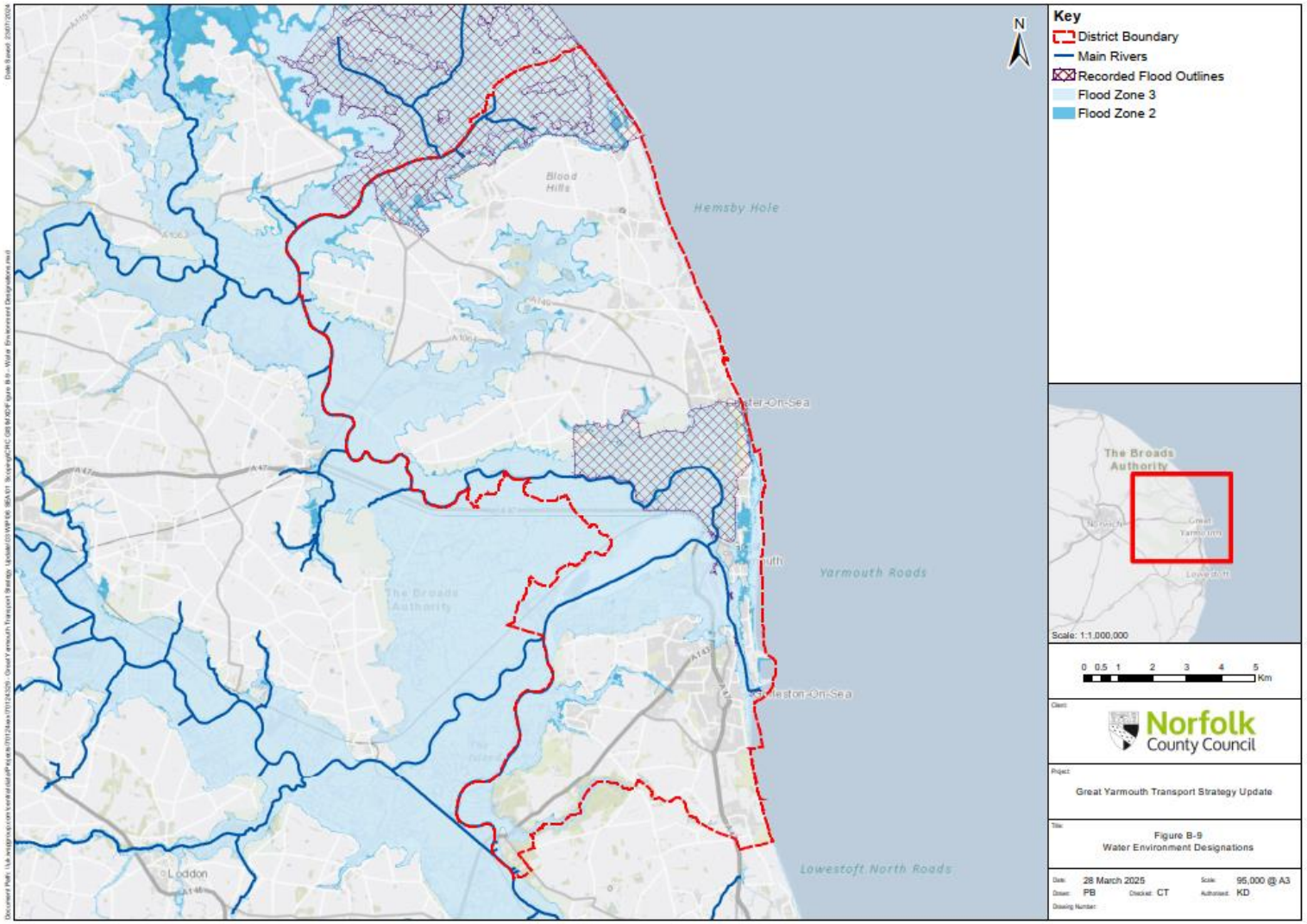


Figure B-10 - Air Quality Management Areas

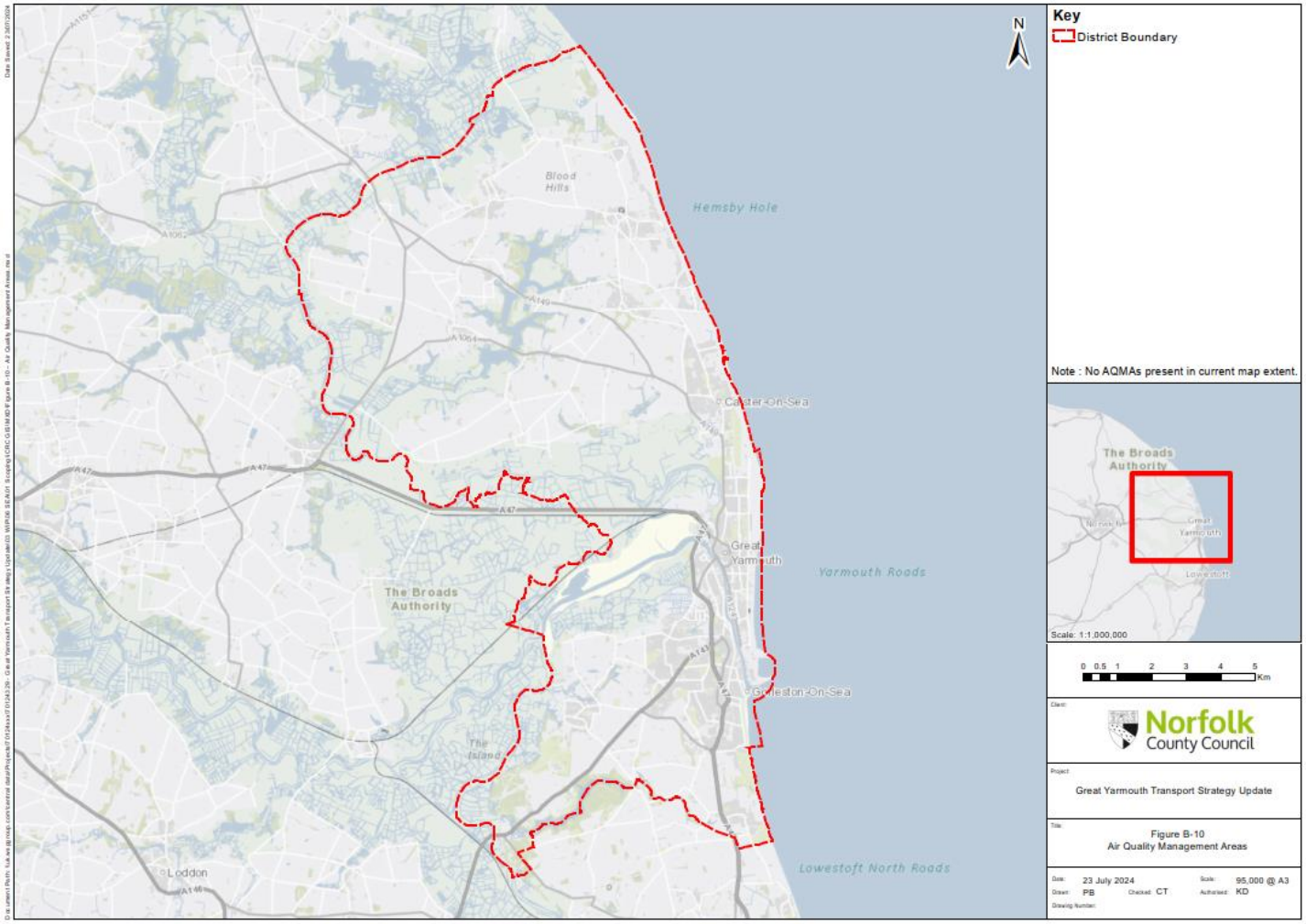
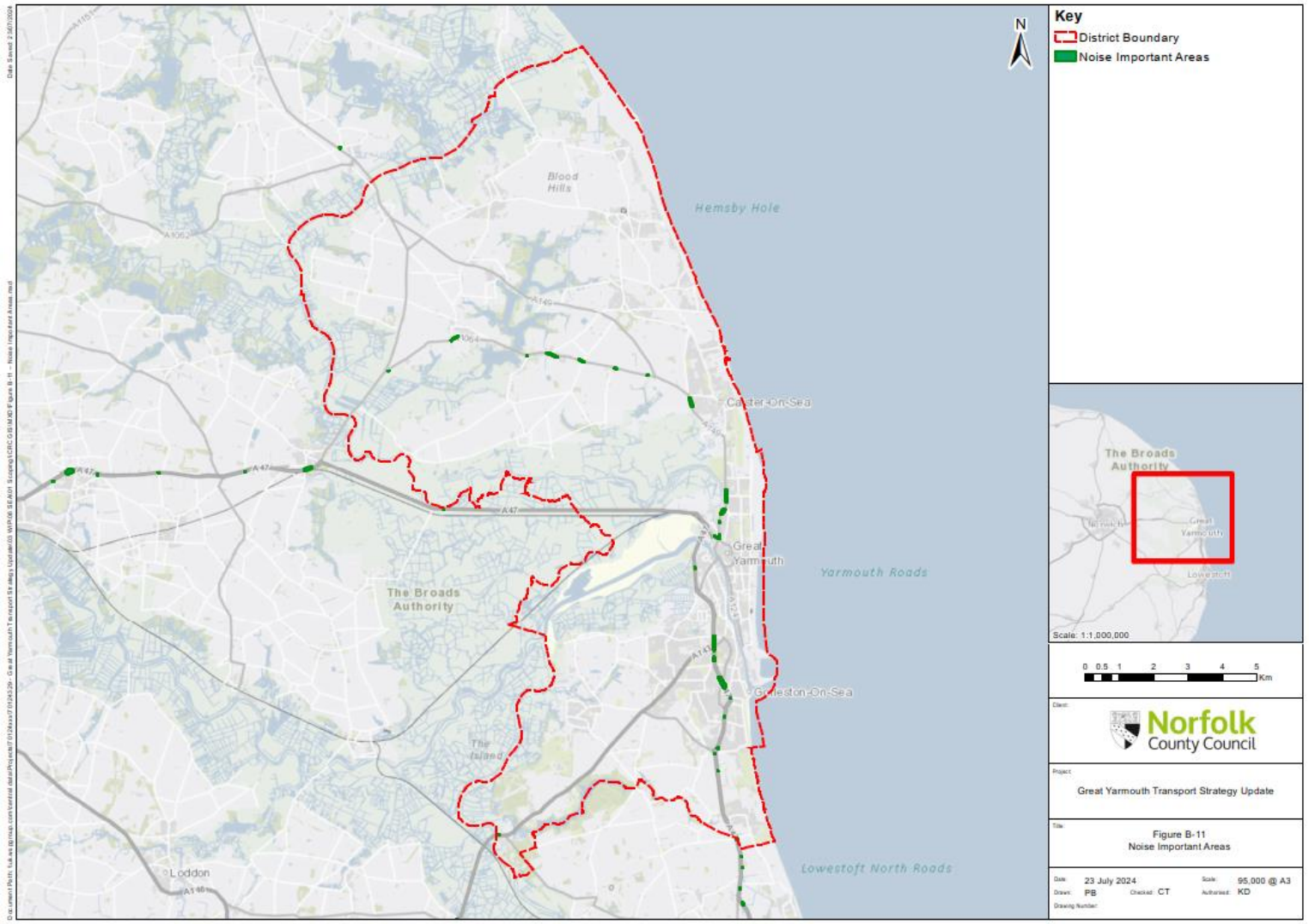


Figure B-11 - Noise Important Areas



Appendix C

Scoping Report Consultation Responses

Table C-1 - Schedule of Consultation Responses

ID	Date	Consultee	Section	Comment	Response
1	21/03/2025	EA	Flood Risk	Please note that not all transport infrastructure will fall into the NSIP/DCO regime, and it is likely that a large amount of the transportation infrastructure will be delivered through local and county development and therefore the report and accompanying document references should reflect this. We would expect transportation infrastructure development to comply with NPPF and in particular the need to apply the sequential approach to locating infrastructure i.e. directing transportation routes and associated infrastructure to areas at little or no risk of flooding from any source in preference to areas at higher risk, as outlined in NPPF PG Paragraph 023.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
2	21/03/2025	EA	Table 4-1	As well as the need for ‘any ‘essential infrastructure’ proposed to be located in Flood Zone 3a or 3b should be designed and constructed to remain operational and safe for users in times of flood’, infrastructure in Flood Zone 3b should also result in no net loss of floodplain storage and not impede water flows and not increase flood risk elsewhere (Para 079 of NPPF PG). We do acknowledge that this is covered in Appendix A Table A-8, but it should also be in Table 4.1 for consistency.	Infrastructure in Flood Zone 3b should result in no net loss of floodplain storage, and not impede water flows, and not increase flood risk elsewhere;' has been included in Table 4.1, under the Water Environment topic.

ID	Date	Consultee	Section	Comment	Response
3	21/03/2025	EA	Table 5-13	Issues and opportunities for the water environment. There are additional opportunities to strategically review existing infrastructure at risk of flooding and relocate or improve resilience. Opportunities to consider extreme flooding, climate change and locating (sequential approach), designing and building for a long term resilient transportation infrastructure. There may also be opportunities to reduce flood risk through new associated transportation infrastructure, e.g. embankments, surface water attenuation and natural flood management of broader mitigation, such as tree planning that may be required for biodiversity net gain.	'The following points have been included in Table 5-13: Upgrading existing infrastructure provides an opportunity to strategically review existing infrastructure, and to improve its resilience to flooding and climate change through locating, designing, and building infrastructure with long term resilience in mind. Possible opportunity to reduce flood risk through design of new transport infrastructure, e.g. embankments, tree planning, and flood management.'

ID	Date	Consultee	Section	Comment	Response
4	21/03/2025	EA	Appendix A	There are a number of other national and local water/flood risk related policies that should be used to inform the scoping these include;	Comment noted, the actions taken are outlined in the following two comments.
5	21/03/2025	EA	Table A-8	• Combined Norfolk SFRA, SFRA and the emerging SFRA • Broadland Rivers Catchment Flood Management Plan Broadland Rivers: Catchment flood management plan - GOV.UK • Shoreline Management Plan for Kelling Hard to Lowestoft SMP6 Kelling Hard to Lowestoft SMP6 | Shoreline Management Plans	The Broadland Rivers: Catchment flood management plan, Kelling Hard to Lowestoft SMP6, and North Norfolk and Great Yarmouth SFRA's have been included in Appendix A, Table A-8.
6	21/03/2025	EA	Appendix A	• Great Yarmouth design code SPD, which does cover Great Yarmouth specific flooding. • DMRB for the Water/Flood specific e.g. LA 113 Road drainage and the water environment	The Great Yarmouth Design Code SPD and the DRMB LA 113 Road drainage and the water environment have been included in Appendix A, Table A-8.

ID	Date	Consultee	Section	Comment	Response
7	21/03/2025	EA	Table A-10	There is overlap with the documents utilised in Table A-8 and this section, specifically the SFRA. Climate change Flood risk assessments: climate change allowances - GOV.UK Note that we would expect site specific modelling to ascertain the climate change impacts, residual risk and required design criteria of Essential infrastructure transportation.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
8	21/03/2025	EA	Figure B-9	Please review against our updated food mapping, including Flood Map for Planning, available from 25th March 2025. The flood risk data available is shortly to be updated and we recommend that this is taken into account in conjunction with the flood information from the Strategic Flood Risk Assessment. The Environment Agency is in the process of publishing new national flood and coastal erosion risk datasets. Some datasets have already been published with additional flood risk datasets, including updated Flood Zones and new climate change scenarios, due to be published on Flood Map for Planning on 25 March 2025. In due course we expect to make further datasets available, including flood depth information for rivers, sea and surface water. More information about our new data can be found in this Defra Data Services Platform announcement. Our planning advice will continue to be based on the best information available at the time. Further information is available on the Town and Country Planning Association website – New national flood and coastal erosion risk information.	Figure B-9 has been updated to reflect March 2025 flood mapping.

ID	Date	Consultee	Section	Comment	Response
9	21/03/2025	EA	Appendix A Water Resources	The legislation here is appropriate and there is not any missing. Covered is the Water Framework Directive, Environment act, and River Basin Management Plan, these sections are covered outside of the National Policy Statement for National Networks (2014) so it is less important if this legislation isn't applicable.	Comment noted and support welcomed.
10	21/03/2025	EA	Section 5.9	The issues identified are appropriate as is the proposal of natural buffers and SUDS to prevent pollution and keep in line with the WFD legislation.	Comment noted and support welcomed.
11	21/03/2025	EA	Water Availability	The Great Yarmouth Transport Strategy Update Sustainability Appraisal has considered generic aspects of water availability and recognised this area as a water stressed area.	Comment noted.
12	21/03/2025	EA	Climate Change Table 4-1	Ambiguous/outdated wording: "Reduce emissions of greenhouse gases that may cause climate change" – remove the word "may", so it reads; "Reduce emissions of greenhouse gases that cause climate change."	The word 'may' has been removed in reference to climate change.

13	21/03/2025	EA	Biodiversity and Natural Capital Table A-5	It is stated that: “To give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species.”Legislation used limited to the “Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)”, European eels, a critically endangered and highly protected migratory species, are afforded specific legislation “The Eel (England & Wales), 2009, and should be incorporated into this. • Other specific legislation should be used, as other protected, migratory fish species, such as smelt and river lamprey, are also likely to be present at specific times of the year. Suggest reviewing: 1. Natural Environment and Rural Communities (NERC) Act 2006 – Species of Principal Importance, Section 41 (it is appreciated that the NERC act is mentioned later on in the document) 2. Marine and Coastal Access Act, 2009, 3. Salmon and Freshwater Fisheries Act, 1975, 4. Habitats Directive (Annex II) 5. UK post-2010 biodiversity framework (UK Biodiversity Action Plan (UKBAP) species)	The following plans and programmes, and their relationship to the TS have been included in Table A-5: The Eels Regulations (England and Wales) 2009 Marine and Coastal Access Act 2009 Salmon and Freshwater Fisheries Act 1975 Conservation of Habitats and Species Regulations 2017 and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 UK Post-2010 Biodiversity Framework (2012)

ID	Date	Consultee	Section	Comment	Response
				This is to ensure the most appropriate actions are followed using specific legislation as guidance, so as not to impact the aims/outcomes proposed.	Natural Environment and Rural Communities Act (2006)

14	21/03/2025	EA	Section 5: Opportunities for Biodiversity	We appreciate that The Transport strategy constitutes high level detail at this stage, however the following opportunities could be included when the strategy is refined. • Opportunity: Apply the mitigation hierarchy (avoid, mitigate, compensate) rigorously to transport development projects. Emphasis should be placed on avoiding impacts on sensitive habitats wherever possible, mitigating unavoidable impacts through habitat restoration or enhancement, and providing compensatory measures where losses are unavoidable. Consideration for TS: Incorporate strict adherence to the mitigation hierarchy within all development plans to minimize biodiversity loss. • Opportunity: Promote the creation and enhancement of ecological corridors along transport routes to improve habitat connectivity between designated sites and fragmented habitats. This includes hedgerows, roadside verges, and buffer zones. Consideration for TS: Identify opportunities to create green corridors along transport infrastructure, linking areas of high biodiversity and allowing safe movement of species across the landscape. • Opportunity: Implement a management regime for roadside verges to enhance biodiversity, particularly for pollinator species.	The following points have been included in the key issues and opportunites table for biodiversity and natural capital: □ There is an opportunity for the TS to create and enhance ecological corridors along transport routes, to improve habitat connectivity between designated sites and fragmented habitats. □ There is an opportunity to link biodiversity enhancement with carbon sequestration through creation and restoration of habitats including wetlands, woodlands and grasslands. □ There is an opportunity to reduce road mortality of protected and priority

				This includes reducing mowing frequency and introducing wildflower-rich grasslands. Consideration for TS: Prioritize biodiversity-friendly verge management along transport routes to enhance species diversity. (See Buglife B-lines project) • Opportunity: Address the spread of invasive non-native species (INNS) along transport routes by incorporating management strategies to prevent their spread and protect native biodiversity. Consideration for TS: Develop and implement INNS management plans to reduce their impact on sensitive habitats • Opportunity: Link biodiversity enhancement with carbon sequestration by creating or restoring habitats such as wetlands, woodlands, and grasslands along transport corridors. Consideration for TS: Incorporate carbon sequestration potential into biodiversity planning and delivery. • Opportunity: Reduce road mortality of protected and priority species by incorporating wildlife crossings, such as underpasses and overpasses, where transport routes intersect with key habitats. Consideration for TS: Include measures to reduce wildlife-vehicle collisions in transport design. • Opportunity: Implement measures to reduce light and noise pollution from transport	species by incorporating wildlife crossings, such as underpasses and overpasses, where transport routes intersect with key habitats. There is an opportunity to implement measures to reduce light and noise pollution from transport infrastructure, which can negatively impact nocturnal species such as bats and birds. The other suggestions have not been included as they are likely to be considered and included as mitigation actions at the project level, or are suggestions for the TS itself rather than the SEA.

ID	Date	Consultee	Section	Comment	Response
				infrastructure, which can negatively impact nocturnal species such as bats and birds. Consideration for TS: Incorporate low-impact lighting solutions and noise barriers to mitigate disturbance in sensitive areas • Opportunity: Incorporate fish species, including resident and migratory species, into the scope of this report to ensure biodiversity is not reduced. Consideration for TS: No specific mention of fish species are listed in Section 5. Many fish species play a vital role in ecosystem functionality and are an important component. Many piscivorous birds and mammals could be negatively impacted, should fish populations be adversely impacted, which would result in a reduction in biodiversity. There are known populations of protected and endangered fish species present that should be included to ensure the outcomes/objectives are met and specific habitats are not impacted by the reduction/loss of specific species.	

ID	Date	Consultee	Section	Comment	Response
15	21/03/2025	NE	General	Natural England considers that an environmentally sustainable transport system should protect and enhance the natural environment, as well as delivering economic and social benefits. Transport effects the natural environment and people's experience of it, in the following areas: • Biodiversity, landscape, geodiversity and soils – through direct and indirect impacts from lands take and traffic; • Climate change and energy; • Quality of life – through people's access to, and experience of, the natural environment including the provision of green infrastructure and through links between walking, cycling, health and wellbeing.	Comment noted.

16	21/03/2025	NE	Designated Sites	Paragraphs 193-195 of the NPPF set out the principles for determining applications impacting on Sites of Special Scientific Interest (SSSI) and habitats sites (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)). Both the direct and indirect impacts of the development should be considered. A Habitats Regulations Assessment is needed where a proposal might affect a habitat site (see Habitats regulations assessments: protecting a European site - GOV.UK (www.gov.uk) and Natural England must be consulted on 'appropriate assessments' (see Appropriate assessment - GOV.UK (www.gov.uk) for more information for planning authorities). Natural England must also be consulted where development is in or likely to affect a SSSI and provides advice on potential impacts on SSSIs either via the SSSI Impact Risk Zones (England) (arcgis.com) or as standard or bespoke consultation responses. We advise that where a transport project is within 200m of a European site, impacts to the site should be assessed in line with Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001) guidance. Where a transport project is likely to have a significant effect on the	Comment noted.

ID	Date	Consultee	Section	Comment	Response
				natural environment, we advise conformity with the avoidance-mitigation-compensation hierarchy. Less damaging alternatives should be considered with regards to impacts to high value ecological and landscape receptors, including those of international and national importance (SACs, SPAs, Ramsar sites, SSSIs, protected species).	
17	21/03/2025	NE	Designated Sites	Development should provide net gains for biodiversity in line with the NPPF paragraphs 187(d), 192 and 193. Major development (defined in the National Planning Policy Framework (publishing.service.gov.uk) glossary) is required by law to deliver a biodiversity gain of at least 10% from 12 February 2024 and this requirement is also applies extended to small scale development from April 2024. For nationally significant infrastructure projects (NSIPs), it is anticipated that the requirement for biodiversity net gain will be implemented from 2025.	Comment noted.
18	21/03/2025	NE	Designated Sites	Biodiversity net gain - GOV.UK (www.gov.uk) provides information on biodiversity net gain, the mitigation hierarchy and wider environmental net gain and includes a link to the draft Planning Practice Guidance.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
19	21/03/2025	NE	Designated Sites	The statutory biodiversity metric should be used to calculate biodiversity losses and gains for terrestrial and intertidal habitats and can be used to inform any development project. We refer you to Calculate biodiversity value with the statutory biodiversity metric - GOV.UK (www.gov.uk) for more information.	Comment noted.
20	21/03/2025	NE	Designated Sites	The mitigation hierarchy as set out in paragraph 193 of the NPPF should be followed to firstly consider what existing habitats within the site can be retained or enhanced. Where on-site measures are not possible, provision off-site will need to be considered.	Comment noted.
21	21/03/2025	NE	Designated Sites	Development also provides opportunities to secure wider biodiversity enhancements and environmental gains, as outlined in the NPPF (paragraphs 8, 77, 109, 125, 187, 188, 192 and 193). Opportunities for enhancement might include incorporating features to support specific species within the design of the project to encourage wildlife.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
22	21/03/2025	NE	Local Nature Recovery Strategies	Local Nature Recovery Strategies (LNRS) are a new England-wide system of spatial strategies, designed to support the restoration and recovery of nature. The main purpose of the strategies is to identify locations to create or improve habitat most likely to provide the greatest benefit for nature and the wider environment.	Comment noted.
23	21/03/2025	NE	Local Nature Recovery Strategies	Local Planning Authorities have a duty to 'take account' of their relevant LNRS, therefore, we advise that any decisions about transport development should consider any potential impacts, and/or possible contribution to the Norfolk Local Nature Recovery Strategy to support nature restoration. Further general information on LNRS can be found here and details of how to incorporate LNRS when planning for BNG can be found here.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
24	21/03/2025	NE	Green Infrastructure	We advise that green infrastructure should be implemented into any transport projects where possible. For evidence-based advice and tools on how to design, deliver and manage green and blue infrastructure (GI) we refer you to Natural England's Green Infrastructure Framework. GI should create and maintain green liveable places that enable people to experience and connect with nature, and that offer everyone, wherever they live, access to good quality parks, greenspaces, recreation and walking/cycling routes that are inclusive, safe, welcoming, well-managed and accessible for all. GI provision should enhance ecological networks, support ecosystems services and connect as a living network at local, regional and national scales.	Comment noted.
25	21/03/2025	NE	Green Infrastructure	Development should be designed to meet the 15 GI How Principles (naturalengland.org.uk). The GI Standards can be used to inform the quality, quantity and type of GI to be provided. Major development should have a GI plan including a long-term delivery and management plan. Relevant aspects of local authority GI strategies should be delivered where appropriate.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
26	21/03/2025	NE	Green Infrastructure	The Green Infrastructure Map (naturalengland.org.uk) and GI Mapping Analysis (naturalengland.org.uk) are GI mapping resources that can be used to help assess deficiencies in greenspace and identify priority locations for new GI provision.	Comment noted.
27	21/03/2025	NE	Protected Landscapes	The statutory purpose of the National Landscape is to conserve and enhance the area's natural beauty. Where transport infrastructure is being built and/or improved within, or close to a National Landscape (in this instance the Norfolk Coast Protected Landscape), an assessment should be made as to whether the proposed development would have a significant impact on or harm that statutory purpose. Consequently, a landscape and visual impacts assessment may be necessary to determine magnitude of impact and any possible mitigation.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
28	21/03/2025	NE	Protected Landscapes	When considering potential impacts, a decision should be guided by paragraph 189 and 190 of the National Planning Policy Framework, which requires great weight to be given to conserving and enhancing landscape and scenic beauty within National Landscapes, and states that the scale and extent of development within all these areas should be limited.	Comment noted.
29	21/03/2025	NE	Best and most versatile agricultural land and soils	Decisions about transport development should take full account of the impact on soils, their intrinsic character and the sustainability of the many ecosystem services they deliver. The Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (publishing.service.gov.uk) provides guidance on soil protection, and we recommend its use in the design and construction of development. Further information is contained in the Guide to assessing development proposals on agricultural land - GOV.UK (www.gov.uk). Find open data - data.gov.uk on Agricultural Land Classification or use the information available on MAGIC (defra.gov.uk).	Comment noted.

ID	Date	Consultee	Section	Comment	Response
30	21/03/2025	NE	General	Should you wish to discuss the detail of this response with Natural England, we may be able to provide advice through our Discretionary Advice Service. Should details of the strategy change, please consult us again.	Comment noted.
31	24/03/2025	HE	General	In terms of the historic environment, we consider that the Report has identified the plans and programmes which are of relevance to the development of the Great Yarmouth Transport Strategy, that it has established an appropriate Baseline against which to assess the Plan's proposals and that it has put forward a suitable set of Objectives and Indicators. Overall, therefore, we believe that it provides an appropriate framework for assessing the likely significant effects which this plan might have upon the historic environment.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
32	24/03/2025	HE	General	Historic England strongly advises that the conservation team of your authority and your archaeological advisors are closely involved throughout the preparation of the SEA of this Plan. They are best placed to advise on; local historic environment issues and priorities, including access to data held in the HER; how the policy or proposal can be tailored to minimise potential adverse impacts on the historic environment; the nature and design of any required mitigation measures; and opportunities for securing wider benefits for the future conservation and management of heritage assets. Historic England has produced guidance for all involved in undertaking SEA/SA exercises which gives advice on issues relating to the historic environment. This can be found at: https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/heag036-sustainability-appraisal-strategic-environmental-assessment/.	Comment noted.

ID	Date	Consultee	Section	Comment	Response
33	24/03/2025	HE	General	This opinion is based on the information provided by you in the document dated February 2025 and, for the avoidance of doubt, does not affect our obligation to advise you on, and potentially object to any specific development proposal which may subsequently arise from this or later versions of the plan which is the subject to consultation, and which may, despite the SA/SEA, have adverse effects on the environment.	Comment noted.

62-64 Hills Road
Cambridge
CB2 1LA

wsp.com

Appendix C

Responses to the Scoping Consultation

Table C-1 – Scoping Consultation Responses

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
1	21/03/2025	EA	Flood Risk	Please note that not all transport infrastructure will fall into the NSIP/DCO regime, and it is likely that a large amount of the transportation infrastructure will be delivered through local and county development and therefore the report and accompanying document references should reflect this. We would expect transportation infrastructure development to comply with NPPF and in particular the need to apply the sequential approach to locating infrastructure i.e. directing transportation routes and associated infrastructure to areas at little or no risk of flooding from any source in preference to areas at higher risk, as outlined in NPPF PG Paragraph 023.	Comment noted.
2	21/03/2025	EA	Table 4.1	As well as the need for 'any 'essential infrastructure' proposed to be located in Flood Zone 3a or 3b should be designed and constructed	Infrastructure in Flood Zone 3b should result in no net loss of floodplain storage, and not impede water flows, and not increase flood

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				to remain operational and safe for users in times of flood', infrastructure in Flood Zone 3b should also result in no net loss of floodplain storage and not impede water flows and not increase flood risk elsewhere (Para 079 of NPPF PG). We do acknowledge that this is covered in Appendix A Table A-8, but it should also be in Table 4.1 for consistency.	risk elsewhere;' has been included in Table 4.1, under the Water Environment topic.
3	21/03/2025	EA	Table 5-13	Issues and opportunities for the water environment. There are additional opportunities to strategically review existing infrastructure at risk of flooding and relocate or improve resilience. Opportunities to consider extreme flooding, climate change and locating (sequential approach), designing and building for a long term resilient transportation infrastructure. There may also be opportunities to reduce flood risk through new associated transportation infrastructure, e.g. embankments, surface water attenuation and natural flood management of broader mitigation,	The following points have been included in Table 5-13: Upgrading existing infrastructure provides an opportunity to strategically review existing infrastructure, and to improve its resilience to flooding and climate change through locating, designing, and building infrastructure with long term resilience in mind. Possible opportunity to reduce flood risk through design of new transport infrastructure, e.g. embankments, tree planning, and flood management.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				such as tree planning that may be required for biodiversity net gain.	
4	21/03/2025	EA	Appendix A	There are a number of other national and local water/flood risk related policies that should be used to inform the scoping these include;	Comment noted, the actions taken are outlined in the following two comments.
5	21/03/2025	EA	Table A-8	▪ Combined Norfolk SFRA, SFRA and the emerging SFRA ▪ Broadland Rivers Catchment Flood Management Plan Broadland Rivers: Catchment flood management plan - GOV.UK ▪ Shoreline Management Plan for Kelling Hard to Lowestoft SMP6 Kelling Hard to Lowestoft SMP6 | Shoreline Management Plans	The Broadland Rivers: Catchment flood management plan, Kelling Hard to Lowestoft SMP6, and North Norfolk and Great Yarmouth SFRA's have been included in Appendix A, Table A-8.
6	21/03/2025	EA	Appendix A	▪ Great Yarmouth design code SPD, which does cover Great Yarmouth specific flooding. ▪ DMRB for the Water/Flood specific e.g. LA 113 Road drainage and the water environment	The Great Yarmouth Design Code SPD and the DRMB LA 113 Road drainage and the water environment have been included in Appendix A, Table A-8.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
7	21/03/2025	EA	Table A-10	There is overlap with the documents utilised in Table A-8 and this section, specifically the SFRA. Climate change Flood risk assessments: climate change allowances - GOV.UK Note that we would expect site specific modelling to ascertain the climate change impacts, residual risk and required design criteria of Essential infrastructure transportation.	Comment noted.
8	21/03/2025	EA	Figure B-9	Please review against our updated food mapping, including Flood Map for Planning, available from 25th March 2025. The flood risk data available is shortly to be updated and we recommend that this is taken into account in conjunction with the flood information from the Strategic Flood Risk Assessment. The Environment Agency is in the process of publishing new national flood and coastal erosion risk datasets. Some datasets have already been published with additional flood risk	Figure B-9 has been updated to reflect March 2025 flood mapping.

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				datasets, including updated Flood Zones and new climate change scenarios, due to be published on Flood Map for Planning on 25 March 2025. In due course we expect to make further datasets available, including flood depth information for rivers, sea and surface water. More information about our new data can be found in this Defra Data Services Platform announcement. Our planning advice will continue to be based on the best information available at the time. Further information is available on the Town and Country Planning Association website – New national flood and coastal erosion risk information.	
9	21/03/2025	EA	Appendix A Water Resources	The legislation here is appropriate and there is not any missing. Covered is the Water Framework Directive, Environment act, and River Basin Management Plan, these sections are covered outside of the National Policy Statement for National Networks (2014) so it is less	Comment noted and support welcomed.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				important if this legislation isn't applicable.	
10	21/03/2025	EA	Section 5.9	The issues identified are appropriate as is the proposal of natural buffers and SUDS to prevent pollution and keep in line with the WFD legislation.	Comment noted and support welcomed.
11	21/03/2025	EA	Water Availability	The Great Yarmouth Transport Strategy Update Sustainability Appraisal has considered generic aspects of water availability and recognised this area as a water stressed area.	Comment noted.
12	21/03/2025	EA	Climate Change Table 4.1	Ambiguous/outdated wording: "Reduce emissions of greenhouse gases that may cause climate change" – remove the word "may", so it reads; "Reduce emissions of greenhouse gases that cause climate change."	The word 'may' has been removed in reference to climate change.
13	21/03/2025	EA	Biodiversity and Natural Capital Table A-5	It is stated that: "To give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species."Legislation used limited to the "Bern Convention on	The following plans and programmes, and their relationship to the TS have been included in Table A-5: ▪ The Eels Regulations (England and Wales) 2009

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				the Conservation of European Wildlife and Natural Habitats (1979)", European eels, a critically endangered and highly protected migratory species, are afforded specific legislation "The Eel (England & Wales), 2009, and should be incorporated into this. ▪ Other specific legislation should be used, as other protected, migratory fish species, such as smelt and river lamprey, are also likely to be present at specific times of the year. Suggest reviewing: 1. Natural Environment and Rural Communities (NERC) Act 2006 – Species of Principal Importance, Section 41 (it is appreciated that the NERC act is mentioned later on in the document) 2. Marine and Coastal Access Act, 2009, 3. Salmon and Freshwater Fisheries Act, 1975, 4. Habitats Directive (Annex II)	▪ Marine and Coastal Access Act 2009 ▪ Salmon and Freshwater Fisheries Act 1975 ▪ Conservation of Habitats and Species Regulations 2017 and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 ▪ UK Post-2010 Biodiversity Framework (2012) ▪ Natural Environment and Rural Communities Act (2006)

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				5. UK post-2010 biodiversity framework (UK Biodiversity Action Plan (UKBAP) species) This is to ensure the most appropriate actions are followed using specific legislation as guidance, so as not to impact the aims/outcomes proposed.	
14	21/03/2025	EA	Section 5: Opportunities for Biodiversity	We appreciate that The Transport strategy constitutes high level detail at this stage, however the following opportunities could be included when the strategy is refined. ▪ Opportunity: Apply the mitigation hierarchy (avoid, mitigate, compensate) rigorously to transport development projects. Emphasis should be placed on avoiding impacts on sensitive habitats wherever possible, mitigating unavoidable impacts through habitat restoration or enhancement, and providing compensatory measures where losses are unavoidable. Consideration for TS: Incorporate	The following points have been included in the key issues and opportunities table for biodiversity and natural capital: ▪ There is an opportunity for the TS to create and enhance ecological corridors along transport routes, to improve habitat connectivity between designated sites and fragmented habitats. ▪ There is an opportunity to link biodiversity enhancement with carbon sequestration through creation and restoration of habitats including wetlands, woodlands and grasslands. ▪ There is an opportunity to reduce road mortality of protected and

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				strict adherence to the mitigation hierarchy within all development plans to minimize biodiversity loss. ■ Opportunity: Promote the creation and enhancement of ecological corridors along transport routes to improve habitat connectivity between designated sites and fragmented habitats. This includes hedgerows, roadside verges, and buffer zones. Consideration for TS: Identify opportunities to create green corridors along transport infrastructure, linking areas of high biodiversity and allowing safe movement of species across the landscape. ■ Opportunity: Implement a management regime for roadside verges to enhance biodiversity, particularly for pollinator species. This includes reducing mowing frequency and introducing wildflower-rich grasslands. Consideration for TS: Prioritize biodiversity-friendly verge management along transport routes to enhance species	priority species by incorporating wildlife crossings, such as underpasses and overpasses, where transport routes intersect with key habitats. There is an opportunity to implement measures to reduce light and noise pollution from transport infrastructure, which can negatively impact nocturnal species such as bats and birds. The other suggestions have not been included as they are likely to be considered and included as mitigation actions at the project level, or are suggestions for the TS itself rather than the SEA.

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				diversity. (See Buglife B-lines project) ■ Opportunity: Address the spread of invasive non-native species (INNS) along transport routes by incorporating management strategies to prevent their spread and protect native biodiversity. Consideration for TS: Develop and implement INNS management plans to reduce their impact on sensitive habitats ■ Opportunity: Link biodiversity enhancement with carbon sequestration by creating or restoring habitats such as wetlands, woodlands, and grasslands along transport corridors. Consideration for TS: Incorporate carbon sequestration potential into biodiversity planning and delivery. ■ Opportunity: Reduce road mortality of protected and priority species by incorporating wildlife crossings, such as underpasses and overpasses, where transport routes intersect with key habitats. Consideration for TS: Include	

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				measures to reduce wildlife-vehicle collisions in transport design. ▪ Opportunity: Implement measures to reduce light and noise pollution from transport infrastructure, which can negatively impact nocturnal species such as bats and birds. Consideration for TS: Incorporate low-impact lighting solutions and noise barriers to mitigate disturbance in sensitive areas ▪ Opportunity: Incorporate fish species, including resident and migratory species, into the scope of this report to ensure biodiversity is not reduced. Consideration for TS: No specific mention of fish species are listed in Section 5. Many fish species play a vital role in ecosystem functionality and are an important component. Many piscivorous birds and mammals could be negatively impacted, should fish populations be adversely impacted, which would result in a reduction in biodiversity. There are known populations of	

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				protected and endangered fish species present that should be included to ensure the outcomes/objectives are met and specific habitats are not impacted by the reduction/loss of specific species.	
15	21/03/2025	NE	General	Natural England considers that an environmentally sustainable transport system should protect and enhance the natural environment, as well as delivering economic and social benefits. Transport effects the natural environment and people's experience of it, in the following areas: ▪ Biodiversity, landscape, geodiversity and soils – through direct and indirect impacts from lands take and traffic; ▪ Climate change and energy; ▪ Quality of life – through people's access to, and experience of, the natural environment including the provision of green infrastructure and through links between	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				walking, cycling, health and wellbeing.	
16	21/03/2025	NE	Designated Sites	Paragraphs 193-195 of the NPPF set out the principles for determining applications impacting on Sites of Special Scientific Interest (SSSI) and habitats sites (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)). Both the direct and indirect impacts of the development should be considered. A Habitats Regulations Assessment is needed where a proposal might affect a habitat site (see Habitats regulations assessments: protecting a European site - GOV.UK (www.gov.uk) and Natural England must be consulted on 'appropriate assessments' (see Appropriate assessment - GOV.UK (www.gov.uk) for more information for planning authorities). Natural England must also be consulted where development is in or likely to affect a SSSI and provides advice on potential impacts on SSSIs either via the SSSI Impact Risk Zones	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				(England) (arcgis.com) or as standard or bespoke consultation responses. We advise that where a transport project is within 200m of a European site, impacts to the site should be assessed in line with Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001) guidance. Where a transport project is likely to have a significant effect on the natural environment, we advise conformity with the avoidance-mitigation-compensation hierarchy. Less damaging alternatives should be considered with regards to impacts to high value ecological and landscape receptors, including those of international and national importance (SACs, SPAs, Ramsar sites, SSSIs, protected species).	
17	21/03/2025	NE	Designated Sites	Development should provide net gains for biodiversity in line with the NPPF paragraphs 187(d), 192 and	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				193. Major development (defined in the National Planning Policy Framework (publishing.service.gov.uk) glossary) is required by law to deliver a biodiversity gain of at least 10% from 12 February 2024 and this requirement is also applies extended to small scale development from April 2024. For nationally significant infrastructure projects (NSIPs), it is anticipated that the requirement for biodiversity net gain will be implemented from 2025.	
18	21/03/2025	NE	Designated Sites	Biodiversity net gain - GOV.UK (www.gov.uk) provides information on biodiversity net gain, the mitigation hierarchy and wider environmental net gain and includes a link to the draft Planning Practice Guidance.	Comment noted.
19	21/03/2025	NE	Designated Sites	The statutory biodiversity metric should be used to calculate biodiversity losses and gains for terrestrial and intertidal habitats and can be used to inform any development project. We refer you to	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				Calculate biodiversity value with the statutory biodiversity metric - GOV.UK (www.gov.uk) for more information.	
20	21/03/2025	NE	Designated Sites	The mitigation hierarchy as set out in paragraph 193 of the NPPF should be followed to firstly consider what existing habitats within the site can be retained or enhanced. Where on-site measures are not possible, provision off-site will need to be considered.	Comment noted.
21	21/03/2025	NE	Designated Sites	Development also provides opportunities to secure wider biodiversity enhancements and environmental gains, as outlined in the NPPF (paragraphs 8, 77, 109, 125, 187, 188, 192 and 193). Opportunities for enhancement might include incorporating features to support specific species within the design of the project to encourage wildlife.	Comment noted.
22	21/03/2025	NE	Local Nature Recovery Strategies	Local Nature Recovery Strategies (LNRS) are a new England-wide system of spatial strategies,	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				designed to support the restoration and recovery of nature. The main purpose of the strategies is to identify locations to create or improve habitat most likely to provide the greatest benefit for nature and the wider environment.	
23	21/03/2025	NE	Local Nature Recovery Strategies	Local Planning Authorities have a duty to 'take account' of their relevant LNRS, therefore, we advise that any decisions about transport development should consider any potential impacts, and/or possible contribution to the Norfolk Local Nature Recovery Strategy to support nature restoration. Further general information on LNRS can be found here and details of how to incorporate LNRS when planning for BNG can be found here.	Comment noted.
24	21/03/2025	NE	Green Infrastructure	We advise that green infrastructure should be implemented into any transport projects where possible. For evidence-based advice and tools on how to design, deliver and manage green and blue infrastructure (GI) we refer you to	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				Natural England's Green Infrastructure Framework. GI should create and maintain green liveable places that enable people to experience and connect with nature, and that offer everyone, wherever they live, access to good quality parks, greenspaces, recreation and walking/cycling routes that are inclusive, safe, welcoming, well-managed and accessible for all. GI provision should enhance ecological networks, support ecosystems services and connect as a living network at local, regional and national scales.	
25	21/03/2025	NE	Green Infrastructure	Development should be designed to meet the 15 GI How Principles (naturalengland.org.uk). The GI Standards can be used to inform the quality, quantity and type of GI to be provided. Major development should have a GI plan including a long-term delivery and management plan. Relevant aspects of local authority GI strategies should be delivered where appropriate.	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
26	21/03/2025	NE	Green Infrastructure	The Green Infrastructure Map (naturalengland.org.uk) and GI Mapping Analysis (naturalengland.org.uk) are GI mapping resources that can be used to help assess deficiencies in greenspace and identify priority locations for new GI provision.	Comment noted.
27	21/03/2025	NE	Protected Landscapes	The statutory purpose of the National Landscape is to conserve and enhance the area's natural beauty. Where transport infrastructure is being built and/or improved within, or close to a National Landscape (in this instance the Norfolk Coast Protected Landscape), an assessment should be made as to whether the proposed development would have a significant impact on or harm that statutory purpose. Consequently, a landscape and visual impacts assessment may be necessary to determine magnitude of impact and any possible mitigation.	Comment noted.
28	21/03/2025	NE	Protected Landscapes	When considering potential impacts, a decision should be guided by	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				paragraph 189 and 190 of the National Planning Policy Framework, which requires great weight to be given to conserving and enhancing landscape and scenic beauty within National Landscapes, and states that the scale and extent of development within all these areas should be limited.	
29	21/03/2025	NE	Best and most versatile agricultural land and soils	Decisions about transport development should take full account of the impact on soils, their intrinsic character and the sustainability of the many ecosystem services they deliver. The Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (publishing.service.gov.uk) provides guidance on soil protection, and we recommend its use in the design and construction of development. Further information is contained in the Guide to assessing development proposals on agricultural land - GOV.UK (www.gov.uk). Find open data - data.gov.uk on Agricultural Land Classification or use the information available on MAGIC (defra.gov.uk).	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
30	21/03/2025	NE	General	Should you wish to discuss the detail of this response with Natural England, we may be able to provide advice through our Discretionary Advice Service. Should details of the strategy change, please consult us again.	Comment noted.
31	24/03/2025	HE	General	In terms of the historic environment, we consider that the Report has identified the plans and programmes which are of relevance to the development of the Great Yarmouth Transport Strategy, that it has established an appropriate Baseline against which to assess the Plan's proposals and that it has put forward a suitable set of Objectives and Indicators. Overall, therefore, we believe that it provides an appropriate framework for assessing the likely significant effects which this plan might have upon the historic environment.	Comment noted.
32	24/03/2025	HE	General	Historic England strongly advises that the conservation team of your authority and your archaeological	Comment noted.

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
				advisors are closely involved throughout the preparation of the SEA of this Plan. They are best placed to advise on; local historic environment issues and priorities, including access to data held in the HER; how the policy or proposal can be tailored to minimise potential adverse impacts on the historic environment; the nature and design of any required mitigation measures; and opportunities for securing wider benefits for the future conservation and management of heritage assets. Historic England has produced guidance for all involved in undertaking SEA/SA exercises which gives advice on issues relating to the historic environment. This can be found at: https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/heag036-sustainability-appraisal-strategic-environmental-assessment/.	

ID	Date	Consultee	In reference to:	Comment	Summary of Action Taken
33	24/03/2025	HE	General	This opinion is based on the information provided by you in the document dated February 2025 and, for the avoidance of doubt, does not affect our obligation to advise you on, and potentially object to any specific development proposal which may subsequently arise from this or later versions of the plan which is the subject to consultation, and which may, despite the SA/SEA, have adverse effects on the environment.	Comment noted.

Appendix D

ASSESSMENT OF THE TRANSPORT STRATEGY UPDATE

Policy 1: Supporting Growth and New Development

Description: Norfolk County Council, working with partners and developers, will seek to ensure transport measures, including sustainable transport options, support new housing developments and employment sites.

Alternatives:

- To not work in partnership with other councils and instead act in isolation – This is not considered a reasonable alternative and has therefore not been assessed under the SEA Framework.
- To do nothing and accept what comes as part of the development process with the understanding that it may not fully meet the LTP objectives or objectives of overarching strategies – This is considered a reasonable alternative and has been assessed under the SEA Framework.

Policy 1 aims to support the delivery of new housing developments and employment sites by working in partnership and providing appropriate transport measures, including sustainable transport options.

Table D-1 – Assessment of the effects of Transport Strategy Policy 1 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	**++**	**+/-**	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019.

SEA Objective	Policy	Alternatives	Description of Effect
			By working in partnership with Great Yarmouth Borough Council to help shape the delivery of new housing and jobs, and seeking to mitigate adverse effects of development on the current transport network, Policy 1 aims to ensure that there is necessary transport infrastructure to support future population growth. It is anticipated that transport measures may involve improvements to the scale and scope of the public transport and active transport network, and improvements to connectivity and accessibility. The proposed policy will therefore aid in the development of secure and sustainable transport networks, contributing significantly to the achievement of the SEA Objective. However, minor negative effects have been identified as transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections, which may have potential negative impacts on the local community if access is severed, and localised traffic is increased although this should be temporary. Transport assessments will be undertaken to identify localised impacts of new development and transport interventions across all modes of transport to mitigate potential significant adverse impacts. Overall, a significant positive effect has been assessed against this SEA Objective. The reasonable alternative will likely include new infrastructure and improvements to existing infrastructure that may somewhat contribute to a positive effect for populations and equalities. However, the alternative may not fully meet the objectives or align with the objectives of the overarching strategies as it unlikely to proportionately support both rural and urban communities and improve access to

SEA Objective	Policy	Alternatives	Description of Effect
			services. The proposed alternative is unlikely to deliver sufficient benefits to the population and equalities objective and has therefore been awarded a mixed score.
Human Health	**+**	**+/-/?**	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. Developing and maintaining new transport measures to support growth, such as active travel routes, across the Great Yarmouth area will encourage residents and visitors to take part in more walking and cycling, improving physical activity rates and therefore physical and mental health. Improvements to the public transport and active transport network may also aid in preventing social isolation in rural and urban areas. Although the exact location and scale of transport measures are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. Additionally, improving noise and air quality as a result of encouraging a modal shift away from private vehicle usage will also improve physical health, particularly for

SEA Objective	Policy	Alternatives	Description of Effect
			children, the elderly, pregnant women and those with respiratory conditions exacerbated by poor air quality. However, minor negative effects have been identified as transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections, which may lead to temporary reductions in air quality due to dust and construction traffic. Potential negative effects on air quality should be mitigable with best practice construction measures, such as implementation of a Construction Traffic Management Plan (CTMP) and Construction Environmental Management Plan (CEMP), during construction. The reasonable alternative will likely include new infrastructure and improvements to existing infrastructure, and therefore the positive and negative effects outlined above are also applicable. However, it is uncertain if leaving it to market will meet the objectives or objectives of overarching strategies.
Economy & Employment	**++/-**	**-**	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Seeking the provision of strategic infrastructure will likely contribute to improving access across the area, including within rural areas. This will provide improved

SEA Objective	Policy	Alternatives	Description of Effect
			accessibility to services, town centres, and employment sites. Additionally, developing new routes and new transport infrastructure may contribute to increasing employment and training opportunities within the area. However, the exact scale and location of the proposed transport measures to support new housing developments and employment sites is currently unknown. As new travel routes will likely increase accessibility of rural areas to employment sites and other locations key to the economy, a significant positive effect has been assessed against this SEA Objective. Minor negative effects have been identified due to the potential for new transport infrastructure to negatively impact the Norfolk Coast National Landscape, which holds great importance as a tourist destination and contributes to the tourism economy within GY. However, improved opportunity for sustainable transport may contribute to more sustainable tourism and reduced traffic, having positive effects on the tourism economy. The reasonable alternative will likely include new infrastructure and improvements to existing infrastructure, however, the proposed alternative is unlikely to include appropriate transport measures to keep up with population growth and the current transport network may not have the capacity to cope with the additional trips generated by new housing and employment sites, therefore a minor negative effect has been identified.
Community Safety	+	+	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were

SEA Objective	Policy	Alternatives	Description of Effect
			aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. The development of new transport measures to support growth and development, such as improving active travel routes and public transport networks, improving access to town centres and employment sites, will likely contribute to improved feelings of safety along routes. This is based on the assumption that it is likely that community safety will be embedded into design, following national policy, however exact measures are currently unknown. Overall, a minor positive effect has been assessed against this SEA Objective. The reasonable alternative will likely include new infrastructure and improvements to existing infrastructure, and therefore the positive effects outlined above are also applicable.
Biodiversity & Natural Capital	**+/-**	**+/-**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture.

SEA Objective	Policy	Alternatives	Description of Effect
			There is potential for negative effects on biodiversity as a result of the development of new transport measures that require land take. This may result in permanent loses of biodiversity, and temporary increases in disturbance to local habitats during construction as a result of noise, vibration and reduced air quality. A minor positive effect is likely as schemes that deliver new infrastructure of sufficient scale will be required to deliver Biodiversity Net Gain (BNG) under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. However, there are potential for positive effects to arise as a result of encouraging a modal shift away from private car use, improving air quality across the County, and reducing traffic disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as their habitats. As the location of infrastructure and details of materials to be used are not known, this has been scored as a minor positive effect. Overall, a mixed minor effect has been assessed against this SEA Objective. The reasonable alternative will likely include new infrastructure and improvements to existing infrastructure, and therefore the effects outlined above are also applicable.
Landscape & Townscape	**+/-**	**+/-**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY.

SEA Objective	Policy	Alternatives	Description of Effect
			Transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections. Development of new and improvement of existing transport infrastructure brings opportunity to incorporate green infrastructure into design, contributing to the landscape and townscape character of the area. Improved transport infrastructure could also contribute to sustainable transport to landscape assets such as the Norfolk Coast National Park, reducing traffic and leading to positive effects. This could result in a minor positive effect on this SEA Objective, though the location and detail of infrastructure is unknown. Construction works could however result in temporary adverse effects on landscape and townscape character and quality, and visual amenity. Negative effects could be significant if they are to impact the Norfolk Coast National Landscape. New above ground infrastructure is likely to be introduced in support of new developments, which is likely to lead to adverse effects on landscape and townscape character. Negative effects could be significant if new infrastructure is to impact the Norfolk Coast National Landscape. The location of new infrastructure is unknown at this stage, resulting in uncertainty around the magnitude of effect. As negative impacts on the character and quality of the Norfolk Coast National Landscape, including visual amenity, are likely to be avoided based on policy and protection measures, it is concluded that Policy 1 would have a minor negative effect on Landscape and Townscape. These effects could be mitigated through best use construction measures, and consideration of landscape

SEA Objective	Policy	Alternatives	Description of Effect
			and townscape character, including designated sites, during planning and routing of transport infrastructure. As the proposed alternative will also likely include new infrastructure and works on existing infrastructure in uncertain locations, the effects outlined above are also applicable.
Historic Environment	**+/-**	**-**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections. Development of new and improvement of existing transport infrastructure brings opportunity to enhance the setting of heritage assets through development of schemes that can reduce traffic and noise, and enhance accessibility around heritage assets. This could result in a minor positive effect on this SEA Objective, though the location and detail of infrastructure is unknown. Construction associated with both new and existing infrastructure may have negative impacts on designated historic assets, through potential damage, restricted access, impacts on visual amenity and noise and air pollution. Impacts associated with construction are anticipated to be temporary.

SEA Objective	Policy	Alternatives	Description of Effect
			Excavation associated with construction of new infrastructure may impact non-designated and unknown heritage assets, which could be of high value. Areas such as the Norfolk Coast National Landscape are rich in archaeological and historical sites, including assets of internationally recognised value. Much of this may be as yet undiscovered and could be damaged during construction of transport infrastructure. Although the location of construction work is unknown and may impact heritage assets, effects should be avoided through policy and planning and construction best practice, therefore it has been concluded that there would be a minor negative effect against this SEA Objective for Policy 1. As the proposed alternative will also likely include new infrastructure and works on existing infrastructure in uncertain locations, the effects outlined above are also applicable. However, significant negative effects on this SEA Objective may be more likely, as the overall TS Objective to protect and enhance Great Yarmouth's heritage and cultural environment may not be incorporated into all development, reducing the likelihood of positive effects.
Water Environment	**+/-**	**+/-**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections.

SEA Objective	Policy	Alternatives	Description of Effect
			Development of new and improvement of existing transport infrastructure brings opportunity to incorporate green infrastructure, including SuDS, into design. This could result in a positive effect on this SEA Objective through improved drainage, reducing discharge from roads and surface water flooding. Although the exact location and scale of transport measures are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. New infrastructure could result in additional concrete or other impermeable surface area within GY. This could lead to negative effects through increased flood risk, particularly as the area is susceptible to flooding with 1300 properties at risk of surface water flooding. Although the exact location and scale is unknown, should new infrastructure fall within a Flood Zone 3, it is likely that the effects could be significant. Construction works could lead to pollution of the water environment including aquifers, rivers and streams, through noise, dust, and surface runoff entering waterbodies leading to a reduction in quality. These effects are likely to be mitigable through best practice construction measures, but there is concluded to be a residual minor negative effect due to the remaining potential for pollution. During operation of new transport infrastructure, increased emissions, noise pollution, dust and other associated pollution could result in a reduction in water quality depending on location. However, the anticipated inclusion of sustainable transport could lead to a reduction in pollution through reduced congestion and emissions.

SEA Objective	Policy	Alternatives	Description of Effect
			New housing and employment developments could lead to increased demand for water, putting pressure on water resources in the area and exacerbating water supply issues where resources are scarce. Due to the anticipated scale of the Policy and mitigation measures, it is concluded that there is a minor positive and minor negative effect on this SEA Objective. As the proposed alternative will also likely include new infrastructure and works on existing infrastructure in uncertain locations, the effects outlined above are also applicable. However, the transition to sustainable transport will be realised more slowly without the updated TS Objectives, so although minor positive effects are assessed for both the policy and its alternative, those positive effects are lesser for the alternative.
Air Quality	+	-	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections. Improved infrastructure, a move to EV's in line with government policy, and increased use of sustainable and active travel could improve the flow of traffic, reducing congestion, and therefore improving air quality through a reduction in air pollution due to more efficient driving and lower use of private internal combustion engine (ICE) vehicles. This is anticipated to have a minor positive effect against this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
			Implementation of the Policy could lead to temporary reductions in air quality during construction, caused by dust and particulate matter, as well as increased localised traffic resulting in increased emissions. This could lead to negative effects on air quality. However, potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. As the proposed alternative will also likely include new infrastructure and works on existing infrastructure in uncertain locations, the effects outlined above are also applicable. The alternative would not enact the Transport Strategy's Objective to improve local air quality and Great Yarmouth's natural environment and reduce overall transport emissions, through actions such as increased EV usage and improve sustainable transport. As the Borough does not have a specific Air Quality Action Plan in place, it is likely that the alternative would result in minor negative effects against this SEA Objective, though the exact magnitude of this is uncertain.
Climate Change & Greenhouse Gases	**+**	**-**	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. GY is susceptible to the impacts of a changing climate, through sea level rise and coastal erosion due to its coastal setting, as well as increased extreme weather events and temperature change. A large area of the borough is expected to be at increased flood risk and sea level rise by 2030.

SEA Objective	Policy	Alternatives	Description of Effect
			Transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections. New and improved transport infrastructure could provide opportunities to increase the number of EV charging stations, improve sustainable transport and promote low carbon and energy efficient design. This would support the council's net zero ambitions. More EVs and more sustainable design in use could result in lower greenhouse gas emissions, leading to a positive effect on this SEA Objective. Depending on the materials used, there is also an opportunity to reduce embodied carbon during construction. Although details on materials are not known, this has been scored as a minor positive effect. Improved sustainable transport could work to reduce the number of private vehicles in use, also having a positive effect on this SEA Objective. Improved infrastructure could improve the flow of traffic, reducing congestion, and therefore improving air quality through a reduction in greenhouse gas emissions due to more efficient driving. This is anticipated to have a minor positive effect against this SEA Objective. Improved infrastructure also brings opportunity to implement green infrastructure & SuDS. This will help to further increase climate change resilience through increasing resilience to flooding, as well as CO2 drawdown, though the extent of this is dependent on the extent and type of vegetation used. Additional infrastructure could increase the amount of impermeable surface, if GI & SuDS are not incorporated, reducing resilience to climate change and causing a negative effect on this SEA Objective. However, it is assumed that appropriate mitigation will be incorporated at the project level.

SEA Objective	Policy	Alternatives	Description of Effect
			As the proposed alternative will also likely include new infrastructure and works on existing infrastructure in uncertain locations, the effects outlined above are also applicable. The alternative would not enact the Transport Strategy's Objective to improve local air quality and Great Yarmouth's natural environment and reduce overall transport emissions. As the Borough does not have a specific Air Quality Action Plan in place, it is likely that the alternative would result in minor negative effects against this SEA Objective, though the magnitude of this is uncertain.
Noise	**+/-**	**+/-**	There are a number of Noise Important Areas (NIAs) within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. Transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections. Development of new transport infrastructure will lead to opportunities for implementation of more sustainable transport infrastructure, which could help to reduce noise and congestion. If planned and located appropriately, this could reduce traffic and rail derived noise in NIAs, resulting in minor positive effects. Although the exact location and scale of transport measures are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. Construction associated with new and upgraded infrastructure will lead to increased levels of noise through additional traffic and use of machinery. Though this will be

SEA Objective	Policy	Alternatives	Description of Effect
			temporary, it could lead to negative effects. If increased noise levels are near to or within sensitive receptors, or lead to designation of new Noise Important Areas, effects may be significant. However, construction effects should be mitigable through implementation of best practice measures, such as a CTMP and CEMP. However, minor negative effects are assessed against this SEA Objective due to temporary increases in noise pollution during construction. As the proposed alternative will also likely include works on existing infrastructure in uncertain locations, the positive and negative effects outlined above are also applicable. However, as there will be no proactive improvement to strategic connections, negative effects are likely to be associated with maintenance of infrastructure, and there will be less opportunity to incorporate sustainable design, resulting in reduced magnitude of positive effects.
Material Assets	**++/--/?**	**++/--/?**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages. Transport measures in support of new housing developments and employment sites will likely require construction of new infrastructure, as well as updates and works to existing infrastructure to improve connections. There are a number of opportunities provided by development of new and upgrade of existing infrastructure that could result in positive effects against this SEA

SEA Objective	Policy	Alternatives	Description of Effect
			Objective. Supporting provision of employment sites and better connectivity between existing sites will work to support a green economy. Sustainable materials could be used during construction, improving resource efficiency and supporting a circular economy. There is also an opportunity to redevelop brownfield land, bringing it back into use, depending on the location of infrastructure. Improved sustainable transport infrastructure could reduce reliance on private cars, reducing resource use. As the location of infrastructure and details of materials to be used are not known, this has been scored as a significant positive uncertain effect. There is potential to lose the region's best and most versatile land through land take associated with construction of new transport infrastructure, depending on its location. This can be mitigated through appropriate routing of new transport routes to avoid loss of best and most versatile agricultural land. As the location of infrastructure and details of materials to be used are not known, this has been scored as a significant negative uncertain effect. As the proposed alternative will also likely include works on existing infrastructure in uncertain locations, the effects outlined above are also applicable. However, without implementation of the LTP policies, use of sustainable materials and improving resource efficiency may not be incorporated as effectively, diminishing the positive effects of the reasonable alternative in comparison to the Policy.

Overall, for a number of SEA Objectives, mixed effects have been identified with a number of objectives identifying uncertainties associated with Policy 1. Uncertainties associated with Policy 1 are primarily around the unknown location and magnitude of new infrastructure and the updates and works to existing infrastructure to improve connections.

Significant positive effects have been identified for the population and equalities objective, with mixed significant positive and minor negative effects identified for economy and employment. These significant positive effects are largely due to the implementation of sustainable transport measures to adequately support new housing developments and employment sites, which may subsequently lead to a cleaner transport network and improvements to the scale and scope of the public transport, improving air quality, connectivity and accessibility in the GY area.

Mixed significant positive and significant negative uncertain effects have been identified for material assets. Significant negative effects were identified due to the potential impacts of new infrastructure on the region's best and most versatile land, and significant positive effects were identified due to the potential to promote the use of a circular economy during construction, alongside the opportunity to redevelop brownfield land, and improved sustainable transport infrastructure could reduce reliance on private cars, reducing resource use.

The reasonable alternative is likely to include new infrastructure and works on existing infrastructure in uncertain effects, and thus the effects outlined above are also applicable. However, without the TS's Policies, use of sustainable materials, and a move towards more sustainable transport infrastructure is likely to be less effective and positive effects will be reduced in comparison to implementation of the Policy.

Policy 2: Strategic Connections

Description: Norfolk County Council, working in partnership, will seek to improve strategic connections between Great Yarmouth, the port, the surrounding villages, Norwich, Norfolk and the wider region. We will seek improvements to strategic connections including the A47, A149 and the railway line to Norwich.

Alternatives:

- To not actively seek to improve strategic connections – This is not considered a reasonable alternative and has therefore not been assessed under the SEA Framework.
- To do nothing and continue with a business as usual approach, with no purposeful improvements to strategic connections – This is considered a reasonable alternative and has been assessed under the SEA Framework.

Implementation of Policy 2 would likely require construction of upgrades to existing infrastructure, to improve strategic connections across GY.

Table D-2 - Assessment of the effects of Transport Strategy Policy 2 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	++	+	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019. Improvements to strategic connections may improve access across the GY area, including in rural areas, which will enhance access to local facilities and

SEA Objective	Policy	Alternatives	Description of Effect
			town centres. It is also anticipated that developments to existing and new routes may improve conditions for people with disabilities or mobility aids, improving the accessibility of routes. Depending on the location, improvements to strategic connections may also lead to improvements in rail and bus connections which will greatly benefit those that rely on public transport for work and leisure, improve connectivity and reduce inequalities in access between communities across the county. The development of improved bus and rail services will also contribute to improving the network for future generations will also aid in improving the network's resilience to increasing populations During construction, there may be temporary severance or restricted access along the A47 and A149, which may restrict to access to local services, with congestion and delays likely, which may have a minor negative effect for populations and equalities. Overall, a significant positive effect has been assessed against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. These road schemes are

SEA Objective	Policy	Alternatives	Description of Effect
			likely to lead to improvements to strategic connections in areas surrounding GY, likely improving accessibility and connectivity to GY, and as such a minor positive effect has been identified.
Human Health	**0**	**0**	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. It is not anticipated that Policy 2 will have any positive or negative effects on human health, and therefore a neutral score has been identified. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. The reasonable alternative

SEA Objective	Policy	Alternatives	Description of Effect
			is unlikely to have any positive or negative effects on human health with or without improvement to strategic connections.
Economy & Employment	+	+	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Exact measures to improve strategic connections are currently unknown. It is assumed that the improvements will lead to less congestion, which may encourage residents and visitors to these areas, boosting local economies. Additionally, working with Great Yarmouth Borough Council, Department for Transport, National Highways and Transport East to campaign for further investment is likely to boost local supply chains, having a positive effect on local economies. Overall, a minor positive effect has been assessed against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. This would result in no construction related to transport infrastructure, no investment, and no subsequent benefits through improvements to town centres and employment sites. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement

SEA Objective	Policy	Alternatives	Description of Effect
			schemes identified along the A47. These road schemes are likely to lead to improvements to strategic connections in areas surrounding GY, which may improve accessibility to the town centre and employment sites within GY. Therefore, a minor positive effect has been identified, although it is likely to be realised at a lesser scale than with Policy 2.
Community Safety	**+**	**0**	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. Minor positive effects are anticipated for community safety as a result of improvements to strategic connections which may lead to a reduction in collisions and the number of KSI on roads in the area, which may encourage walking and cycling. Although the exact location and scale of improvements are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable

SEA Objective	Policy	Alternatives	Description of Effect
			alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits to community safety.
Biodiversity & Natural Capital	**++/--**	**0**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. There is potential for negative effects on biodiversity as a result of any works that will take place to improve strategic connections. This may result in temporary increases in disturbance to local habitats during construction as a result of noise, vibration and reduced air quality. Furthermore, during operation of improved transport infrastructure, increased emissions, noise pollution, dust and other associated pollution could result in disturbance to local habitats. Due to the anticipated scale of the option, it is concluded that there is a significant negative effect on this SEA Objective. However, there are potential for positive effects to arise as a result of reducing congestion, therefore improving air quality and reducing disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as

SEA Objective	Policy	Alternatives	Description of Effect
			their habitats. A significant positive effect, equal and opposite to negative effects, is likely from schemes that deliver new infrastructure as they will be required to deliver Biodiversity Net Gain (BNG) under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. Overall, a mixed significant effect has been assessed against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits to biodiversity & natural capital.
Landscape & Townscape	**+**	**0**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Depending on location, works on the A47 and A149 and improved connections between Great Yarmouth and neighbouring towns and villages and the wider Norfolk area and beyond could impact the National Landscape through impacts to visual amenity and restricted access during construction. This could result in

SEA Objective	Policy	Alternatives	Description of Effect
			negative effects on this SEA Objective. Construction works in or around the National Landscape could lead to increased air, noise, and light pollution, leading to negative effects on its setting. As implementation of Policy 2 is not expected to require new infrastructure, and construction effects are likely to be mitigated through best practice methods such as implementation of a CEMP and CTMP, negative effects are not anticipated on this SEA Objective. However, upgraded transport infrastructure could improve access to the countryside and National Landscape, promoting sustainable tourism, resulting in a minor positive effect against this SEA Objective. New infrastructure also provide opportunities to incorporate green infrastructure into design and improve the sustainability of transport, reducing pollution around the National Landscape. However, the degree to which green infrastructure will be incorporated is not known, therefore minor positive effects are concluded against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits to Landscape and townscapes.
Historic Environment	**+**	**0**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National

SEA Objective	Policy	Alternatives	Description of Effect
			Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Improvement of existing transport infrastructure brings opportunity to enhance the setting of heritage assets through development of schemes that can reduce traffic and noise and enhance accessibility around heritage assets. This could result in a minor positive effect on this SEA Objective, though the location and detail of infrastructure is unknown. Construction associated with improvements to existing infrastructure may have negative impacts on designated historic assets, through potential damage, restricted access, impacts on visual amenity and noise and air pollution. It is assumed that any proposed works will not involve excavations beyond ground level and construction impacts are expected to be temporary and likely mitigated through best use construction practice including implementation of a CTMP and CEMP. As the impacts of construction works on heritage assets are likely mitigable and in the footprint of existing infrastructure, it has been concluded that overall there would be a minor positive effect against this SEA Objective for Policy 2. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six

SEA Objective	Policy	Alternatives	Description of Effect
			road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits to the Historic Environment.
Water Environment	**+/-**	**0**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Improvements to existing transport infrastructure bring opportunity to incorporate green infrastructure, including SuDS, into design. This could result in a positive effect on this SEA Objective through improved drainage, reducing discharge from roads and surface water flooding. Although the location and detail of infrastructure is unknown, including design, this is scored as a minor positive effect. New infrastructure could result in additional concrete or other impermeable surface area within GY. This could lead to negative effects through increased flood risk, particularly as the area is susceptible to flooding with 1300 properties at risk of surface water flooding. Although the exact location and scale is unknown, should new infrastructure fall within a Flood Zone 3, it is likely that the effects could be significant. However, we would assume that appropriate mitigation in line with other policy, including national policy, would be incorporated into design of infrastructure, that would prevent increased surface runoff and subsequently increased surface water flood risk.

SEA Objective	Policy	Alternatives	Description of Effect
			Construction works could lead to pollution of the water environment including aquifers, rivers and streams, through noise, dust, and surface runoff entering waterbodies leading to a reduction in quality. These effects are mitigable through best practice construction measures, but there is concluded to be a residual minor effect due to the remaining potential for pollution. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits through incorporation of green infrastructure and SuDS.
Air Quality	**+/-**	**0**	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Improved strategic connections between key areas could improve the flow of traffic, reducing congestion, and improve air quality through a reduction in air pollution due to more efficient driving. This could have a minor positive effect against this SEA Objective, as improvements are expected to benefit the Study Area and beyond and could lead to a reduction in congestion and associated emissions.

SEA Objective	Policy	Alternatives	Description of Effect
			Implementation of the Policy could lead to temporary reductions in air quality during construction, caused by dust and particulate matter, as well as increased localised traffic resulting in increased emissions. This could lead to negative effects on air quality. Due to this, minor negative effects have been assessed against this SEA Objective. However, potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits on air quality.
Climate Change & Greenhouse Gases	**+**	**0**	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. GY is susceptible to the impacts of a changing climate, through sea level rise and coastal erosion due to its coastal setting, as well as increased extreme

SEA Objective	Policy	Alternatives	Description of Effect
			weather events and temperature change. A large area of the borough is expected to be at increased flood risk and sea level rise by 2030. Improvements to transport infrastructure could provide opportunities to increase the number of EV charging stations and promote low carbon and energy efficient design. This would support the council's net zero ambitions. More EVs and more sustainable design in use could result in lower greenhouse gas emissions, leading to a positive effect on this SEA Objective. Depending on the materials used, there is also an opportunity to reduce embodied carbon during construction. Though details on materials are not known, this has been scored as a minor positive effect. Improved infrastructure could improve the flow of traffic, reducing congestion, and therefore improving air quality through a reduction in greenhouse gas emissions due to more efficient driving. This is anticipated to have a minor positive effect against this SEA Objective. Improved infrastructure also brings opportunity to implement green infrastructure & SuDS. This will help to further increase climate change resilience through increasing resilience to flooding, as well as CO2 drawdown, though the extent of this is dependent on the extent and type of vegetation used. Additional infrastructure could increase the amount of impermeable surface, if GI & SuDS are not incorporated, reducing resilience to climate change and causing a negative effect on this SEA Objective. Although the details of projects are unknown, it is assumed that this will be mitigated at the plan level and no negative effects are anticipated.

SEA Objective	Policy	Alternatives	Description of Effect
			The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits on on climate change and greenhouse gases.
Noise	**+/-**	**0**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. Improvements to strategic transport infrastructure will lead to opportunities for implementation of more sustainable design, which could help to reduce noise and congestion. If planned and located appropriately, this could reduce traffic and rail derived noise in Noise Important Areas, resulting in significant positive effects. Although the exact location and scale of transport measures are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. Construction associated with upgraded infrastructure will lead to increased levels of noise through additional traffic and use of machinery. Though this will be temporary, it will lead to negative effects. Construction effects should be mitigable through implementation of best practice measures, such as a CTMP and CEMP. However, a residual minor negative effect has been assessed against this SEA Objective due to temporary increases in noise pollution.

SEA Objective	Policy	Alternatives	Description of Effect
			The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits on noise.
Material Assets	**+/-/?**	**0**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages. There are a number of opportunities provided by improving existing strategic transport infrastructure that could result in positive effects against this SEA Objective. Supporting provision of employment sites and better connectivity between existing sites will work to support a green economy. Sustainable materials could be used during construction, improving resource efficiency and supporting a circular economy. Improved sustainable transport infrastructure could reduce reliance on private cars, reducing resource use. However, construction works are likely to produce waste associated with new materials and old infrastructure.

SEA Objective	Policy	Alternatives	Description of Effect
			As the location of infrastructure and details of materials to be used are not known, this has been scored as a minor positive, and minor negative uncertain effect. The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. The reasonable alternative is unlikely to result in major improvements to strategic connections, or encourage alternative travel modes such as active travel, or improved bus and rail services within GY. However, the Government's Road Investment Strategy identified the East of England as an area in need of investment, with six road improvement schemes identified along the A47. This is unlikely to result in subsequent benefits on materials and resource use.

Overall, for a number of SEA Objectives, mixed effects have been identified alongside a number of objectives identifying uncertainties associated with Policy 2. Uncertainties associated with Policy 2 are primarily around the unknown location and magnitude of the improvements to strategic connections and any infrastructure works required.

Significant positive effects have been identified for the objectives population and equalities objective. The significant positive effects are largely due to the increased resilience of the transport network for future generations, improved noise and air quality, and decreased levels of congestion

Mixed significant positive and significant negative effects have been identified for the biodiversity and natural capital objective. Significant positive effects were identified as reducing congestion is likely to improve air quality and reduce disturbance to biodiversity, which is particularly likely to benefit species that utilise hedgerows as their habitats. Significant negative effects were identified due to the potential impacts related to the construction of new infrastructure.

The proposed reasonable alternative to this policy would be business as usual, with no purposeful improvements to strategic connections. This would result in no construction related to transport infrastructure, and no subsequent effects on the majority of objectives.

Policy 3: Parking

Description: Norfolk County Council, working with partners, will seek to develop car parking policy for on street and off-street public parking that balances the needs of residents and visitors whilst still supporting the promotion of public transport and active travel.

Alternatives:

- To focus only on public transport/active travel – This is considered a reasonable alternative and has been assessed under the SEA Framework.
- To focus only on private vehicles – This is considered a reasonable alternative and has been assessed under the SEA Framework.

Implementation of Policy 3 aims to work in partnership to deliver a parking strategy that meets the needs of the town whilst supporting the promotion of public transport and active travel. To meet parking needs, it is possible that construction may take place. However, the scale and scope of this is currently unknown.

Table D-3 – Assessment of the effects of Transport Strategy Policy 3 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	**+/-**	**+/-**	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019.

SEA Objective	Policy	Alternatives	Description of Effect
			A car parking policy that balances the needs of residents and visitors may improve connectivity by encouraging those who would otherwise be prevented from travelling into town for concern of not being able to park. This will improve connectivity, particularly for those who are disabled or not located in close proximity to the public transport network. Connectivity will be further improved by promoting the use of active travel networks, which is likely to benefit both rural and urban areas. Policy 3 is likely to support future population growth by ensuring that the needs of existing and future businesses and residents within the borough, as well as visitors and commuters to the town, will be met. However, there are uncertainties associated with Policy 3 that are primarily around the unknown location and magnitude of new infrastructure and the updates and works to existing infrastructure to deliver the parking strategy and meet parking needs. As such, minor negative effects have been identified as a result of potential construction works to create new parking facilities. During construction there may be temporary severance or restricted access to local services, with congestion and delays likely. Overall, a mixed minor effect has been assessed against this SEA Objective. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on population and qualities by promoting active or sustainable travel which is likely to improve accessibility. Minor negative effects are also anticipated associated with construction.

SEA Objective	Policy	Alternatives	Description of Effect
			The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having potential minor positive effects on population & equalities, as above, though to a lesser extent. Minor negative effects have also been identified for this alternative, due to encouragement of private vehicle use and impacts of potential construction works, without balancing the needs of active and sustainable travel modes. People often use multiple modes of travel throughout the week, and some residents may only be able to access one mode of transport, such as private vehicles if they are not located nearby the public transport network. As such, the reasonable alternatives may unintentionally exclude certain groups or reinforce existing inequalities. However, the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Human Health	**+/-**	**+/-**	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation,

SEA Objective	Policy	Alternatives	Description of Effect
			GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. Minor positive effects have been identified as by providing adequate parking facilities, it may improve access to health services across the GY area, which will be beneficial to human health. The promotion of new sustainable transport measures and active travel routes across the Great Yarmouth area will encourage residents and visitors to take part in walking and cycling, improving physical activity rates and therefore physical and mental health. Improvements to the public transport and active transport network may also aid in preventing social isolation in rural and urban areas, although the exact location and scale of transport measures are currently unknown. However, minor negative effects have been identified as new parking infrastructure will likely require construction or updates and works to existing infrastructure, which may lead to temporary reductions in air quality due to dust and construction traffic as well as severance affecting facilities and services. Potential negative effects on air quality should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. Overall, a mixed uncertain effect has been assessed against this SEA Objective. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on human health through a reduction in

SEA Objective	Policy	Alternatives	Description of Effect
			emissions and improvements in air quality. Minor negative effects are also anticipated associated with construction. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having potential minor positive effects on human health through a reduction in emissions and improvements in air quality. Minor negative effects have been identified for this alternative, due to encouragement of private vehicle use and impacts of potential construction works, which could temporarily cause negative impacts on human health. However, the exact scale and scope of this would be uncertain. Overall, minor mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Economy & Employment	**++**	**+/-**	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. A car parking policy that balances the needs of residents and visitors may improve connectivity by encouraging those who would otherwise be prevented from travelling into town for concern of not being able to park. This will improve

SEA Objective	Policy	Alternatives	Description of Effect
			connectivity, particularly for those who are disabled or not located in close proximity to the public transport network and need to travel for work. This will subsequently support local economies by encouraging residents, visitors, and tourists to travel across the GY area, having a significant positive effect on employment and economy. However, negative effects are also possible as a result of potential construction works to create new parking facilities. During construction there may be temporary severance or restricted access to local services, with congestion and delays likely. Overall however, a significant positive effect has been assessed against this SEA Objective. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on economy and employment due to increased accessibility and connectivity to town centres, boosting local economies and encouraging residents, tourists, and visitors to travel across GY. Minor negative effects are also anticipated associated with construction. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having potential minor positive effects on economy and employment due to increased accessibility and connectivity to town centres, boosting local economies and encouraging residents, tourists, and visitors to travel across GY. However, minor negative effects have been identified as a result of potential construction and improvement works across the travel network

SEA Objective	Policy	Alternatives	Description of Effect
			which may lead to temporary severance or restricted access to services although the exact scale and scope of this is uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Community Safety	**+**	**+/-**	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. Implementation of Policy 3 aims to work in partnership to deliver a parking strategy that meets the needs of the town whilst supporting the promotion of public transport and active travel. To meet parking needs, it is possible that construction may take place. However, the scale and scope of this is currently unknown. Providing designated and well-maintained parking areas may contribute to community safety by reducing the number of vehicles parked on streets and subsequently improving visibility for both pedestrians and drivers, decreasing

SEA Objective	Policy	Alternatives	Description of Effect
			the likelihood of accidents. Additionally, the provision of adequate parking spaces may make town centres more accessible, increasing foot traffic, and making areas feel safer. Overall, a minor positive effect has been assessed against this SEA Objective. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on community safety as promotion of active travel and public transport may lead to less traffic on the roads, making roads safer for all road users. Minor negative effects are also anticipated associated with construction. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has been identified as having potential minor negative effects due to encouragement of private vehicle use and the potential construction works which could impact community safety. However, the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Biodiversity & Natural Capital	**++/--**	**+/--**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There

SEA Objective	Policy	Alternatives	Description of Effect
			are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. Creation of new parking facilities may require land take which may result in permanent loss of biodiversity and natural capital. However, the scale and nature of this is likely to be determined by individual scheme design and location and it is assumed that, in line with national and local planning policy, any proposals would seek to avoid and minimise biodiversity impacts and provide enhancements where possible. Biodiversity net gain will be required to be incorporated into any works at the project level, if projects are of sufficient scale, resulting in an equal and opposite positive effect on this SEA Objective. The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. The provision of adequate parking spaces may also encourage private vehicle usage, which may lead to an increase in noise and air pollution, which is likely to disturb local habitats and animal behaviour. Furthermore, there is potential for negative effects on biodiversity as a result of the promotion of the active travel network which may cause disturbance to local habitats as a result of noise, vibration and potential littering. However, a positive effect has also been identified due to the promotion of the active transport network which may lead to improvements in air quality and noise quality. This is particularly likely to benefit species that utilise hedgerows as their habitats. Overall, a mixed uncertain effect has been assessed against this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
			Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on biodiversity and natural capital by improving air quality, noise quality, and reducing congestion. Negative effects are also anticipated associated with construction. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has been identified as having significant negative effects due to encouragement of private vehicle use and potential construction works which would decrease air quality, noise quality, and likely lead to congestion. However, the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Landscape & Townscape	**+/-**	**+/-**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Creation of new parking facilities may require land take, resulting in permanent loss of land, which could include land within the Norfolk Coast National Landscape. The scale and nature of land take is likely to be determined by individual scheme design and location, and it is assumed that any proposals

SEA Objective	Policy	Alternatives	Description of Effect
			would seek to avoid and minimise impacts to the National Landscape. Due to this, minor negative effects are assessed against this SEA Objective. The provision of adequate parking spaces may also encourage private vehicle usage, which may lead to an increase in noise and air pollution, negatively affecting the setting of seascape, landscape and townscape, including the Norfolk Coast National Landscape. However, a minor positive effect has been identified due to the promotion of active travel, and opportunities to incorporate green infrastructure into designs, which may lead to improvements in air quality and noise quality as well as improving the quality and condition of areas and reducing traffic disturbance. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on landscape and townscape by promoting active or sustainable travel. Negative effects are also anticipated associated with construction. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having minor positive effects, however minor negative effects have also been identified due to encouraging private vehicle usage and the potential construction works, without balancing needs of active and sustainable travel modes, although the exact scale and scope of this would be uncertain.

SEA Objective	Policy	Alternatives	Description of Effect
			Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Historic Environment	**+/-**	**+/-**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Development of new parking infrastructure brings opportunity to incorporate high quality design in the public realm and enhance the setting of heritage assets through development of schemes that can reduce traffic and noise and enhance accessibility around heritage assets. This could result in a minor positive effect on this SEA Objective, though the location and detail of infrastructure is unknown. Construction associated with new parking infrastructure may have negative impacts on designated historic assets, through potential damage, restricted access, impacts on visual amenity and noise and air pollution. Though some of these impacts may be temporary, there is potential for permanent negative impacts on heritage assets. Excavation associated with construction may also impact non-designated and unknown heritage assets, which could be of high value. Areas such as the Norfolk Coast National Landscape are rich in archaeological and historical sites, including assets of internationally recognised value. Much of this may be yet undiscovered and could be damaged during construction of transport

SEA Objective	Policy	Alternatives	Description of Effect
			infrastructure. However, it is assumed that appropriate mitigation measures would be employed, in line with relevant policy, to prevent damage to heritage assets. As construction works may impact heritage assets, it has been concluded that there would be a minor negative effect against this SEA Objective for Policy 3. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on the historic environment through incorporation of high quality design and improving the setting of heritage assets. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having minor positive effects, however minor negative effects have also been identified due to encouraging private vehicle usage and the potential construction works, which could negatively impact heritage assets and the historic environment, although the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Water Environment	**+/-**	**+/-**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just

SEA Objective	Policy	Alternatives	Description of Effect
			3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. New parking infrastructure could result in additional concrete or other impermeable surface area within GY. This could lead to negative effects through increased flood risk, particularly as the area is susceptible to flooding with 1300 properties at risk of surface water flooding. Although the exact location and scale is unknown, should new infrastructure fall within a Flood Zone 3, it is likely that the effects could be significant. However, we would assume that appropriate mitigation in line with other policy, including national policy, would be incorporated into design of infrastructure, that would prevent increased surface runoff and subsequently increased surface water flood risk. Development of new parking infrastructure brings opportunity to incorporate green infrastructure, including SuDS, into design. This could result in a positive effect on this SEA Objective through improved drainage, reducing discharge from roads and surface water flooding. Although the location and detail of infrastructure is unknown, including design, this is scored as a minor positive effect. Construction works could lead to pollution of the water environment including aquifers, rivers and streams, through noise, dust, and surface runoff entering waterbodies leading to a reduction in quality. These effects are mitigable through best practice construction measures, therefore no negative effects are anticipated during construction.

SEA Objective	Policy	Alternatives	Description of Effect
			During operation of new parking infrastructure, localised increased emissions, noise pollution, dust and other associated pollution could result in a reduction in water quality depending on location. Due to this, it is concluded that there is a minor negative effect on this SEA Objective. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on the water environment through incorporation of green infrastructure and reduction in flood risk. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having minor positive effects, however significant negative effects have also been identified due to encouraging private vehicle usage and the potential construction works which could impact the water environment. However, the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Air Quality	**+/-**	**+/-**	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Promotion of active travel and public transport will lead to an improvement in air quality if effective. Implementation of Policy 3 could also lead to a reduction in

SEA Objective	Policy	Alternatives	Description of Effect
			congestion through increased use of sustainable transport and active travel, improving air quality through a reduction in air pollution due to more efficient driving. If this impacts congestion hot spots, then effects could be significant. As the exact location and scale of transport measures are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. However, the provision of adequate parking spaces may encourage private vehicle usage, which may lead to an increase in air pollution. Implementation of the Policy could also lead to temporary reductions in air quality during construction, caused by dust and particulate matter, as well as increased localised traffic resulting in increased emissions. This could lead to negative effects on air quality. Reductions in air quality, during construction or operation could lead to negative effects on this SEA Objective. Potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction however, a minor negative effect has been assessed against this SEA Objective due to the possibility of temporary negative impacts on air quality. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on air quality through a reduction in emissions and improvements in air quality.

SEA Objective	Policy	Alternatives	Description of Effect
			The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having minor positive effects, however significant negative effects have also been identified due to encouraging private vehicle usage and the potential construction works which could temporarily impact air quality. However, the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Climate Change & Greenhouse Gases	**+/-**	**+/--**	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. Construction of new parking infrastructure could provide opportunities to promote low carbon and energy efficient design. This would support the council's net zero ambitions. Greater use of sustainable design could result in lower greenhouse gas emissions and a positive effect on this SEA Objective. Depending on the materials used, there is also an opportunity to reduce embodied carbon during construction. Though details on materials are not known, this has been scored as a minor positive effect. If promotion of active travel and public transport is effective it could lead to reduced congestion and improving air quality through a reduction in greenhouse gas emissions due to more efficient driving and lower use of private vehicles. This is anticipated to have a minor positive effect against this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
			Construction of new parking infrastructure also provides opportunity to implement green infrastructure & SuDS. This will help to further increase climate change resilience through increasing resilience to flooding, as well as CO2 drawdown, though the extent of this is dependent on the extent and type of vegetation used. Construction of parking infrastructure could require land take, resulting in additional impermeable surfaces, reducing resilience to the impacts of climate change. However, we would assume that appropriate mitigation in line with other policy, including national policy, would be incorporated into design of infrastructure to minimise this. This would result in minor negative effects being assessed against this SEA Objective due to increased vehicle emissions during construction and embodied carbon of materials. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on climate change through a reduction in greenhouse gas emissions and improvements in design. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having minor positive effects, however significant negative effects have also been identified due to encouraging private vehicle usage and the potential construction works which could impact greenhouse gas emissions and resilience to climate change. Though the exact scale and scope of this would be uncertain.

SEA Objective	Policy	Alternatives	Description of Effect
			Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Noise	**+/-**	**+/-**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. If promotion of active travel and public transport is effective it could lead to reduced noise pollution through a reduction in use of private vehicles and congestion. This could reduce traffic noise in Noise Important Areas, resulting in significant positive effects. As the extent of noise reduction is not known, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. Construction associated with new parking infrastructure will lead to increased levels of noise through additional traffic and use of machinery. Though this will be temporary, it will lead to negative effects. Construction effects should be mitigable through implementation of best practice measures, such as a CTMP and CEMP. The provision of adequate parking spaces may however, also encourage private vehicle usage, which may lead to an increase in noise pollution. New parking infrastructure in previously quiet locations could lead to increased noise where noise levels were previously low. If increased noise levels are near to or within sensitive receptors, or lead to designation of new Noise Important Areas, effects may be significant. We assume that appropriate mitigation will be applied in line

SEA Objective	Policy	Alternatives	Description of Effect
			with relevant policy, including national policy regarding noise, however, a residual minor negative effect has been assessed against this SEA Objective. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on noise through a reduction in congestion and traffic related noise. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having minor positive effects, however significant negative effects have also been identified due to encouraging private vehicle usage and the potential construction works which could impact noise levels and Noise Important Areas and other sensitive receptors. However, the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.
Material Assets	**++/--**	**+/--/?**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages.

SEA Objective	Policy	Alternatives	Description of Effect
			There are a number of opportunities provided by implementation of Policy 3 that could result in positive effects against this SEA Objective. Construction of new parking infrastructure could encourage use of sustainable materials during construction and the reuse of existing infrastructure and brownfield land, improving resource efficiency and supporting a circular economy. Although the location of infrastructure and details of materials to be used are not known, this has been scored as a significant positive uncertain effect, due to the opportunity to utilise brownfield land. Creation of new parking facilities may require land take, resulting in permanent loss of land, which could include best and most versatile agricultural land. The scale and nature of land take is likely to be determined by individual scheme design and location, and it is assumed that any proposals would seek to avoid and minimise this, though as the location of works is unknown there is a residual significant negative effect. Two alternatives have been identified for Policy 3, the first of which is to focus only on public transport/active travel. This has been identified as having potential minor positive effects on material assets due to the opportunities provided to utilise sustainable materials and utilise existing infrastructure and brownfield land. The second alternative proposes a focus on private vehicles, though would still promote sustainable and active travel to a lesser extent. This has also been identified as having minor positive effects, however significant negative effects have also been identified due to the potential for loss of best and most versatile

SEA Objective	Policy	Alternatives	Description of Effect
			agricultural land in construction of parking facilities. However, the exact scale and scope of this would be uncertain. Overall, mixed effects have been identified, and the positive effects of the reasonable alternatives are likely to be lesser than that of the policy, due to a reduced focus on sustainable transport and active travel.

Overall, for the majority of SEA Objectives, mixed effects have been identified with a number of objectives identifying uncertainties associated with Policy 3. Uncertainties associated with Policy 3 are primarily around the unknown location and magnitude of new infrastructure and the updates and works to existing infrastructure to deliver the parking strategy and meet parking needs.

Significant positive effects have been identified for the Economy and Employment objective due to improved connectivity which will subsequently support local economies by encouraging residents, visitors, and tourists to travel across the GY area, having a significant positive effect on employment and economy.

Mixed significant positive effects and minor negative effects were identified for the SEA objective, Noise, due to promotion of active travel and public transport which may lead to reduced noise pollution through a reduction in use of private vehicles and congestion. However, construction associated with new parking infrastructure will lead to increased levels of noise through additional traffic and use of machinery, leading to negative effects.

Mixed significant positive and significant negative effects have been identified for the following SEA objectives: Biodiversity and Natural Capital, and Material Assets. These significant positive effects are largely due to the positive outcomes seen from improving transport infrastructure and connectivity, as well as the opportunities provided to incorporate sustainable design and promote use of active travel and public transport, reducing air and noise pollution. These significant negative effects are largely due to the impacts of construction of new infrastructure and associated pollution and land take, as well as encouragement of the use of private vehicles and potential increased pollution.

The proposed reasonable alternative was identified as having mixed effects for the majority of the SEA objectives. This is primarily related to the reasonable alternative focusing on individual matters instead of taking a holistic approach, which may unintentionally exclude certain groups or reinforce existing inequalities. Significant negative effects were identified for Biodiversity & Natural Capital, Climate Change & Greenhouse Gases, and Material Assets and one significant positive effect was identified for Biodiversity & Natural Capital due to the reasons outlined above.

Policy 4: Bus Services

Description: Norfolk County Council, will seek to support bus operators to deliver quicker, reliable, integrated, convenient and accessible journeys.

Alternatives:

- To do nothing and continue with a business as usual approach, with no involvement from NCC in bus services – This is considered a reasonable alternative and has been assessed under the SEA Framework.

Implementation of Policy 4 will support bus operators to deliver quicker, reliable, integrated, convenient and accessible journeys. This is not expected to require construction of new infrastructure, however there will likely be changes to bus routes and timetables.

Table D-4 – Assessment of the effects of Transport Strategy Policy 4 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	++	-	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of

SEA Objective	Policy	Alternatives	Description of Effect
			deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019. Improvements to bus services will improve connectivity for those who rely on public transport for work, and improve the bus network for future generations, supporting population growth. Alongside improving the scale and scope of public transport, connectivity may also improve across the area, including in rural areas, which will enhance access to local facilities and town centres, reducing overall inequality. It is also anticipated that developments to existing and new routes may improve conditions for people with mobility aids, or adapted bicycles, improving the accessibility of routes. Overall, a significant positive effect has been identified, however, the exact measures to deliver improvements to the bus network are currently unknown. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to positive effects, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a minor positive effect has been identified.
Human Health	**+**	**0**	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower

SEA Objective	Policy	Alternatives	Description of Effect
			for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. Supporting bus operators to deliver quicker, more reliable and accessible journeys may encourage the use of public transport, which could see a shift away from private vehicle usage. This may lead to improvements in air quality and noise quality, reduce congestion, and lead to positive benefits to human health. Although the exact extent of improvements are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area but is not likely to have any effects on human health.
Economy & Employment	++	+	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained,

SEA Objective	Policy	Alternatives	Description of Effect
			with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Increasing the frequency of bus services may contribute to improved public transport reliability, resulting in more reliable journey times, improving access to employment and training opportunities in both urban and rural areas. Additionally, delivering more integrated and accessible services may lead to more residents, visitors, and tourists visiting town centres, boosting local economies. Although the exact extent of improvements are currently unknown, it is anticipated that implementation of this policy would have a significant positive effect against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to positive effects on the economy and employment, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a minor positive effect has been identified.
Community Safety	+	+	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011

SEA Objective	Policy	Alternatives	Description of Effect
			and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. Increasing the frequency, reliability, and accessibility of bus services may result in more reliable journey times and improved feelings of safety. Additionally, measures such as improving bus stop facilities may contribute to feelings of safety, particularly during night time hours. Although the exact extent of improvements are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to positive effects on community safety, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a minor positive effect has been identified.
Biodiversity & Natural Capital	++	+	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the

SEA Objective	Policy	Alternatives	Description of Effect
			conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. Supporting bus operators to deliver quicker, more reliable and accessible journeys may encourage the use of public transport, which could see a shift away from private vehicle usage. This may lead to improvements in air quality and noise quality, reduce congestion, reducing traffic disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as their habitats. The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to contribute to positive effects. Overall, a significant positive effect has been assessed against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to positive effects on biodiversity and natural capital as it encourages the use of public transport and shift away from private vehicle usage, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a minor positive effect has been identified.
Landscape & Townscape	**+/-**	**+/-**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY.

SEA Objective	Policy	Alternatives	Description of Effect
			Improved bus services may increase ease of accessibility, and promote sustainable transport to, the countryside and Norfolk Coast National Landscape. This could lead to minor positive effects. If the amount of bus services in or around the Norfolk Coast National Landscape increase, or significant new routes affecting the National Landscape are introduced, there may be negative effects. If these potential bus services negatively impact the setting of the National Landscape through pollution or impacts on visual amenity, then negative effects are likely to be minor. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to both positive and negative effects on landscape and townscape for the reasons outlined above, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a mixed effect has been identified.
Historic Environment	**+/-**	**+/-**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register.

SEA Objective	Policy	Alternatives	Description of Effect
			Improved bus services may increase ease of accessibility, support tourism, and promote sustainable transport to, heritage assets. This would lead to minor positive effects through increased visitor expenditure. If the amount of bus services in and around designated or undesignated heritage assets, or significant new routes affecting these assets are introduced, there may be negative effects. If these potential bus services negatively impact the setting of heritage assets through pollution or impacts on visual amenity, then negative effects are likely to be minor. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to both positive and negative effects on the historic environment for the reasons outlined above, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a mixed effect has been identified.
Water Environment	+	+	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Improved bus services may lead to a reduction in the use of private ICE vehicles, and reduction in air pollution. Reduction in air pollution could have

SEA Objective	Policy	Alternatives	Description of Effect
			minor indirect positive effects on the water environment through an improvement in general quality. A reduction in emissions, could also work to reduce the impacts of climate change through a lower contribution to the greenhouse effect, this could work to lower the risk of climate change associated flooding. Overall, it is assessed that there would be a minor positive effect against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to positive effects on the water environment as it encourages the use of public transport and shift away from private vehicle usage, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a minor positive effect has been identified.
Air Quality	**+/-**	**+/-**	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Improvements to bus services could lead to a reduction in congestion, and subsequently emissions, as well as promote the use of sustainable transport across the GY area, which may lead to improvements in air quality. If congestion reduction and air quality improvements are realised in congestion hotspots, significant positive effects may be realised. However, as the location and magnitude of emissions reductions is not known, minor positive effects are

SEA Objective	Policy	Alternatives	Description of Effect
			assessed against this SEA Objective. Significant effects may be realised through appropriate implementation and monitoring. If additional buses are put in place, or new routes running near sensitive receptors, negative effects could be seen due to increased emissions, if low carbon vehicles are not utilised. Although details of emissions are not known, a minor negative effect has been assessed against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to both positive and negative effects on air quality for the reasons outlined above, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a mixed effect has been identified.
Climate Change & Greenhouse Gases	**+/-**	**+/-**	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. Supporting bus operators to improve services could provide an opportunity to reduce embodied carbon and support low carbon transport as part of the council's net zero ambitions, if new, low carbon, buses are utilised. However, increased journeys and new routes without utilising low carbon transport technologies would lead to negative effects on this SEA Objective through increased emissions, although this could be offset by the reduce number of

SEA Objective	Policy	Alternatives	Description of Effect
			private vehicles in use. Although details on vehicle type and movements are not known, minor mixed effects have been assessed against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to both positive and negative effects on climate change & greenhouse gases for the reasons outlined above, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a mixed effect has been identified.
Noise	**+/-**	**+/-**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. Improvements to bus services could lead to a reduction in congestion and promote the use of sustainable transport across the GY area, which could lead to a reduction in noise pollution. If congestion and subsequent noise reduction take place in noise important areas, positive effects may be realised. As the location and magnitude is not known, minor positive effects are assessed against this SEA Objective. If additional buses are put in place, or new routes running near sensitive receptors, negative effects could be seen due to noise in previously tranquil areas. As details of routes and noise are not known, a minor negative effect has been assessed against this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
			The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to both positive and negative effects on noise for the reasons outlined above, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale. As such, a mixed effect has been identified.
Material Assets	**+**	**0**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages. Additional bus services and new routes could lead to an increase in resource use, through fuel consumption. However, if low carbon vehicles are used there are opportunities to increase resource efficiency through utilisation of sustainable fuels and energy. As it is assumed that low carbon vehicles should be utilised, in line with local and national policy, a minor positive effect has been assessed against this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services

SEA Objective	Policy	Alternatives	Description of Effect
			and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. It is not known if low-carbon vehicles would be utilised, and therefore a neutral score for material assets has been identified.

Overall, for a number of SEA Objectives, mixed effects have been identified with a number of objectives identifying uncertainties associated with Policy 4. Uncertainties associated with Policy 4 are primarily around the unknown location and magnitude of the improvements to bus services and any infrastructure works required.

Significant positive effects have been identified for the following SEA objectives: population and equalities, economy and employment, biodiversity and natural capital, air quality, and noise. These significant positive effects are largely to the delivery of quicker, more reliable and accessible journeys that may encourage the use of public transport and lead to improvements in air quality and noise quality, reduce congestion, reducing traffic disturbance to biodiversity.

No significant negative effects against any of the SEA objectives. have been identified for this policy.

The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC in bus services. Government funding through the Bus Service Improvement Plan (BSIP) will likely lead to changes to bus services and associated infrastructure, with aims to provide quicker and more reliable bus journeys in the area. This is likely to lead to both minor positive and minor negative effects on the majority of SEA objectives, however, without the involvement of NCC, the positive effects are likely to be realised at a lesser scale.

Policy 5: Rail

Description: Norfolk County Council, working with partners, will seek to support rail operators to make improvements to Great Yarmouth Station and to the Wherry Lines services for the public and freight. This will include aiming to make them more reliable, accessible, integrated, quicker and we will seek improved frequency and earlier / later services.

Alternatives:

- To do nothing and continue with a business as usual approach, with no involvement from NCC in rail services – This is considered a reasonable alternative and has been assessed under the SEA Framework.

Implementation of Policy 5 will support rail operators to deliver quicker, reliable, integrated, convenient and accessible journeys. This is not expected to require construction of new infrastructure, however there will likely be changes to timetables.

Table D-5 – Assessment of the effects of Transport Strategy Policy 5 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	++	+	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019. Great Yarmouth Station was the fourth most used station across Norfolk out of 31 mainline stations, with 402,658 passengers in 2023/24.

SEA Objective	Policy	Alternatives	Description of Effect
			Alongside improving the railway network, connectivity is also likely to improve across the area which will enhance access to local facilities and town centres. It is also anticipated that improvements to rail services may improve conditions for people with mobility aids, or adapted bicycles, improving the accessibility of routes. Improvements to rail services will improve connectivity for those who rely on public transport for work, and improve the railway network for future generations, supporting population growth. Overall, a significant positive effect has been identified, however, the exact measures to deliver improvements to the bus network is currently unknown. The reasonable alternative approach of 'business as usual' is unlikely to achieve the same benefits without the involvement of NCC and engagement with rail operators. However, improvements are planned to Great Yarmouth rail station, including improvements to accessibility which will help to reduce inequality and improve diversity. Due to this, a minor positive effect has been assessed against this SEA Objective.
Human Health	+	-	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly

SEA Objective	Policy	Alternatives	Description of Effect
			lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. Supporting rail operators to deliver quicker, more reliable and accessible journeys may encourage the use of the railway network, which could see a shift away from private vehicle usage. This may lead to improvements in air quality and noise quality, reduce congestion, and lead to positive benefits to human health. However, the exact extent of improvements in air quality is uncertain. Overall, a minor positive effect has been assessed against this SEA Objective. The reasonable alternative approach of 'business as usual' is unlikely to achieve the same benefits without the involvement of NCC and engagement with rail operators. However, improvements to rail stations are planned which may lead to temporary negative effects on human health associated with construction. As such, a minor negative effect has been identified.
Economy & Employment	**++**	**-**	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Increasing the frequency of rail services may contribute to improved public transport reliability, resulting in more reliable journey times, improving access to

SEA Objective	Policy	Alternatives	Description of Effect
			employment and training opportunities in both urban and rural areas, alongside improving freight journeys. Additionally, delivering more integrated and accessible services may lead to more residents, visitors, and tourists visiting town centres, boosting local economies. As such, significant positive effects have been identified. However, the exact measures to deliver improvements to the rail network are currently unknown. The reasonable alternative approach of 'business as usual' is unlikely to achieve the same benefits without the involvement of NCC and engagement with rail operators. However, improvements are planned to rail stations which would require construction. This may cause temporary disruption and problems in access to employment centres. As such, minor negative effects have been identified.
Community Safety	+	0	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. Increasing the frequency, reliability, and accessibility of rail services may result in more reliable journey times and improved feelings of safety. Additionally,

SEA Objective	Policy	Alternatives	Description of Effect
			measures such as improving railway stations may contribute to feelings of safety, particularly during night time hours. As such, a minor positive effect has been assessed against this SEA Objective, however, the exact measures are currently unknown. The reasonable alternative approach of 'business as usual' is unlikely to achieve the same benefits without the involvement of NCC and engagement with rail operators. As such, a neutral effect has been identified.
Biodiversity & Natural Capital	**+/-**	**-**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. Minor positive effects have been identified as supporting rail operators to deliver quicker, more reliable and accessible journeys may encourage the use of public transport, which could see a shift away from private vehicle usage. This may lead to improvements in air quality and noise quality, reduce congestion, reducing traffic disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as their habitats. However, there is potential for negative effects on biodiversity due to improvements to the railway station that will likely require construction and cause disturbance to local habitats as a result of noise, vibration, and air

SEA Objective	Policy	Alternatives	Description of Effect
			pollution. However, it is assumed that any new infrastructure would be within the footprint of the existing station. The scale and nature of this is likely to be determined by individual scheme design and location and it is assumed that, in line with national and local planning policy, any proposals would seek to avoid and minimise biodiversity impacts and provide enhancements where possible. The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. Overall, a mixed effect has been assessed against this SEA Objective. The reasonable alternative approach of 'business as usual' is unlikely to achieve the same benefits without the involvement of NCC and engagement with rail operators. As such, a neutral effect has been identified. However, improvements are planned to rail stations which would require construction. This may have temporary impacts on biodiversity through disturbance from increased noise and vibration. As such, a minor negative effect has been identified.
Landscape & Townscape	**+/-**	**+/-**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Improvements to rail facilities will improve access to Great Yarmouth and its surrounding areas and promote the use of sustainable transport. This will have a minor positive effect on this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
			Due to the distance of the station to the Norfolk Coast National Landscape, it is not anticipated that there would be any effect on its setting through implementation of this Policy. However, there is expected to be temporary minor negative effects on townscape during construction, associated with improvements to the station. The proposed alternative is for NCC not to have any input into rail services. However improvements are planned for Great Yarmouth station, resulting in minor positive and negative effects against this SEA Objective as there would be temporary reductions in accessibility during construction, but subsequent improvements to accessibility.
Historic Environment	**+/-**	**+/-**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. The station is also within a short walking distance of the main town centre via Vauxhall Bridge, a Grade II listed shared pedestrian and cycle bridge. Improvements to rail facilities will improve access to these heritage assets and promote the use of sustainable transport. This will have a minor positive effect on this SEA Objective. Construction associated with the improvements, however, will likely result in negative effects on this SEA Objective through temporary restricted access and impacts on the setting of nearby assets. As there would be negative effects on

SEA Objective	Policy	Alternatives	Description of Effect
			the Great Yarmouth railway station, itself a Listed Building, effects may be significant. However, mitigation measures are expected to be implemented to avoid significant effects and it is therefore concluded that there would be minor negative uncertain effects against this SEA Objective. The proposed alternative is for NCC not to have any input into rail services. However improvements are planned for Great Yarmouth station, resulting in minor positive and negative effects against this SEA Objective as there would be temporary reductions in accessibility during construction, but subsequent improvements to accessibility.
Water Environment	**+/-**	**+/-**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Improvements to the station and line provide opportunity to incorporate aspects of sustainable design, such as green infrastructure and SuDS that could work to improve drainage, and reduce the risk of flooding. This could result in a positive effect on this SEA Objective through improved drainage, reducing discharge from roads and surface water flooding. Although the location and detail of infrastructure is unknown, including design, this is scored as a minor positive effect. Great Yarmouth Railway Station is situated immediately adjacent to the River Yare and River Bure. Construction works could lead to pollution of the water

SEA Objective	Policy	Alternatives	Description of Effect
			environment, through noise, dust, and surface runoff entering these waterbodies leading to a reduction in quality. These effects are anticipated to be mitigable through best practice construction measures, though there is concluded to be a residual minor effect due to the remaining potential for pollution. The proposed alternative is for NCC not to have any input into rail services. However improvements are planned for Great Yarmouth station, resulting in potential minor negative effects on the water environment during construction, however there would also be opportunity to incorporate sustainable design and therefore minor positive effects.
Air Quality	-	-	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Potential construction works could lead to temporary reductions in air quality, caused by dust and particulate matter, as well as increased localised traffic resulting in increased emissions. Potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. Taking a precautionary approach, a minor negative effect has been scored against this SEA Objective. The proposed alternative is for NCC not to have any input into rail services. However, improvements would still be made to Great Yarmouth station, therefore there would still be construction and a subsequent minor negative effect on air quality.

SEA Objective	Policy	Alternatives	Description of Effect
Climate Change & Greenhouse Gases	+	+	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. Improvements to the rail station and line provide opportunities to support low carbon and energy efficient design, reduce levels of embodied carbon, and to implement Green Infrastructure, to ameliorate the warming effects of climate change and urban heat island effect. Due to the assumed scale of works associated with this Policy, and therefore the opportunities for accompanying benefits, a minor positive effect has been scored against this SEA Objective, although details of materials and design to be used are not known. As works will likely take place in the footprint of existing transport infrastructure, it is not anticipated that there would be any land take or additional impermeable surface, reducing resilience to the impacts of climate change. The proposed alternative is for NCC not to have any input into rail services. However, improvements would still be made to Great Yarmouth station, therefore there would still be construction and a subsequent minor positive effect on climate change due to opportunities to reduce embodied carbon and to implement green infrastructure.
Noise	-	-	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143.

SEA Objective	Policy	Alternatives	Description of Effect
			Construction of improvements to the rail station and line will lead to increased levels of noise through additional traffic and use of machinery. Though this will be temporary, it will lead to negative effects. Construction effects should be mitigable through implementation of best practice measures, such as a CTMP and CEMP. Operation of additional journeys would also lead to increased noise. If increased noise levels are near to or within sensitive receptors, or lead to designation of new Noise Important Areas, effects may be significant, though this is unlikely as increased noise will be in an area already subject to noise associated with transport infrastructure. Therefore, a minor negative effect has been assessed against this SEA Objective. The proposed alternative is for NCC not to have any input into rail services. However, improvements would still be made to Great Yarmouth station, therefore there would still be construction and a subsequent minor negative effect on noise due to temporary increases in noise pollution during construction.
Material Assets	+	+	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages.

SEA Objective	Policy	Alternatives	Description of Effect
			Improvements to the rail station and line provide an opportunity to incorporate resource efficiency and waste management, to minimise waste and maximise use of sustainable materials, and to promote sustainable transport. This will likely lead to positive effects against this SEA Objective, though details of materials to be used and detailed designs are not known. Overall, a minor positive effect is scored against this objective. The proposed alternative is for NCC not to have any input into rail services. However, improvements would still be made to Great Yarmouth station, therefore there would still be construction and a subsequent minor positive effect on material assets due to opportunities to utilise sustainable materials.

Overall, for a number of SEA Objectives, mixed effects have been identified with a number of objectives identifying uncertainties associated with Policy 5. Uncertainties associated with Policy 5 are primarily around the unknown location and magnitude of the improvements to rail services and any infrastructure works required.

Significant positive effects have been identified for the following SEA objectives: population and equalities and economy and employment. These significant positive effects are largely to the delivery of quicker, more reliable and accessible journeys that may encourage the use of public transport and improve connectivity across the GYBC area.

No significant negative effects have been identified against any of the SEA objectives for this policy.

Policy 6: Active Travel

Description: Norfolk County Council, will seek to support and promote the use and benefits of active and sustainable modes of travel by walking, wheeling and cycling to reduce dependency on cars.

Alternatives:

- To do nothing and continue with a business as usual approach for active travel – This is not considered a reasonable alternative and has not been assessed under the SEA Framework.

Implementation of Policy 6 would involve the promotion of active travel and sustainable modes of travel across the GY area and give priority to walking, cycling and public transport, leading to more sustainable travel. This is not expected to require construction of new infrastructure, however there may be changes to active travel routes to increase uptake and reduce dependency on cars.

Table D-6 – Assessment of the effects of Transport Strategy Policy 6 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	**+**	**N/A**	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019. The development and promotion of active travel routes and maintenance of existing routes is likely to improve connectivity across the GY area, which will enhance access to local facilities and town centres. It is also likely to contribute

SEA Objective	Policy	Alternatives	Description of Effect
			to improving the active travel network for future generations, supporting population growth. It is anticipated that improvements to existing and new routes may lead to better conditions for people with mobility aids, or adapted bicycles, improving the accessibility of routes, and reducing inequalities. Improvements to the active transport network may also aid in preventing social isolation in rural and urban areas. Although the exact location and scale of transport measures are currently unknown, it is anticipated that implementation of this policy would have a minor positive effect against this SEA Objective. No reasonable alternative has been identified for this policy.
Human Health	**++**	**N/A**	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. The promotion of new sustainable transport measures and active travel routes across the Great Yarmouth area will encourage residents and visitors to take part in walking and cycling, improving physical activity rates and therefore

SEA Objective	Policy	Alternatives	Description of Effect
			physical and mental health. Improvements to the public transport and active transport network may also aid in preventing social isolation in rural and urban areas, although the exact location and scale of transport measures are currently unknown. Additionally, improving noise and air quality as a result of encouraging a modal shift away from private vehicle usage will also improve physical health, particularly for children, the elderly, pregnant women and those with respiratory conditions exacerbated by poor air quality. A significant positive effect has been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Economy & Employment	**+**	**N/A**	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Developing new active travel routes and improving the scale and scope of public transport will contribute to improving access across the area, including within rural areas. This will provide improved accessibility to services, town centres, and employment sites. Additionally, developing new routes and new transport infrastructure may contribute to increasing employment and training opportunities within the area. However, the exact scale and location of the

SEA Objective	Policy	Alternatives	Description of Effect
			proposed transport measures are currently unknown. A minor positive effect has been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Community Safety	**++**	**N/A**	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. The promotion of active travel and sustainable transport modes will likely contribute to improved feelings of safety along routes. Measures such as improving pavements and footways, making it easier for those on foot, in wheelchairs or pushing prams, encouraging more residents, visitors, and tourists to use the active transport network. Measures such as improvements to road crossings would reduce accident/hazard rates for pedestrians crossing the road, and improved signage and way marking would be beneficial for cyclists and pedestrians. However, at this stage, the exact measures are currently not known.

SEA Objective	Policy	Alternatives	Description of Effect
			Additionally, a reduction in the dependency on cars will likely reduce road collisions incidents, creating a safer environment for pedestrians, cyclists, and those driving on the roads. Overall, a significant positive effect has been identified. No reasonable alternative has been identified for this policy.
Biodiversity & Natural Capital	**+/-**	**N/A**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. There is potential for positive effects to arise as a result of encouraging a modal shift away from private car use, improving air quality across the County, and reducing traffic disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as their habitats. However, there is potential for negative effects on biodiversity as a result of the promotion of the active travel network which may cause disturbance to local habitats as a result of noise, vibration and potential littering. Additionally, although it is not expected to require construction of major new infrastructure, there may be works associated with providing new or improving existing active travel routes to increase uptake and reduce dependency on cars. This may

SEA Objective	Policy	Alternatives	Description of Effect
			result in some disturbance to local habitats during construction as a result of noise, vibration and reduced air quality. The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. Therefore, a minor positive and minor negative effect have been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Landscape & Townscape	**+**	**N/A**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Implementation of Policy 6 would involve the promotion of active travel and sustainable modes of travel across the GY area and give priority to walking, cycling and public transport, leading to more sustainable travel. This is not expected to require construction of major new infrastructure, however there may be works associated with providing new or improving existing active travel routes to increase uptake and reduce dependency on cars. Promotion of sustainable transport and active travel, and a reduction in use of private cars, may increase the number of users accessing the countryside and Norfolk Coast National Landscape using these methods. This would lead to an increase in sustainable tourism and a reduction in pollution in these areas, therefore having a positive effect on the setting of landscape and townscapes.

SEA Objective	Policy	Alternatives	Description of Effect
			Although the degree to which active travel and sustainable transport use will increase, and use of cars will decrease, is not known, minor positive effects have been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Historic Environment	**+**	**N/A**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Promotion of sustainable transport and active travel, and a reduction in use of private cars, may increase the number of users accessing heritage assets and the historic environment using these methods. This would lead to an increase in sustainable tourism and a reduction in pollution around heritage assets, therefore having a positive effect on their setting. Although the degree to which active travel and sustainable transport use will increase, and use of cars will decrease, is not known, minor positive effects have been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Water Environment	**+**	**N/A**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets.

SEA Objective	Policy	Alternatives	Description of Effect
			A transition away from private car use and increase in active travel and sustainable transport methods will result to a reduction in transport associated pollution, including air and noise pollution. Reduction in air pollution could have minor indirect positive effects on the water environment through an improvement in general quality. A reduction in emissions, could also work to reduce the impacts of climate change through a lower contribution to the greenhouse effect, this could work to lower the risk of climate change associated flooding. Overall, it is assessed that there would be a minor positive effect against this SEA Objective. No reasonable alternative has been identified for this policy.
Air Quality	**+**	**N/A**	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. A transition away from private car use and increase in active travel and sustainable transport methods will result in a reduction in congestion and transport emissions, having a positive effect on this SEA Objective due to a reduction in air pollution. As the degree to which active travel and sustainable transport use will increase and reliance on cars will decrease, and whether this will occur in congestion hot spots is not known, minor positive effects have been assessed against this SEA Objective. Significant effects may be realised through appropriate implementation and monitoring. No reasonable alternative has been identified for this policy.

SEA Objective	Policy	Alternatives	Description of Effect
Climate Change & Greenhouse Gases	**++**	**N/A**	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. A transition away from private car use and increase in active travel and sustainable transport methods will result in a reduction in transport derived greenhouse gas emissions, reducing the sectors contribution to climate change and contributing to the council's net zero ambition. Although the degree to which active travel and sustainable transport use will increase, and reliance on cars will decrease, is not known, significant positive effects have been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Noise	**+**	**N/A**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. A transition away from private car use and increase in active travel and sustainable transport methods could result in a reduction in noise from transport, having a positive effect on this SEA Objective due to a reduction in vehicle movements and congestion. As the degree to which active travel and sustainable transport use will increase and reliance on cars will decrease, and whether this will occur near sensitive noise receptors is not known, minor positive effects have been assessed against this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
			No reasonable alternative has been identified for this policy.
Material Assets	**+**	**N/A**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages. A transition away from private car use and increase in active travel and sustainable transport methods could lead to a reduction in resource use, through reduced fuel consumption by private cars and increased use of sustainable fuels. Although details on fuel use and energy consumption are not known, a minor positive effect has been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.

Overall, for the majority of SEA Objectives, positive effects have been identified with a number of objectives identifying uncertainties associated with Policy 6. Uncertainties associated with Policy 6 are primarily around the unknown location and scale of transport measures to be implemented.

Significant positive effects have been identified for the following SEA objectives: Human Health, Community Safety, Air Quality, Climate Change & Greenhouse Gases, and Noise. These significant positive effects are largely to the promotion of active travel and sustainable modes of travel and encouraging a transition away from private vehicle usage across the GYBC area, which is likely to improve physical health, feelings of safety, and noise and air quality.

No significant negative effects have been identified, though a minor negative has been identified for the Biodiversity and Natural Capital SEA Objective, due to the potential for increased disturbance to wildlife around active travel routes.

No reasonable alternative has been identified for this policy.

Policy 7: Climate Change Resilience

Description: Norfolk County Council, working with partners, will seek to contribute to making the transport network zero emission by 2050 and resilient to the impacts of severe weather and climate change.

Alternatives:

- To take a business as usual approach with no policy specifically for Great Yarmouth, responding only when damage has occurred due to climate change and severe weather events – This is considered a reasonable alternative and has been assessed under the SEA Framework.

It is assumed that works associated with Policy 7 to make the transport network net zero and improve the resilience of the transport network to the effects of severe weather and climate change will require some construction works, though these are likely to be within the footprint of existing infrastructure and not require significant land take.

Table D-7 – Assessment of the effects of Transport Strategy Policy 7 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	+	+	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019. To encourage a shift to more sustainable modes of transport and to increase the uptake of more efficient conventional vehicles and EVs, the necessary

SEA Objective	Policy	Alternatives	Description of Effect
			infrastructure must be available. For EVs, EV charging infrastructure will be required to be more accessible and readily available. Implementing EV charging may contribute to improving transport infrastructure for future generations and support population growth. This is also likely to encourage residents who do not have access to private electric charging infrastructure to transition to EVs. Improving access to the necessary infrastructure is likely to benefit those groups who may currently be isolated and unable to access these services, including the elderly, disabled and socio-economically deprived. Therefore, a minor positive effect has been identified for this SEA Objective. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This may have positive effects on population and equalities by improving connectivity and accessibility across GY, although the benefits are likely to be realised at a much lesser scale than with the policy. As such, a minor positive effect has been identified.
Human Health	+	+	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the

SEA Objective	Policy	Alternatives	Description of Effect
			most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. By transitioning to a zero-emissions transport network, the GY area will subsequently have better air quality and better conditions for active travel. There are anticipated to be positive effects upon human health as a result of improved air quality. This will improve physical health, particularly for children, the elderly, pregnant women and those with respiratory conditions exacerbated by poor air quality. These benefits are likely to be realised at a greater magnitude in urban areas, where there is typically denser traffic and poorer air quality. As such, a minor positive effect has been identified. However, the exact placement of these interventions is uncertain. Minor negative effects have been identified as a result of works to update existing infrastructure that may be required to increase climate change resilience, as well as updates and works to contribute to making the transport network zero-emissions, which may lead to temporary reductions in air quality due to dust and construction traffic. Potential negative effects on air quality should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction.

SEA Objective	Policy	Alternatives	Description of Effect
			The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, encouraging more sustainable and active travel, and creating Local Cycling and Walking Infrastructure Plans that cover the whole county. This is likely to have positive effects on human health. As such, a minor positive effect has been identified, although the benefits are likely to be realised at a much lesser scale than with the policy.
Economy & Employment	**+/-**	**0**	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. A minor positive effect has been identified due to the promotion of a net-zero public transport network may encourage residents, visitors, and tourists to take public transport, which may boost the number of visitors to town centres and support the local economy and tourism economy. It may also increase access to jobs and training opportunities. Additionally, working with the tourism and

SEA Objective	Policy	Alternatives	Description of Effect
			leisure industry to promote sustainable travel may promote these services to tourists, improving the economy of these sectors. This has been assessed as having a minor positive effect against this SEA Objective. However, a minor negative effect has been identified as during construction, there may be temporary severance or restricted access along the major roads such as the A149, A47, A1064, which may restrict to access to local services, with congestion and delays likely, impacting local economies. Overall, mixed effects have been identified for this SEA Objective. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have limited effects on economy and employment within GY. As such, a neutral effect has been identified.
Community Safety	**+**	**0**	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in

SEA Objective	Policy	Alternatives	Description of Effect
			the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. Increasing resilience to severe weather and climate change may improve feelings of safety in the area by reducing vulnerability to extreme weather events, particularly to those most at risk. This has been assessed as having a minor positive effect against this SEA Objective. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have limited effects on community safety within GY. As such, a neutral effect has been identified.
Biodiversity & Natural Capital	**+/-**	**0**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the

SEA Objective	Policy	Alternatives	Description of Effect
			conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. Policy 7 is unlikely to damage locally and nationally designated sites through infrastructure provision, traffic, or maintenance as it is anticipated that local planning policy will be followed. However, temporary negative effects on biodiversity may be realised during construction of new infrastructure, resulting in a minor negative effect against this SEA Objective. The UK Government has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. Minor positive effects have been identified as Policy 7 may lead to improvements in air quality and noise quality, reducing traffic disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as their habitats. Overall, mixed effects have been identified for this SEA Objective. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions and therefore no effect against this SEA Objective as there would be no construction, or subsequent improvement to resilience or reduction in emissions. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to

SEA Objective	Policy	Alternatives	Description of Effect
			severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have limited effects on biodiversity and natural capital within GY. As such, a neutral effect has been identified.
Landscape & Townscape	**+/-**	**0**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Contributing to making the transport network net zero and increasing resilience will provide opportunity to incorporate green infrastructure into design, promote sustainable transport, and to protect and enhance the character of the Norfolk National Landscape. This will have positive effects on landscape and townscapes through protecting and enhancing their settings. Although the exact location of works is not known this has been assessed as a minor positive effect. It is anticipated that there would be temporary negative effects during construction due to restricted access to designated landscapes depending on location, potential for pollution through construction related noise, emissions and dust etc, as well as impacts on visual amenity. These impacts are expected to be minor in magnitude and mitigable through use of best practice construction measures such as a CEMP and CTMP. Overall, a residual minor negative effect

SEA Objective	Policy	Alternatives	Description of Effect
			has been identified due to the potential for lasting impacts to landscape and townscape. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have limited effects on landscape and townscape within GY. As such, a neutral effect has been identified.
Historic Environment	**+/-**	**0**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Contributing to making the transport network net zero and increasing resilience will provide opportunity to incorporate green infrastructure into design and could improve the setting of heritage assets and indirectly increase their resilience to severe weather and climate change, if in the vicinity of heritage assets. This will have a minor positive effect on this SEA Objective, though the exact location of works is not known.

SEA Objective	Policy	Alternatives	Description of Effect
			Construction associated with implementation of Policy 7 may have negative impacts on designated historic assets, through potential damage, restricted access, impacts on visual amenity and noise and air pollution. These impacts are anticipated to be temporary and mitigable through best use construction practice. However, a residual minor negative effect has been identified due to the potential for lasting damage to the historic environment. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have limited effects on the historic environment within GY. As such, a neutral effect has been identified.
Water Environment	**+/-**	**0**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Works to increase resilience and make the transport network net zero provide opportunity to incorporate aspects of sustainable design, such as green

SEA Objective	Policy	Alternatives	Description of Effect
			infrastructure and SuDS that could work to improve drainage, and reduce the risk of flooding. Although the location and detail on design of infrastructure is unknown, a minor positive effect on this SEA Objective has been assessed due to improved drainage, reducing discharge from roads and surface water flooding. Implementation of interventions such as SuDS will require land take and construction-related effects. Where construction works take place near bodies of water, this could lead to pollution of the water environment, through noise, dust, and surface runoff entering watercourses and leading to a reduction in quality. These effects are mitigable through best practice construction measures, but there is concluded to be a residual minor uncertain effect due to the remaining potential for pollution. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have limited effects on the water environment within GY as there would be no construction, or subsequent incorporation of new green infrastructure or SuDS. As such, a neutral effect has been identified.

SEA Objective	Policy	Alternatives	Description of Effect
Air Quality	**+/-**	**+/-**	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Working towards a net zero transport network will likely include a reduction in the number of cars on the road, as part of a suite of interventions. This would lead to a reduction in particulate emissions and a subsequent improvement in air quality. Although the scale and exact location of works are not known, a minor positive effect has been assessed against this SEA Objective due to the potential to improve air quality. Construction works could lead to temporary reductions in air quality, caused by dust and particulate matter, as well as increased localised traffic resulting in increased emissions. Reductions in air quality during construction could lead to negative effects on this SEA Objective. Potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. Therefore, overall, minor negative effects have been assessed against this SEA Objective. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions and therefore no effect against this SEA Objective as there would be no construction, or subsequent reduction in emissions.

SEA Objective	Policy	Alternatives	Description of Effect
			The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have minor positive effects on air quality within GY, however, the positive effects are likely to be realised at a lesser scale than with the policy. Minor negative effects have also been identified due to potential construction works and temporary reductions in air quality. Therefore, a mixed score has been identified.
Climate Change & Greenhouse Gases	++	+	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. Implementation of Policy 7 will inherently have a positive effect against this SEA Objective, as it aims to significantly reduce greenhouse gas emissions, and improve resilience to the effects of climate change. Working towards a net zero transport network will likely include a significant reduction in the number of cars on the road, and increase in low carbon transport use, as part of a suite of interventions. This will reduce GHGs from traffic and other transport modes, helping the council to meet its net zero

SEA Objective	Policy	Alternatives	Description of Effect
			targets. Though the exact scale and location of works are not known, a significant positive effect has been assessed against this SEA Objective. Increasing the resilience of the transport network to climate change will also likely incorporate elements of green infrastructure, supporting low carbon and energy efficient design and reducing embodied carbon, that could work to increase the rate of CO2 drawdown and ameliorate the warming effects of climate change and urban heat island effect. The extent of CO2 absorption is dependent on the extent and type of vegetation used. This is also anticipated to have a significant positive effect on this SEA Objective. As works will likely take place in the footprint of existing transport infrastructure, it is not anticipated that there would be any land take or additional impermeable surface, reducing resilience to the impacts of climate change. However, some negative effects are anticipated during construction, associated with vehicle emissions and embodied carbon of construction materials. These impacts are anticipated to be temporary and mitigable through the use of best practice construction measures, such as a CEMP and CTMP, and use of low carbon design and materials. Details of design and materials are not known however. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and

SEA Objective	Policy	Alternatives	Description of Effect
			active travel. Another focus area is adapting to climate change, working with the Tyndall Centre to better understand risks of climate change impacts and potential adaptation responses. Alongside securing appropriate investment on adaptation across the county. This is likely to have minor positive effects on climate change and greenhouse gases within GY, however, the positive effects are likely to be realised at a lesser scale than with the policy.
Noise	**+/-**	**+/-**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. Implementation of Policy 7 may lead to a positive effect on noise levels due to a reduction in congestion from increased use of sustainable transport and EVs as a consequence of a move to a net zero transport network. Although the scale of reduction is not known, this has been assessed as having a minor positive effect against this SEA Objective. Construction of net zero and resilient infrastructure will lead to increased levels of noise through additional traffic and use of machinery. Though this will be temporary, it will lead to negative effects and could take place near sensitive receptors. Construction effects should be mitigable through implementation of best practice measures, such as a CTMP and CEMP, therefore a minor negative uncertain effect has been assessed against this SEA Objective due to the potential for temporary increased noise pollution.. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and

SEA Objective	Policy	Alternatives	Description of Effect
			severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions and therefore no effect against this SEA Objective as there would be no construction, or subsequent reduction in noise from traffic. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have minor positive effects on noise quality within GY, however, the positive effects are likely to be realised at a lesser scale than with the policy. Minor negative effects have also been identified due to potential construction works and temporary reductions increase in noise pollution. Therefore, a mixed score has been identified.
Material Assets	**++**	**0**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages.

SEA Objective	Policy	Alternatives	Description of Effect
			Improvements to the transport network and climate change resilience provide an opportunity to enhance land quality, ensure that critical infrastructure is resilient to the effects of climate change, incorporate resource efficiency and waste management, to minimise waste and maximise use of sustainable materials, and to promote sustainable transport. This will likely lead to positive effects against this SEA Objective. Although details of materials to be used and detailed designs are unavailable, due to the scale and nature of the option a significant positive effect is scored against this objective. The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions. However, Norfolk County Council's 2023 Climate Strategy aims to improve sustainable travel across Norfolk by supporting the switch to EVs, improving the county's public transport, and encouraging more sustainable and active travel. This is likely to have limited effects on material assets within GY. Therefore, a neutral score has been identified.

Overall, for the majority of SEA Objectives, mixed effects have been identified with a substantial number of objectives identifying uncertainties associated with Policy 7. Uncertainties associated with Policy 7 are primarily around the unknown location and magnitude of the improvement to make the transport network net zero by 2050 and improve resilience to severe weather and climate change.

Significant positive effects have been identified for the following SEA objectives: Climate Change & Greenhouse Gases, and Material Assets. These significant positive effects are largely to the shift to more sustainable modes of transport and

promotion of the uptake of EVs, improving the transport infrastructure for future generations and improving air quality and limiting greenhouse gas emissions.

No significant negative effects have been identified for Policy 7, however a range of minor negative effects have been identified, due to potential construction-related impacts on the Norfolk Coast National Landscape, heritage assets, and air quality.

The reasonable alternative identified for this option is to enact no policy, and to take a reactionary approach in response to the effects of climate change and severe weather. This would result in no proactive work to improve resilience to severe weather and climate change, or to achieve net zero greenhouse gas emissions and therefore no subsequent effects across the majority of SEA objectives. The remaining SEA Objectives were identified as having either minor positive effects or mixed minor positive and minor negative effects due to Norfolk County Council's 2023 Climate Strategy which aims to improve sustainable travel across Norfolk. This may improve connectivity and accessibility across GY, although the benefits are likely to be realised at a lesser scale than with the policy.

Policy 8: Improved Air Quality

Description: Norfolk County Council, working with partners, will seek to reduce emissions from vehicles to improve air quality.

Alternatives:

- To do nothing and continue with a business as usual approach whereby emissions are likely to be reduced by technological advances and the market – This is considered a reasonable alternative and has been assessed under the SEA Framework.

Implementation of Policy 8 aims to reduce emissions from vehicles and improve air quality. This is likely to involve a shift to more sustainable modes of transport and an increase in the uptake of more efficient conventional vehicles and EVs is necessary. To support EVs, more accessible and readily available charging infrastructure will be required. It is not anticipated that construction of new infrastructure will take place.

Table D-8 – Assessment of the effects of Transport Strategy Policy 8 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	++	+	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019. Implementing EV charging may contribute to improving infrastructure for future generations. This is also likely to encourage residents who do not have access to private electric charging infrastructure to transition to EVs. Additionally, providing access and support for local communities is likely to benefit those

SEA Objective	Policy	Alternatives	Description of Effect
			groups who may currently be isolated and unable to access these services, including the elderly, disabled and socio-economically deprived. A cleaner, more sustainable transport system supports long-term population growth by making places healthier, more liveable, and attractive for investment. It is also likely to increase resilience of the transport network for future generations, and increase mobility and accessibility for both the rural and urban population, therefore reducing inequality. However, the exact measures to be implemented are uncertain. Overall, it is concluded that there will be a significant positive effect on this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC, instead leaving emissions to be reduced by technological advances or left to the market. This would likely result in some improvements to air quality within the GY area, however, the changes would likely be realised at a slower pace than with implementation of Policy 8. As such, minor positive effects on population and equalities have been identified.
Human Health	++	+	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation,

SEA Objective	Policy	Alternatives	Description of Effect
			GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. There are anticipated to be positive effects upon human health as a result of improved air quality. This will improve physical health, particularly for children, the elderly, pregnant women and those with respiratory conditions exacerbated by poor air quality. Additionally, the policy promotes active travel which may contribute to improving physical activity rates and therefore health. These benefits are likely to be realised at a greater magnitude in urban areas, where there is typically denser traffic and poorer air quality. However, the exact measures to be implemented are uncertain. Overall, it is concluded that there will be a significant positive effect on this SEA Objective. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC, instead leaving emissions to be reduced by technological advances or left to the market. This would likely result in some improvements to air quality within the GY area, however, the changes would likely be realised at a slower pace than with implementation of Policy 8. As such, minor positive effects on human health have been identified.
Economy & Employment	**+**	**0**	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food

SEA Objective	Policy	Alternatives	Description of Effect
			Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Investment in low-emission vehicles and public transport may increase mobility and improve access across the area, including within rural areas. This will provide improved accessibility to services, town centres, and employment sites, encouraging more residents and visitors to travel to town centres and employment sites, boosting local economies, resulting in a minor positive effect. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC, instead leaving emissions to be reduced by technological advances or left to the market. This would likely result in limited changes to air quality within the GY area, with no subsequent effects on economy and employment.
Community Safety	**0**	**0**	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK.

SEA Objective	Policy	Alternatives	Description of Effect
			It is not anticipated that 'Policy 8 Improving Air Quality' will have any positive or negative effects on community safety, and therefore a neutral score has been identified. The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC, instead leaving emissions to be reduced by technological advances or left to the market. This would likely result in limited changes to air quality within the GY area, with no subsequent effects on community safety.
Biodiversity & Natural Capital	+	+	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. There is potential for positive effects to arise as a result of encouraging a modal shift away from private car use, encouraging public transport uptake, which is likely to improve air quality across the GY area, and reduce traffic disturbance to biodiversity. This is particularly likely to benefit species that utilise hedgerows as their habitats. However, the exact measures to be implemented are uncertain. Overall, it is concluded that there will be a minor positive effect on this SEA Objective. The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to contribute to positive effects.

SEA Objective	Policy	Alternatives	Description of Effect
			The proposed reasonable alternative to this policy would be business as usual, with no involvement of NCC, instead leaving emissions to be reduced by technological advances or left to the market. This would likely result in some improvements to air quality within the GY area, however, the changes would likely be realised at a slower pace than with implementation of Policy 8. As such, minor positive effects on biodiversity and natural capital have been identified.
Landscape & Townscape	+	+	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Implementation of Policy 8 aims to reduce emissions from vehicles and improve air quality. This is likely to involve a shift to more sustainable modes of transport and an increase in the uptake of more efficient conventional vehicles and EVs is necessary. To support EVs, more accessible and readily available charging infrastructure will be required. It is not anticipated that construction of new infrastructure will take place. Improved sustainable access and reduction in pollution is anticipated to have a minor positive effect on this SEA Objective. It is assumed that there is no construction associated with this policy, therefore no negative impacts on landscape and townscape are anticipated. The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is also expected to have a minor positive effect on this SEA Objective through a reduction in pollution and

SEA Objective	Policy	Alternatives	Description of Effect
			the benefits this will have on landscape, townscape and the National Landscape. However, it is expected that any positive effects would be realised more slowly than would be seen with the implementation of Policy 8.
Historic Environment	+	+	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Implementation of Policy 8 aims to reduce emissions from vehicles and improve air quality. This is likely to involve a shift to more sustainable modes of transport and an increase in the uptake of more efficient conventional vehicles and EVs is necessary. To support EVs, more accessible and readily available charging infrastructure will be required. It is not anticipated that construction of new infrastructure will take place. Implementation of Policy 8 is likely to result in positive effects against this SEA Objective. Reduction in emissions from vehicles to improve air quality will result in improvement to the setting, quality and condition of designated and undesignated heritage assets, through a reduction in air pollution. Although the extent of reduction in emissions is not known, it is concluded that there will be a minor positive effect on this SEA Objective. It is assumed that there is no construction associated with this policy, therefore no negative impacts on landscape and townscape are anticipated.

SEA Objective	Policy	Alternatives	Description of Effect
			The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is also expected to have a minor positive effect on this SEA Objective through a reduction in pollution and the benefits this will have on the historic environment. However, it is expected that any positive effects would be realised more slowly than would be seen with the implementation of Policy 8.
Water Environment	+	+	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Reduction in air pollution could have minor indirect positive effects on the water environment through an improvement in general quality. A reduction in emissions, could also work to reduce the impacts of climate change through a lower contribution to the greenhouse effect, this could work to lower the risk of climate change associated flooding. Overall, it is assessed that there would be a minor positive effect against this SEA Objective. The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is also expected to have a minor positive effect on this SEA Objective through a reduction in pollution and the benefits this will have on the water environment. However, it is expected that any positive effects would be realised more slowly than would be seen with the implementation of Policy 8.

SEA Objective	Policy	Alternatives	Description of Effect
Air Quality	+	+	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. The purpose of Policy 8 is to reduce emissions from vehicles to improve air quality. This will inherently support measures to reduce levels of air pollution from vehicles, which will lead to an improvement in air quality across the GY area. Although the scale of the reduction is not known, a minor positive effect is concluded. The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is expected to have a minor positive uncertain effect on this SEA Objective as improvements to air quality are likely to be realised more slowly and to a lesser degree of significance than if Policy 8 is implemented.
Climate Change & Greenhouse Gases	++	+	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. The purpose of Policy 8 is to reduce emissions from vehicles to improve air quality. This includes greenhouse gas emissions and will support the council's net zero ambitions and make a significant reduction in the UK's most carbon intense sector, transport. Although the scale of the reduction is not known and the precise effect is uncertain a significant positive effect is concluded as the policy directly aims to reduce transport emissions.

SEA Objective	Policy	Alternatives	Description of Effect
			This reduction in emissions will also work to reduce the impacts of climate change in the long term, through a reduction in emissions lessening the greenhouse effect and having indirect impacts on sea level rise, flood risk, and other climate driven risks. The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is expected to have a minor positive uncertain effect on this SEA Objective as a reduction in emissions and subsequent impacts on climate change are likely to be realised more slowly and to a lesser degree of significance than if Policy 8 is implemented.
Noise	**+**	**0**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. Measures to reduce emissions from vehicles to improve air quality would likely lead to increased use of sustainable transport and EV's, and a reduction in use of private ICE vehicles. This would lead to a reduction in the level of noise from traffic. This is anticipated to have a minor positive effect against this SEA Objective. The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is not anticipated to have any effect on this SEA Objective, as although there would be a move to increased use of sustainable transport and EVs, there would be no active promotion.

SEA Objective	Policy	Alternatives	Description of Effect
Material Assets	**+**	**0**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages. Implementation of Policy 8 would lead to an improvement in air quality through reduction in transport emissions and promote the uptake of EVs. This promotes the sustainable use of resources and will have a minor positive effect on this SEA Objective. The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is not anticipated to have any effect on this SEA Objective, as although there would be a move to a more sustainable use of resources over time, there would be no active promotion.

Overall, for the majority of SEA Objectives, positive effects have been identified with a number of objectives identifying uncertainties. Uncertainties associated with Policy 8 are primarily around the unknown extent of reduction in emissions and possible interventions.

Significant positive effects have been identified for the following SEA objectives: Population & Equalities, Human Health, and Climate Change & Greenhouse Gases. These significant positive effects are largely due to increased resilience of the transport network for future generations, and the reduction of levels of air pollution from vehicles and improvement in air quality.

No negative effects have been identified for implementation of Policy 8.

The proposed alternative, to leave this reduction in emissions and improvement in air quality to the market and technological advances is not anticipated to have any effect on the majority of SEA Objectives, as although there would be a move to a more sustainable use of resources over time, there would be no active promotion and therefore fewer positive effects.

Policy 9: Road Traffic Harm Reduction

Description: Norfolk County Council, working with partners, will seek to reduce road traffic collisions and transport related casualties. Improvement schemes will aim to address the fear of road traffic affecting vulnerable road users.

Alternatives:

- To do nothing and only react to new data or accidents – This is not considered a reasonable alternative and has therefore not been assessed under the SEA Framework.

Implementation of Policy 9 may involve some construction associated with improvements to existing infrastructure. The scale and scope of this is uncertain but may include works on key roads such as the A47 and A143 and key junctions. It is not anticipated that new infrastructure would be required as a result of this policy.

Table D-9 – Assessment of the effects of Transport Strategy Policy 9 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	**++/-**	**N/A**	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019. It is anticipated that measures put in place to reduce road traffic collisions may attract different residents and visitors, those of whom may be vulnerable or fear driving, across the GY area, promoting accessibility and reducing feelings of

SEA Objective	Policy	Alternatives	Description of Effect
			isolation. This may reduce inequality, therefore, a significant positive effect has been identified. During construction, there may be temporary severance or restricted access along the A47 and A143, which may restrict to access to local services, with congestion and delays likely, as such a minor negative effect has been identified. Overall, mixed uncertain effects have been identified for this SEA Objective. No reasonable alternative has been identified for this policy.
Human Health	**++**	**N/A**	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. There are anticipated to be major positive effects upon human health as a result of increasing user safety for road users and pedestrians. Prioritising safety improvements on routes with high numbers of collisions and high KSI statistics may contribute to reducing accidents, collisions, and the number of KSI on rural roads.

SEA Objective	Policy	Alternatives	Description of Effect
			No reasonable alternative has been identified for this policy.
Economy & Employment	**+**	**N/A**	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Any construction related to improvements to road safety will likely have positive effects on the economy by boosting local supply chains, if jobs are materials are soured locally, and will also act to support the local job economy. However, the exact scale and location of construction is currently unknown. It is anticipated that measures put in place to reduce road traffic collisions may attract different residents and visitors to areas across GY, encouraging increased movement of people and boosting local economies. Overall, a minor positive effect has been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Community Safety	**++**	**N/A**	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and

SEA Objective	Policy	Alternatives	Description of Effect
			27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK. There are anticipated to be major positive effects upon community safety as a result of improving safety for active travel modes, specifically improvements to walking and cycling infrastructure to connect Great Yarmouth and the hinterland, crossing points, and roundabouts. Additionally, prioritising safety improvements on routes with high numbers of collisions and high KSI statistics may contribute to reducing accidents and the number of KSI on rural roads. Therefore, a major positive effect has been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Biodiversity & Natural Capital	**+/-**	**N/A**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture.

SEA Objective	Policy	Alternatives	Description of Effect
			Implementation of Policy 9 may involve some construction associated with improvements to existing infrastructure. The scale and scope of this is uncertain but may include works on key roads such as the A47 and A143 and key junctions. It is not anticipated that new infrastructure would be required as a result of this policy. There is potential for negative effects on biodiversity as a result of construction when implementing road safety improvements. This may result in negative effects on biodiversity through disturbance and increased noise and air pollution. However, the scale and nature of this is likely to be determined by individual scheme design and location and it is assumed that, in line with national and local planning policy, any proposals would seek to avoid and minimise biodiversity impacts and provide enhancements where possible, resulting in an equal and opposite positive effect. The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. Overall, minor mixed effects have been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Landscape & Townscape	**+/-**	**N/A**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Improvements to safety are likely to improve access and encourage use and enjoyment of landscapes and townscapes by all. Safety improvements may

SEA Objective	Policy	Alternatives	Description of Effect
			also work to improve townscapes by moving away from car focused street design and towards sustainable transport and active travel. Due to this, a minor positive effect has been assessed against this SEA Objective. Works on major roads such as the A47 and A143 could take place within the boundary of National Character Areas such as the North East Norfolk and Flegg NCA and The Broads NCA. This may result in negative impacts on the general landscape and townscape character across GY. However, the scale and nature of this is likely to be determined by individual scheme design and location and it is assumed that any proposals would seek to avoid and minimise impacts to the National Landscape where possible. Construction work could also temporarily effect access to the countryside and the National Landscape, and have temporary negative effects on visual amenity. Overall, a minor negative effect has been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Historic Environment	**-**	**N/A**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Construction associated with improvements to existing infrastructure may have negative impacts on designated historic assets, through potential damage, restricted access, impacts on visual amenity and noise and air pollution. Though impacts are expected to be temporary, there is potential for negative impacts on heritage assets. However, it is assumed that appropriate mitigation

SEA Objective	Policy	Alternatives	Description of Effect
			measures will be utilised in line with relevant policy, to minimise adverse effects on heritage assets. Although the location of construction works is unknown and appropriate mitigation is assumed, it has been concluded that there would be a minor negative effect against this SEA Objective for Policy 9. No reasonable alternative has been identified for this policy.
Water Environment	**+/-**	**N/A**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Improvements to existing infrastructure brings opportunity to incorporate green infrastructure, including SuDS, into design. This could result in a positive effect on this SEA Objective through improved drainage, reducing discharge from roads and surface water flooding. Although the location and detailed design of improvements are unknown, this is scored as a minor positive effect. Construction works could lead to pollution of the water environment including aquifers, rivers and streams, through noise, dust, and surface runoff entering waterbodies leading to a reduction in quality. These effects are likely mitigable through best practice construction measures, though there is concluded to be a residual minor effect as proximity to the water environment is not known and potential for pollution remains.

SEA Objective	Policy	Alternatives	Description of Effect
			No reasonable alternative has been identified for this policy.
Air Quality	**+/-**	**N/A**	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Safer roads and reduced road traffic collisions and casualties may encourage more use of active travel routes, increasing the number of people walking and cycling regularly. This could reduce vehicle movements and subsequently lead to an improvement in air quality. This has been assessed as having a minor positive effect against this SEA Objective. However, implementation of the Policy could lead to temporary reductions in air quality during construction, caused by dust and particulate matter, as well as increased localised traffic resulting in increased emissions. This could lead to negative effects on air quality. Potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP during construction, therefore a minor negative effect has been assessed against this SEA Objective. No reasonable alternative has been identified for this policy.
Climate Change & Greenhouse Gases	**+/-**	**N/A**	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution.

SEA Objective	Policy	Alternatives	Description of Effect
			Improvements to existing infrastructure could provide opportunities to increase the number of EV charging stations and promote low carbon and energy efficient design. This would support the council's net zero ambitions. More EVs and more sustainable design in use could result in lower greenhouse gas emissions, leading to a positive effect on this SEA Objective. Depending on the materials used, there is also an opportunity to reduce embodied carbon during construction. Although details on design and materials are not known, this has been scored as a minor positive effect. Improved infrastructure also brings opportunity to implement green infrastructure & SuDS. This could help to further increase climate change resilience through increasing resilience to flooding, as well as CO2 drawdown, though the extent of this is dependent on the extent and type of vegetation used. Materials used for construction would increase use of embodied carbon, if sustainable materials and construction methods are not used. Although the details of projects and materials are unknown, it is concluded that this could have a minor negative effect. No reasonable alternative has been identified for this policy.
Noise	**+/-**	**N/A**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. Safer roads and reduced road traffic collisions and casualties may encourage more use of active travel routes, increasing the number of people walking and

SEA Objective	Policy	Alternatives	Description of Effect
			cycling regularly. This could reduce vehicle movements and congestion. Due to this, a minor positive effect has been assessed against this SEA Objective. Construction associated with improvements to existing infrastructure will lead to increased levels of noise through additional traffic and use of machinery. Though this will be temporary, it will lead to negative effects. Construction effects should be mitigable through implementation of best practice measures, such as a CTMP and CEMP. This has been assessed as a minor negative effect against this SEA Objective. No reasonable alternative has been identified for this policy.
Material Assets	**+**	**N/A**	The GY borough is underlain by Principal Aquifers, and the majority of the land is classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages. Implementation of Policy 9 may involve some construction associated with improvements to existing infrastructure. The scale and scope of this is uncertain but may include works on key roads such as the A47 and A143 and key junctions. It is not anticipated that new infrastructure would be required as a result of this policy.

SEA Objective	Policy	Alternatives	Description of Effect
			There are a number of opportunities provided by improvements to existing infrastructure that could result in positive effects against this SEA Objective. Sustainable materials could be used during construction, improving resource efficiency and supporting a circular economy, and support the use of existing infrastructure. Although details of materials to be used are not known, this has been scored as a minor positive effect, due to the anticipated scale of the option. No reasonable alternative has been identified for this policy.

Overall, for the majority of SEA Objectives, mixed effects have been identified with a number of objectives identifying uncertainties associated with Policy 9. Uncertainties associated with Policy 9 are primarily around the unknown scale and scope of construction and new infrastructure.

Significant positive effects have been identified for the following SEA objectives: Population and Equalities, Human Health, and Community Safety. These significant positive effects are largely due to the impacts of reduced traffic collisions and implementation of the Safe Systems approach, and subsequent impacts on health, safety and accessibility for residents.

No significant negative effects have been identified for Policy 9 although a number of minor negative effects have been identified. These minor negative effects are largely due to the impacts of construction of new infrastructure, and associated pollution, material use, and damage to heritage assets.

No reasonable alternative has been identified for Policy 9.

Policy 10: Supporting Culture, Heritage and Tourism

Description: Norfolk County Council, working with partners, will seek to protect existing green infrastructure and where possible, enhance the public realm for the benefit of residents, visitors and tourists using a healthy streets approach to make streets attractive.

Alternatives:

- To continue with a business as usual approach by fulfilling the statutory role to not damage structures and not actively seek to enhance culture, heritage or tourism in Great Yarmouth – This is considered a reasonable alternative and has been assessed under the SEA Framework.

Policy 10 seeks to protect existing green infrastructure and enhance the public realm for the benefit of residents, visitors, and tourists using a healthy streets approach to enhance streets within GY and work for all users of the network. It is not anticipated that construction of new infrastructure will take place. However, changes to green infrastructure and the public realm may take place.

Table D-10 – Assessment of the effects of Transport Strategy Policy 10 and its Reasonable Alternatives

SEA Objective	Policy	Alternatives	Description of Effect
Population & Equalities	**+**	**0**	GY has a total population of approximately 99,800 people, with a split of 51% female and 49% male, which is equivalent to regional and national averages. With a population density of 573 people per km^2, GY is higher than the regional average of 331 people/km^2 and national average of 434 people/km^2. The ethnic make-up of GY is less diverse compared to the national average. In terms of deprivation, GY contains neighbourhoods in both the 10% most deprived and in the 10% least deprived, ranking 24 out of 326 local authority districts in 2019.

SEA Objective	Policy	Alternatives	Description of Effect
			Great Yarmouth has a rich historic and cultural environment, with numerous key historic buildings and areas of public realm with heritage significance. These include buildings along South Quay from the town's maritime past, in the Hall Plain area outside the Town Hall and around the northern part of the Market Place, providing an attractive destination for visitors, supporting the local economy. Improving the green infrastructure and public realm within Great Yarmouth is likely to include rest spaces and spaces for socialisation, which is likely to reduce loneliness within communities. It is anticipated that enhancing the public realm will improve accessibility and enhance access to local facilities, potentially improving conditions for people with mobility aids, or adapted bicycles, and improving the accessibility of routes. However, measures to implement this are currently unknown. By implementing transport schemes that are sensitive to the historic and cultural environment, residents, visitors, and tourist may be encouraged to learn more about Great Yarmouth's historic character, building a better sense of community. This has been assessed as having a minor positive effect against this SEA Objective. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets, which may

SEA Objective	Policy	Alternatives	Description of Effect
			deliver some benefits to population and equalities, but likely at a lesser scale than with the policy, and as such as neutral score has been identified.
Human Health	++	+	The average life expectancy across GY is 82.6 years for females and 78.2 years for males, which is similar to regional and national averages. However, in the most deprived areas of GY, life expectancy can be as much as 10.7 years lower for men and 4.5 years lower for women. Physical activity rates in adults are much lower in GY when compared with regional and national averages, and the percentage of adults and Year 6 children classified as overweight or obese is slightly higher than regional and national averages. The proportion of people within GY who are considered disabled under the equality act is significantly lower than the national average (17.7%) at 9.7%. In terms of health deprivation, GY is ranked 50 out of 151 upper tier authorities nationally in the Health Deprivation and Disability Domain of IMD 2019. By protecting and enhancing green infrastructure and the public realm, visitors and residents may be encouraged to spend more time outdoors and utilise active transport networks, increasing walking and cycling within the GY area. Encouraging active travel and spending more time outdoors may contribute to improving physical activity rates and preventing social isolation, therefore improving health. However, the exact measures to be implemented are currently not known. Additionally, improving noise and air quality as a result of encouraging a modal shift away from private vehicle usage will also improve physical health, particularly for children, the elderly, pregnant women and those with respiratory conditions exacerbated by poor air quality. Overall, a significant positive effect has been assessed against this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
			It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets, which may deliver some benefits to human health for the reasons outlined above, but likely at a lesser scale than with the policy, and as such as minor positive score has been identified.
Economy & Employment	+	0	In 2021, 58.8% of the population of GY were of working age (between 16-64 years) which is lower than both the regional and UK averages. GY also has a higher economic inactivity rate of 29.3%, compared to 19.4% in the region and 21.2% in the UK. Job density in GY is lower than the regional average (0.84) and national average (0.87) at 0.84. GY's labour market is fairly self-contained, with relatively low levels of in-and-out commuting. Accommodation and Food Service Activities and human health and social work activities are the largest economic sectors in Great Yarmouth. Great Yarmouth has a rich historic and cultural environment, with numerous key historic buildings and areas of public realm with heritage significance. These include buildings along South Quay from the town's maritime past, in the Hall Plain area outside the Town Hall and around the northern part of the Market Place, providing an attractive destination for visitors, supporting the local economy. Developments to the public realm are likely to improve the town centres within GY. This may encourage residents, visitors, and tourists to these areas,

SEA Objective	Policy	Alternatives	Description of Effect
			boosting local economies. The strategy outlines a number of opportunities to develop efficient transport infrastructure to allow sustained growth in the area, future proofing the transport network for future generations. Development schemes incorporating retail, leisure, culture, entertainment, community, professional services and industrial operations will enable the area to achieve economic potential. Overall, a minor positive effect has been assessed against this SEA Objective. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets, which may deliver some benefits to the economy and employment, but likely at a lesser scale than with the policy, and as such as neutral score has been identified.
Community Safety	**+**	**0**	On average, 32.2 people (per 100,000 resident population) are killed or seriously injured on the borough's roads each year, lower than both regional and national averages. In Norfolk, 56.6% of all casualties in 2022 were male and 27.8% of casualties were aged between 17 to 29 years old. Just 11.5% of all casualties were aged over 70. In terms of crime, the borough's average crime rate is approximately 10,103 incidents per 100,000 population. Between 2011 and 2021, incidents on average grew by 6.7% per year. The overall crime rate in the town of Great Yarmouth was 129 crimes per 1,000 people, significantly higher than both the Norfolk and East of England averages. However, levels of crime deprivation are relatively low in GY, ranking 121 out of 317 local authorities within the UK.

SEA Objective	Policy	Alternatives	Description of Effect
			By protecting and enhancing green infrastructure and the public realm, visitors and residents may have increased feelings of safety. Additionally, utilising a 'healthy streets approach' to make streets more attractive may improve feelings of safety along routes. This is based on the assumption that it is likely that community safety will be embedded into design, following national policy, however exact measures are currently unknown. This has been assessed as having a minor positive effect against this SEA Objective. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets, which may deliver some benefits to community safety but likely at a lesser scale than with the policy, and as such as neutral score has been identified.
Biodiversity & Natural Capital	**++/-**	**+/-**	There are a large range of nationally and locally designated sites within the borough of GY, including 6 Sites of Special Scientific Interest (SSSI), 5 National Nature Reserves (NNR), and 5 Local Nature Reserves (LNR). There are also numerous internationally designated sites within GY, including Ramsar sites, Special Area of Conservation (SAC) and Special Protection Areas (SPA). There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England. Additionally, out of the 16,600ha comprising GY, 58.4% of the land cover is agriculture. Green infrastructure plays a key role in creating and connecting habitats and supporting local biodiversity. By improving green infrastructure and enhancing

SEA Objective	Policy	Alternatives	Description of Effect
			the public realm, it is anticipated to result in significant positive effects on biodiversity and natural capital due to preventing of fragmentation of habitats and promoting ecological networks. Policy 10 is unlikely to cause damage to locally and nationally designated sites, instead improving green infrastructure and the public realm which will likely result in improved biodiversity. However, the exact measures to be implemented are uncertain. Overall, a significant positive effect has been assessed against this SEA Objective. Additionally, although it is not expected to require construction of major new infrastructure, there may be works associated with providing new or improving existing green infrastructure and the public realm. This may result in some disturbance to local habitats during construction as a result of noise, vibration and reduced air quality, although this is uncertain and expected to be mitigated by using best practice construction methods. Due to this, a minor negative effect has been identified. The UK Government also has a target to halt biodiversity loss by 2030 and to increase abundance, which is anticipated to mitigate negative effects somewhat. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets, which may deliver some benefits to biodiversity and natural capital for the reasons outlined above, but likely at a lesser scale than with the policy, and as such as mixed score has been identified.

SEA Objective	Policy	Alternatives	Description of Effect
Landscape & Townscape	**++/-**	**+/-**	There is 1 designated National Landscape, Norfolk Coast, in the GY area. Designated for its landscape, seascape and settlement character, alongside its geomorphology, biodiversity, geology, and heritage. The area also sits within three National Character Areas, reflecting the diversity of landscape features within GY. Enhancements to the public realm may improve the quality and condition of townscape and landscape across the GY area and provide opportunities to further incorporate green infrastructure into design. This is anticipated to result in a major positive effect on this SEA Objective as the policy aims to directly improve the quality of the landscape and townscape, although the location and detail of infrastructure is unknown. Construction works could however result in temporary adverse effects on landscape and townscape character and quality, and visual amenity. Negative effects could be significant if they are to impact the Norfolk Coast National Landscape, however we assume that appropriate mitigation will be applied in line with relevant policy, to minimise impacts on designated landscapes. Due to this, a minor negative effect has been assessed against this SEA Objective. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets, which may deliver some benefits to landscape and townscape, for the reasons outlined

SEA Objective	Policy	Alternatives	Description of Effect
			above, but likely at a lesser scale than with the policy, and as such as mixed score has been identified.
Historic Environment	**++/-**	**+/-**	The GY area contains numerous designated and non-designated historic and cultural assets; including 14 Scheduled Monuments, 432 Listed Buildings, 1 Registered Parks and Gardens, 19 Conservation Areas, and one National Landscape. The area contains 25 heritage assets currently listed on the Heritage at Risk Register. Enhancements to the public realm will likely work to conserve and enhance the setting of heritage assets and wider historic environment, as well as improve its quality and condition. Enhancement of infrastructure will provide opportunities to incorporate sustainable design for the public realm, whilst maintaining local character and sense of place across townscapes, landscapes and seascapes. Depending on the scale of works, there is potential for a significant positive effect on this SEA Objective. Construction associated with new infrastructure may have negative impacts on designated historic assets, through potential damage, restricted access, impacts on visual amenity and noise and air pollution. Though some of these impacts may be temporary, there is potential for permanent negative impacts on heritage assets. Excavation associated with construction may also impact non-designated and unknown heritage assets which could be damaged during construction though it is anticipated that works will predominantly take place around existing infrastructure.

SEA Objective	Policy	Alternatives	Description of Effect
			As the location of construction works is unknown, it has been concluded that there would be a minor negative effect against this SEA Objective for Policy 10, taking a precautionary approach. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets, which may deliver some benefits to the historic environment but likely at a lesser scale than with the policy, and as such as mixed score has been identified.
Water Environment	**+/-**	**0**	The GY area is underlain by three Principal Aquifers (Crag, Chalk, Lower Greensand and Oolites), with the Chalk aquifer being the major aquifer of southern and eastern England. Of the monitored waterbodies in the area, just 3.1% are achieving good ecological status, with 81% achieving moderate and 12.5% achieving poor status, and all failed based on their chemical status, in relation to WFD targets. Protecting green infrastructure and enhancing the public realm is likely to lead to greater extent of green infrastructure and sustainable design, including SuDS, across GY. This could reduce the risk of flooding, through improved drainage, reducing discharge from roads and surface water flooding. This is likely to have a positive effect on this SEA Objective. Although the location and detail of design of infrastructure is unknown, this is scored as a minor positive effect. Construction works could lead to pollution of the water environment including aquifers, rivers and streams, through noise, dust, and surface runoff entering

SEA Objective	Policy	Alternatives	Description of Effect
			waterbodies leading to a reduction in quality. These effects are mitigable through best practice construction measures, but there is concluded to be a residual minor negative effect due to the remaining potential for pollution. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets. This would not be anticipated to have any effect on this SEA Objective.
Air Quality	**+**	**0**	The GY area has lower levels of air pollution than the UK overall. The borough does not exceed the targets of the Air Quality Objective for either PM10 or PM2.5. There are no AQMAs in Greater Yarmouth and therefore no specific Air Quality Action Plan. Protecting green infrastructure and enhancing the public realm is likely to lead to greater extent of green infrastructure and sustainable design which could work to improve air quality. Improvements to the public realm could work to reduce congestion through promotion of cycling and walking as part of the healthy streets approach, leading to a further improvement in air quality through a reduction in air pollution due to more efficient driving. Although the scale and location of works is not known, a positive effect against has been assessed against this SEA Objective. Implementation of the Policy could lead to temporary reductions in air quality during construction, caused by dust and particulate matter, as well as increased

SEA Objective	Policy	Alternatives	Description of Effect
			localised traffic resulting in increased emissions. This could lead to negative effects on air quality. Potential negative effects on this SEA Objective should be mitigable with best practice construction measures, such as implementation of a CTMP and CEMP, during construction. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets. This would not be anticipated to have any effect on this SEA Objective.
Climate Change & Greenhouse Gases	**+/-**	**0**	In 2020, GY's total emissions were 408.5 ktCO2e, or 4.1 tCO2e per capita. GY has lower levels of carbon emissions per capita than both the regional and national figures, with Domestic usage, transportation, and commercial having the greatest contribution. Protecting green infrastructure and enhancing the public realm could provide opportunities to promote low carbon and energy efficient design. This would support the council's net zero ambitions. Greater use of sustainable design could result in lower greenhouse gas emissions and a positive effect on this SEA Objective. Depending on the materials used, there is also an opportunity to reduce embodied carbon during construction. Although details on materials are not known, this has been scored as a minor positive effect.

SEA Objective	Policy	Alternatives	Description of Effect
			Enhancements to the public realm could improve the flow of traffic, reducing congestion through promotion of cycling and walking as part of the healthy streets approach, and improving air quality through a reduction in greenhouse gas emissions due to more efficient driving and lower use of private vehicles. This is anticipated to have a minor positive effect against this SEA Objective. Enhancements to the public realm and protection of green infrastructure also bring opportunity to implement green infrastructure & SuDS. This will help to further increase climate change resilience through increasing resilience to flooding, as well as CO2 drawdown, though the extent of this is dependent on the extent and type of vegetation used. As works will likely take place in the footprint of existing infrastructure, it is not anticipated that there would be any land take or additional impermeable surface, reducing resilience to the impacts of climate change. However, there may be minor negative effects against this SEA Objective associated with increased vehicle emissions during construction and embodied carbon of materials, if low carbon vehicles and materials are not utilised. Although details on materials and vehicles are not known, a minor negative effect has been assessed against this SEA Objective. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets. This would not be anticipated to have any effect on this SEA Objective.

SEA Objective	Policy	Alternatives	Description of Effect
Noise	**+/-**	**0**	There are a number of Noise Important Areas within the GY borough, concentrated in and around town centres and along major roads such as the A149, A47, A1064 and A143. Protecting green infrastructure and enhancing the public realm could provide opportunities to reduce noise through promotion of cycling and walking as part of the healthy streets approach, leading to lower congestion. If planned and located appropriately, this could reduce traffic noise in Noise Important Areas, resulting in significant positive effects. As the location of infrastructure is not known, this has been scored as a minor positive effect. Construction associated with enhancements to the public realm will lead to increased levels of noise through additional traffic and use of machinery. Though this will be temporary, it will lead to negative effects. Construction effects should be mitigable through implementation of best practice measures, such as a CTMP and CEMP. Overall, this has been assessed as a minor negative effect against this SEA Objective. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets which may deliver some benefits to noise but likely at a lesser scale than with the policy, and as such as mixed score has been identified.
Material Assets	**+**	**0**	The GY borough is underlain by Principal Aquifers, and the majority of the land is

SEA Objective	Policy	Alternatives	Description of Effect
			classified as urban. In the south of the borough, there is a relatively small area of land in the rural space rated as excellent for agriculture. The GY area contains 2,256 renewable energy sites. The percentage of household waste sent for reuse, recycling or composting was 31.9%, significantly less than regional (49%) and national (43.2%) averages. There are a number of opportunities provided by implementation of Policy 10 that could result in positive effects against this SEA Objective. Protecting green infrastructure and enhancing the public realm could encourage use of sustainable materials during construction and the reuse of existing infrastructure, improving resource efficiency and supporting a circular economy. Promotion of the Healthy Streets approach could also reduce reliance on private cars, reducing resource use. Although the location of infrastructure and details of materials to be used are not known, this has been scored as a minor positive effect, due to the anticipated scale of the option. It is not anticipated that the reasonable alternative would involve any work with partners to protect existing green infrastructure or enhance the public realm, instead taking a 'business as usual' approach. Great Yarmouth's 2020 Culture, Heritage and Tourism strategy includes an aim to enhance the public realm where appropriate and to conserve and enhance heritage assets. This would not be anticipated to have any effect on this SEA Objective.

Overall, for all the majority of SEA Objectives, positive effects have been identified with a number also having negative and uncertain effects. Uncertainties associated with Policy 10 are primarily around the unknown scale and scope of construction and new infrastructure.

Significant positive effects have been identified for the following SEA objectives: Human Health, Biodiversity and Natural Capital, Landscape & Townscape, Historic Environment, and Noise. These significant positive effects are largely due to the positive outcomes seen from delivering enhancements to the public realm, e.g. reductions in air and noise pollution, and benefits of improved green infrastructure on biodiversity.

No significant negative effects have been identified for Policy 10, though a range of minor negative effects have been identified. These negative effects are largely due to the impacts of construction of new infrastructure and associated pollution.

The reasonable alternative identified for Policy 10 is to only fulfil the council's statutory role to not damage structures and not to enhance them. This would result in no proactive action to support culture, heritage and tourism. This would mean no negative effects associated with construction, but also no positive outcomes, therefore neutral effects have been assessed against the majority of SEA Objectives. The remaining SEA Objectives were identified as having either minor positive effects or mixed minor positive and minor negative effects due to Great Yarmouth's 2020 Culture, Heritage and Tourism strategy which aims to enhance the public realm where appropriate and to conserve and enhance heritage assets. This may deliver some positive effects, but likely at a lesser scale than with the policy.

Kings Orchard
1 Queen Street
Bristol
BS2 0HQ

wsp.com