



ZetTrans Regional Transport Strategy

SEA Environmental Report

On behalf of **ZetTrans**



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1 Introduction

1.1 Background

- 1.1.1 This Environmental Report (ER) has been prepared to accompany a draft version of the new Regional Transport Strategy (RTS) for the Shetland Islands for the ZetTrans' Regional Transport Partnership (RTP).
- 1.1.2 Stantec UK Ltd (Stantec) has been commissioned by ZetTrans to assist with the preparation of the new RTS. The RTS provides the strategic framework for the development of transport, both within Shetland and to / from the Scottish mainland up to 2040. It sets out the transport problems within Shetland and how ZetTrans proposes to respond to them with the aim of contributing to the priorities of National Transport Strategy 2 (NTS2), namely delivering a transport system that reduces inequalities, takes climate action, helps deliver inclusive economic growth, and improves the health and wellbeing of people in Shetland.
- 1.1.3 The RTS has been developed in line with the principles of the refreshed Scottish Transport Appraisal Guidance (STAG) and marks the final stage in a three-stage process which involved the delivery of a Case for Change Report (developed in January 2022) and a Preliminary Options Appraisal Report (developed in June 2022).
- 1.1.4 This ER documents the findings of a Strategic Environmental Assessment (SEA) which has been carried out in respect of the Draft RTS. The SEA has been undertaken as a plan-making tool to help shape the emerging RTS throughout the key stages of its development (see Section 2.2) and by iterative working between the transport planning, environmental and equalities assessment teams. It builds upon previous stages, and takes account of comments and information received from, an extensive stakeholder and public consultation exercise held in 2021; the SEA Scoping Report; the Case for Change Report and its accompanying ER.

1.2 How to comment on this Environmental Report

- 1.2.1 This ER and an associated Non-Technical Summary are being issued for consultation alongside the Draft RTS and associated documents for a period of 12 weeks. Details of how to participate in the consultation are provided in Section **Error! Reference source not found.** of this report and, in accordance with statutory requirements, will be published in a local newspaper.

Other Related Appraisals

- 1.2.2 This SEA has been undertaken in parallel with an assessment of the equalities impacts of the RTS. The findings of the equalities impact assessment (EqIA) of the Draft RTS are presented in a report which will be published with the Draft RTS and this ER for consultation.
- 1.2.3 At this stage of the RTS development, the Policies set out within the Draft RTS are not predicted to have any likely significant effects (LSE) on European sites and as such the RTS is unlikely to be subject to a requirement for a Habitats Regulations Appraisal (HRA). This shall be kept under review as the RTS develops through to the Delivery Plan and implementation, and an HRA Screening will be completed if ZetTrans considers there is any potential for LSE from implementation of the RTS.

2 Overview of ZetTrans Regional Transport Strategy

2.1 Introduction

2.1.1 This section describes the context in which a new RTS is being prepared for the ZetTrans region, the principal stages of Strategy development and outlines the form and content of the draft document, all of which require to be assessed through this SEA. The wider policy context and its relationship with the emerging RTS is also briefly outlined.

2.2 Stage of RTS Development

2.2.1 The draft RTS has been prepared following a staged process of transport planning drawing on extensive baseline analysis and consultation feedback. The key stages of the process are described below:

- The context for the RTS was established through a review of key policy drivers, the spatial context for the Strategy and relevant travel behaviours and demand. This work involved identification of a detailed baseline of relevant transport, land use, socio-economic and environmental data.
- Problems analysis was then undertaken, drawing on analysis of the Shetland region's transport characteristics and trends. The analysis of issues, problems and opportunities was then reported in the RTS Case for Change document (Stantec, 2022b).
- Public and stakeholder consultation was undertaken on the Case for Change document in 2022 (see Section 2.3). The feedback from this exercise was reviewed and taken into account in the subsequent work on the RTS and its associated environmental and equalities assessments.
- Transport options were then generated to resolve the problems identified in the Case for Change and a preliminary appraisal of the options was undertaken following the principles of the refreshed STAG to determine those options which best meet the transport planning objectives, the RTS Objectives and the various technical STAG criteria. The appraisal incorporated an equalities assessment for each option. The overall appraisal was used to inform the development of themes and Policies (see below) which were subsequently incorporated into the RTS.
- Building on the problems analysis framework prepared for the Case for Change, the draft RTS presents an updated set of Strategy Objectives and a Vision for transport in Shetland. The document identifies a series of eight RTS Themes which provide the structure for the Strategy. The draft RTS sets out a context discussion for each theme in turn along with Policies which set out the 'direction of travel' across a broad range of transport issues affecting Shetland for the period of the strategy. Subsequent to the agreement of the draft RTS, an accompanying Action / Delivery Plan will be developed to set out activities and priorities in relation to these polices and will be updated regularly.

2.2.2 At each stage, the environmental and equalities assessment teams have been involved in the analysis and review of data, the appraisal of key components of the Strategy and the assembly of the document.

2.2.3 The SEA process has been integrated with the development of the RTS. The key stages of the process are set out in Table 2-1 to illustrate the activities from the two strands of work which were undertaken at similar periods and to explain how SEA outputs informed the RTS process.

Table 2-1 RTS and SEA Processes

RTS Process	SEA Process
Development of a detailed baseline of relevant transport, land use, socio-economic and environmental data.	Collation of a detailed environmental baseline including review and identification of relevant key plans and programmes.
Identification of transport problems, issues, constraints and opportunities, drawing on the detailed transport baseline analysis.	<p>Analysis of baseline environmental issues and discussions with the RTS transport planning and policy development teams to ensure environment, climate change and sustainability issues were captured in the problems analysis process.</p> <p>Development of an initial SEA framework to provide the basis for environmental assessment of the key emerging components of the RTS.</p> <p>Key SEA output: SEA Scoping Report (Stantec, 2021)</p>
Development and drafting of the strategic framework for the Draft RTS including setting out a draft Vision and Strategy Objectives.	Input to the policy development process including initial testing of the compatibility of the RTS strategic framework with the development of the SEA framework and objectives.
Case for Change public and stakeholder Consultation.	<p>The public and stakeholder consultation process included consultation on the interim findings of the SEA at the Case for Change stage.</p> <p>Key SEA output: Case for Change SEA Environmental Report (Stantec UK, 2022)</p>
Development of a long-list of transport options to address the identified problems.	SEA team input to the specification of options. A strong environmental (and equalities) theme runs through the options list, particularly those addressing active travel and public transport.
Appraisal of the long-list of options in line with STAG guidance and criteria.	Environmental assessment of options was carried out in line with STAG to provide environment and climate change analysis of options and inform the understanding of the effectiveness of options in addressing the identified problems. Initial proposals for mitigation were identified from the environmental appraisals and taken forward in this SEA.
Development of transport policies linked with supporting options and compilation of the Draft RTS.	<p>Completion of the detailed environmental assessment of the RTS policies against each of the SEA objectives and preparation of the SEA Environmental Report.</p> <p>Key SEA output: Draft RTS SEA Environmental Report (November 2022) (This document)</p>

2.3 Form and Content of the Draft Regional Transport Strategy

- 2.3.1 The draft RTS is a multi-layered document which draws on the findings of the key stages of development set out above. The initial chapters of the document (Chapters 1 and 2) set out an introduction and an overview of the transport and local policy context for the Strategy. A summary of the demographic and economic context for Shetland is presented in Chapter 3 with an overview of transport supply and demand in Chapter 4, including connections from Shetland to the Scottish mainland and inter-island transport.

2.3.2 The approach to the development of the RTS is set out in Chapter 5, explaining the process of transport problem analysis at the Case for Change stage, the development of a Vision and Strategy Objectives and the Preliminary Options Appraisal. The RTS Vision states:

Our transport network in Shetland and our connections to the rest of Scotland support our social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to our net zero emission targets

2.3.3 The six draft Strategy objectives were developed at the Case for Change stage to reflect and encompass the Transport Planning Objectives (TPOs) used as part of the problems and opportunities analysis. They are:

- **Strategy Objective 1** – To address the barriers which constrain access and / or impose unreasonable costs on travel and freight transport for all groups to / from the rest of Scotland.
- **Strategy Objective 2** – To address the barriers which constrain access and / or impose unreasonable costs on travel and freight transport for all groups within Shetland.
- **Strategy Objective 3** – To facilitate and encourage safe walking and cycling and wheeling for everyone, including for leisure and tourism.
- **Strategy Objective 4** – To improve alternative, more sustainable travel options in Shetland for all including those without access to, or who would prefer not to use a car.
- **Strategy Objective 5** – To transition towards an environmentally and financially sustainable, post-carbon transport system.
- **Strategy Objective 6** – To support safe, resilient, and efficient movement of all people and freight across Shetland.

2.3.4 In the draft RTS, each objective is presented with a clear expression of the transport outcomes and societal impacts of the objective (and by extension, the overall RTS) aims to deliver from the perspective of users (passengers and businesses) of the transport networks in the Shetland Islands.

2.3.5 The development of the RTS options followed identification of the key problems and RTS objectives. The options aim to tackle the specific problems identified and support achievement of the RTS Objectives. The options were collated into a set of eight supporting RTS Themes as shown in Table 2-2

Table 2-2 RTS Themes

Strategy Theme	Supporting Narrative
1. Enabling and encouraging active travel	Improving the public realm and facilitating walking, wheeling, and cycling within settlements as well as providing active travel connections between them
2. Improving the quality of, and access to our public transport	Delivering affordable and accessible public transport, enhancing the public transport infrastructure including vehicles and stops and improving ticketing options and information
3. Extending bus connectivity	Improving bus connectivity through improved frequency, extended operating hours, additional services and enhanced multi-modal connectivity
4. Connecting our islands	Improving internal ferry and air connections and exploring the case for fixed links so as to better connect Shetland's island communities

Strategy Theme	Supporting Narrative
5. Enhancing our external connections and supply chain	Enhancing external ferry and air connections to the Orkney Islands and the Scottish mainland
6. Decarbonising our transport	Supporting the decarbonisation of transport through the adoption of zero emission vehicles, vessels and aircraft
7. Embracing new technologies	Capitalising on innovations and new technology
8. Enhancing network efficiency	Supporting the safe, resilient, and efficient movement of people and freight across the transport network

- 2.3.6 The themes form the basis for presentation of information in Chapters 6 to 13 of the draft RTS which set out the key transport problems under each theme, discuss the potential actions to address the problems and present a set of policies which articulate the key focus and intention of the RTS. The policies will be used to take forward more detailed and specific interventions in future stages of implementation of the Strategy, including through a proposed Action / Delivery Plan.
- 2.3.7 In Chapter 14 of the draft document, the proposals for future delivery and monitoring of the RTS are briefly presented.

2.4 Relationship with other Plans and Programmes

- 2.4.1 In accordance with SEA statutory requirements, a review of the relationship between the developing Draft RTS and other relevant plans and programmes (including current legislation, policies and strategies at national and regional levels) has been carried out. This review identified key requirements, objectives and priorities of relevant plans and their implications for both the emerging RTS and for the SEA. A review of these plans and programmes is set out in Appendix A of this report and relevant information from the review has been used in developing the RTS and in identifying key issues for the SEA.
- 2.4.2 From the review of relevant plans and strategies provided in Appendix A, a number of key environmental issues and priorities were identified which were considered to be important for the SEA and development of the Draft RTS. These include the following:
- Align with relevant existing and emerging targets, policies and proposals within relevant national, regional and local plans and strategies particularly in the area of sustainable transport where key national level strategy (NTS2) has recently been developed and which sets clear intentions and commitments for priorities in the delivery of active travel and public transport, emissions reductions, accessibility and in the maintenance and resilience of transport infrastructure assets.
 - Encourage measures that reduce the need to travel and allow communities in different locations to flourish, supporting efforts to reduce inequality of outcome in the Shetland Islands and improve quality of life and environment for all in the region.
 - Minimise the environmental impacts of transport provision and infrastructure, including in terms of reducing carbon and other greenhouse gas emissions and using natural resources sustainably, reflecting the key priority of achieving net zero and the Scottish Government's legislated targets for carbon emissions reductions to 2045.
 - Ensure transport networks are resilient to climate change, and able to adapt to the threats posed by climate change.
 - Ensure the avoidance of likely significant environmental effects from the implementation of the strategy on designated sites for reasons of biodiversity conservation and ecological importance and seeking to secure recovery of nature and opportunities to enhance biodiversity wherever possible.

- Minimise the amenity impact of transport, including in terms of improving road safety, reducing congestion, noise and vibration and take opportunities to enhance amenity through development of new and upgraded active travel routes and better integration of transport with place-making.
- Seek to protect and enhance the health and wellbeing of the resident and working population, including through facilitating access to healthcare, safeguarding physical health, providing opportunities to enhance mental health and social wellbeing, and supporting the delivery of public health benefits through facilitating and encouraging active travel.
- Ensure the avoidance of unacceptable human health impacts from transport, in particular impacts on local air quality and support the delivery of public health benefits through facilitating and encouraging active travel.
- Improve the accessibility of the transport system (both physical access and access to transport information) and the provision of a range of appropriate transport modes to meet identified needs.
- Ensure that transport and transport information is accessible to all and does not contribute to social exclusion or disadvantage, whether through severance or unaffordability.
- Ensure that the transport network offers convenient, sustainable, and flexible services that meet the needs of the population in terms of accessing employment, education, and other facilities.
- Enable the efficient, effective, affordable and sustainable movement of people and freight to increase economic productivity, competitiveness and opportunities for all ensuring no one is unfairly disadvantaged.
- Secure economic growth and inward investment by supporting the delivery of new and upgraded transport infrastructure to increase connectivity and improve access to high quality employment and economic opportunities.

2.4.3 As with the key issues identified in part from analysis of the environmental and socio-economic baseline (see Section 3), these key policy issues needed to be addressed within the emerging RTS itself to effectively tackle pertinent transport problems and support the implementation of other existing and emerging plans and policies.

3 Environmental Baseline

3.1 Introduction and Approach

- 3.1.1 This section summarises the approach to developing the environmental baseline within the area likely to be affected by the emerging RTS, in particular the ZetTrans area. Section 3.2 presents a summary of the environmental baseline drawing on information collated on key environmental designations and from a detailed baseline review in Appendix B. A commentary on the likely evolution of the environmental baseline in the absence of the proposed policy (the Draft RTS) is then set out in Section 3.3.
- 3.1.2 The SEA Scoping Report presented an initial review of the relevant aspects and characteristics of the environment, including those likely to be significantly affected by the outcome of the refreshed RTS. This included the identification of sites designated at international or national levels for reasons of biodiversity conservation, geological importance, heritage, or landscape values which have the potential to be affected by the emerging RTS.
- 3.1.3 This report has both updated and synthesised the environmental baseline in the SEA Scoping Report, taking into account recent publications, and focusing the review on existing problems and issues in the ZetTrans region.

3.2 Overview of the Region

- 3.2.1 The Shetland Islands are roughly 100 miles off the northeast coast of Scotland, forming the northern-most tip of Scotland. Shetland is a predominantly rural region with a number of small towns, villages and rural settlements. Main settlements include the capital Lerwick, Sumburgh and Sandwick. The Shetland archipelago consists of over 100 islands, of which 15 are inhabited.
- 3.2.2 The ZetTrans region comprises a mix of semi-rural and rural landscapes, with varying bedrock geology overlain by a mixture of soils, with class 1 peatland being prevalent. Shetland has a rich cultural history with 365 Scheduled Monuments and 490 Listed Buildings, 26 of which are category 'A' listed. Inland waterbodies include lochs and burns, including those with ecological importance.
- 3.2.3 The population is approaching 23,000 people (2020) dispersed across 15 islands, including the Shetland mainland and the capital Lerwick in which around 30% (in 2016) of the population reside. The population density is considerably lower (16 persons per square km) than the national average (70 persons per square km). The population is both decreasing and ageing, resulting in a decreasing working population. While deprivation is relatively low, the cost of living in Shetland can be high, with transport and delivery costs accounting for a considerable proportion of this additional expense.
- 3.2.4 There are no significant issues with respect to air quality in Shetland, with air quality generally performing well in relation to National Air Quality objectives and there are no Air Quality Management Areas in Shetland.
- 3.2.5 An overview of the designations in the Shetland Islands is provided in Table B-1 in Appendix B and includes 15 Special Protection Areas (SPAs), 12 Special Areas of Conservation (SACs), 78 Sites of Special Scientific Interest (SSSIs) and a National Scenic Area (NSA).
- 3.2.6 The economy of Shetland has been shaped by the discovery and commercialisation of oil in the 1970's. The role of oil in the economy is now diminished, with aquaculture, fish processing, public administration, retail, construction and tourism being of importance to the local economy.

3.3 Key Environmental Issues

- 3.3.1 The suite of key environmental issues and policy requirements for the emerging RTS is presented in Table 3-1. These issues were originally identified within the ZetTrans RTS SEA Scoping Report and have been updated to reflect consultation responses.
- 3.3.2 The table is structured by environmental topic and for each theme a summary of baseline information and key issues is presented including cross reference to the objectives from the SEA framework which has been used to assess the RTS policies.
- 3.3.3 The information in this table draws from the analysis of environmental baseline information (see Appendix B) and information from the review of relevant policies and plans presented in Section 2.4.
- 3.3.4 The key issues and sensitivities identified in this analysis have provided a strategic baseline sufficient to support the prediction and evaluation of potential environmental effects of the developing RTS policies, the findings of which are presented in Section 5 of this Environmental Report. As the policies do not set out specific measures or transport schemes, the assessment and baseline data underpinning it has been collated at a regional level. As the RTS is implemented in future, it is likely that more detailed interventions will emerge through the proposed RTS Delivery Plan (see Section 6.2). It is proposed that the environmental effects of future interventions would be considered in relation to baseline environmental information collated at a transport corridor level (see Section 6.2).

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Table 3-1 Environmental baseline features and key issues

SEA Topic	Environmental Baseline Features	Key Issues
Climate Change	<ul style="list-style-type: none"> ▪ Transport is a significant contributor to national and regional carbon emissions and a key sector for decarbonisation action. ▪ Key national carbon emissions reduction targets are 75% reduction in emissions by 2030 and Net Zero by 2045. These are now also supported by the commitment in the Climate Change Plan update and NTS2 which commit to reducing car kilometres by 20% by 2030. ▪ Carbon rich soils provide significant carbon stores within the extensive network of peatland in Shetland. ▪ The Draft NPF4 (2021) proposes innovation to sustain and enhance natural capital (including forests and woodland, peatland as carbon storage and sequestration; renewable energy generation; decarbonising homes and a strategic approach to electric vehicle charging); and to strengthen resilience and decarbonise connectivity (including supporting a modal shift and reducing car use; better digital connectivity). 	<ul style="list-style-type: none"> ▪ Reducing GHG emissions, particularly carbon dioxide (CO2) is a priority for the region and decarbonisation of the transport sector (particularly road vehicles) is critical to supporting Net Zero legislated targets in Scotland and regionally. Measures may include promoting sustainable land use patterns (including the 20-minute neighbourhood) and the decarbonisation of the transport sector. ▪ The need to consider, and integrate, the role of natural (green/blue) infrastructure in tackling climate change. ▪ The need to align with the national Update to the Climate Change Plan 2018-2032 (Scottish Government, 2020) and the emerging Shetland Climate Change Strategy. ▪ Recognise the importance of maintaining and enhancing the peat resources for carbon storage and sequestration. ▪ Future climate change is now unavoidable and the adaptation and resilience of transport infrastructure to changes in weather patterns and intensity needs to be progressed with urgency.
<p>Relevant SEA Objectives: 1. Climate Change: Respond to the climate emergency by decarbonising infrastructure, promoting natural infrastructure, facilitating a low carbon economy and adapting to accommodate the effects of climate change. 4. Water, Flood Risk and Resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst adapting to climate change and reducing flood risks.</p>		
Air Quality and Amenity	<ul style="list-style-type: none"> ▪ Whilst there are no Air Quality Management Areas (AQMAs) within this rural region, and local air quality is good, there is a high reliance on use of private transport options. ▪ In larger settlements such as Lerwick, road traffic typically forms the principal contributor to background noise levels. 	<ul style="list-style-type: none"> ▪ The need to maintain and improve air quality for the benefit of human health and the environment. ▪ Ensure that new development, including transport infrastructure, facilities and services, are developed with emissions reductions as a priority to jointly support efforts to maintain air quality and achieve climate related targets for emissions reduction.
<p>Relevant SEA Objective: 2. Air Quality and Amenity: To maintain air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.</p>		
Biodiversity, Geodiversity and Soil	<ul style="list-style-type: none"> ▪ There is a range of significant biodiversity, flora and fauna constraints and designations in Shetland. This includes: 	<ul style="list-style-type: none"> ▪ The need to conserve and enhance biodiversity interests, including sites designated for their ecological importance, including within the coastal and marine environment.

SEA Topic	Environmental Baseline Features	Key Issues
	<ul style="list-style-type: none"> ○ Special Protection Areas (SPAs) and Sites of Special Scientific Interest (SSSIs) which have been designated as they support rare and vulnerable birds and have presence of nationally important or rare habitats and other species. ○ Special Areas of Conservation (SACs) which make a significant contribution to conserving important habitat types and species. ○ Shetland Marine Region including a network of Marine Protected Areas (MPAs) and other designated sites of nature conservation importance. ○ National Nature Reserves (NNRs) which further conservation and the study of wildlife and habitats of special interest. ○ Ramsar sites which are considered to be of international importance for the conservation of birds. ▪ Shetland’s vegetation is dominated by peatland, heather moorland and montane habitats. ▪ Carbon rich peat soils and peaty soils can be found throughout the region and considered to be a ‘nationally important resource’. Soil erosion from grazing and natural erosion have left over 70% of blanket bog damaged in Shetland. ▪ The amount of land suitable for agriculture in Shetland is limited, with rough grazing being the largest agricultural land class. ▪ The Draft NPF4 (2021) proposes innovation to sustain and enhance natural capital, including peatland as carbon storage and sequestration. <p>Relevant SEA Objective: 3. Biodiversity, Geodiversity and Soil: Conserve, protect, restore and enhance biodiversity and geodiversity interests, including through safeguarding designated and non-designated sites, species, habitat connectivity and soil resources and by protecting and enhancing green infrastructure.</p>	<ul style="list-style-type: none"> ▪ The need to maintain, restore and expand valued habitats and to safeguard protected species and non-designated biodiversity interests. ▪ Seek to address and where possible, reverse impacts and damage to habitats as a result of transport developments and emissions and disturbance from traffic. ▪ The need to protect and enhance green infrastructure assets and wildlife corridors. ▪ Seek opportunities through development of the Strategy to build in green / blue infrastructure to transport networks using nature-based solutions which enhance biodiversity. ▪ The need to protect sites designated for their geological interest. ▪ The need to prioritise the redevelopment of previously developed (brownfield) land. ▪ The need to protect and enhance the health of soils, including peatland and carbon rich soils which are nationally important carbon-rich soils and priority habitat. ▪ The need to sensitively locate and design new transport infrastructure, including marine-based transport infrastructure, particularly in relation to European sites.
Water, Flood Risk and Resilience	<ul style="list-style-type: none"> ▪ Water resources are a key resource in Shetland, supporting aquaculture, agriculture, wildlife and heritage tourism, the oil industry and more recently wave and tidal renewable energy. ▪ Water quality in the region is above the national average, with 96% of surface water bodies in good or excellent condition, and all groundwater bodies in good condition. 	<ul style="list-style-type: none"> ▪ The need to protect and enhance the quality of water resources and the water environment including the availability and quality of water for human consumption, ecological quality and economic uses. ▪ The need to locate new development including transport infrastructure away from areas of flood risk, and for infrastructure to be resilient to flooding (and adverse weather more widely).

SEA Topic	Environmental Baseline Features	Key Issues
	<ul style="list-style-type: none"> ▪ Drinking water is supplied through local abstractions, none of which are identified at risk of deterioration. The quality of the public water supply is generally high. ▪ Coastal, fluvial and surface water flood risk are present, with key coastal flood risk being the most significant issue and fluvial flood risk being relatively localised in nature. 	<ul style="list-style-type: none"> ▪ Avoid or mitigate the potential for adverse water quality impacts from the construction and operation of new transport infrastructure and operations. ▪ Identify and deliver enhancement to the water environment and contribution to resilience from flooding through the adoption of sustainable drainage measures and blue green infrastructure in preference to hard/positive drainage. ▪ UK Climate Projections include sea level rises, sea temperature rises and increasing coastal flooding from storm surges and high tides as sea levels rise.
<p>Relevant SEA Objective: 4. Water, Flood Risk and Resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst adapting to climate change and reducing flood risks.</p>		
Cultural Heritage	<ul style="list-style-type: none"> ▪ The region contains a range of diverse cultural heritage assets with a wealth of archaeological sites and monuments, supported by historic designations dating from early Neolithic times. Although, 95% of the archaeological resource is undesignated, much of it is of schedulable quality. ▪ Designated cultural heritage assets are located throughout the region. Designations include 365 Scheduled Monuments, 490 Listed Buildings and three World Heritage Sites. ▪ There are extensive archaeological remains in Shetland including Viking sites, brochs, wheelhouses, standing stones, ancient crofts and ruined chapels. 	<ul style="list-style-type: none"> ▪ Preserve, protect and enhance (as appropriate) cultural heritage assets (including historic transport infrastructure, archaeological resources and undesignated sites) and their settings. ▪ Recognise opportunities through development and future implementation of the RTS to enhance access to, and understanding of, sites and areas of cultural heritage interest including areas of archaeological importance and locations of built heritage significance. ▪ Acknowledge the important role of built heritage in healthy spaces and integrate cultural heritage protection and interpretation with improved place making. ▪ Protect and enhance local character, customs and traditions.
<p>Relevant SEA Objective: 5. Cultural Heritage: Conserve, protect and enhance the historic environment, cultural assets and promote Shetland's distinct culture.</p>		
Landscape	<p>The region includes:</p> <ul style="list-style-type: none"> ▪ Shetland has dramatic coastal landscape, with inland landscapes characterised by rolling hills, heather and rough grassland with historic buildings and features. ▪ Shetland National Scenic Area (NSA) which covers seven individual areas. ▪ One area of 'wild land'. ▪ Seventeen proposed Local Landscape Areas. 	<ul style="list-style-type: none"> ▪ Conserve and enhance landscape character and protect visual amenity. ▪ Protect and enhance local landscape character, customs and traditions including in areas recognised for their importance such as areas of wild land. ▪ Protect and enhance the seascape character.

SEA Topic	Environmental Baseline Features	Key Issues
		<ul style="list-style-type: none"> ▪ Conserve and enhance townscapes in particular through the contribution that transport planning and promotion / integration of active and public transport to public realm and urban areas. ▪ Integrate access to and enjoyment of landscape with healthier lifestyles through promotion of active travel links and use of green infrastructure and nature based design solutions for new and upgraded transport infrastructure.
Accessibility and Connectivity	<ul style="list-style-type: none"> ▪ The majority of the road network comprises minor roads; with a higher proportion of households with access to a car than the Scottish average. ▪ The main airport in Shetland is at Sumburgh, connecting to mainland UK. Inter-island air services from Tingwall airfield to Fair Isle and Foula. ▪ The Northlink Ferry connecting Shetland to Orkney and mainland Scotland. Lerwick Port handles around 900,000 tonnes of cargo annually. Sullom Voe is a major oil port. ▪ A network of seven inter-island ferry services provide a critical service linking the islands to the Shetland Mainland. ▪ The Draft NPF4 (2021) proposes to strengthen resilience and decarbonise connectivity (including supporting modal shift and reducing car use; better digital connectivity; and a strategic approach to electric vehicle charging). 	<ul style="list-style-type: none"> ▪ Recognise the unique nature of the island communities, including the reliance on air and sea services both socially and economically. ▪ Align with and support the implementation of adopted and emerging relevant national policies, including NTS2 (Scottish Government, 2020) and the draft Strategic Transport Projects Review 2 (STPR2) and draft National Planning Framework 4 (NPF4). ▪ Encourage measures that reduce the need to travel and allow communities in different locations to flourish supporting efforts to reduce inequality of outcome in Shetland and improve quality of life and environment for all in the region. ▪ Underpin the development of a safe, secure, efficient, reliable, integrated and sustainable transport system across the region which meets identified needs and supports population growth and enables population retention. ▪ Develop an affordable and accessible (both physical access and access to transport information) transport network which provides connections between i) Shetland’s islands and ii) the Scottish mainland. ▪ Ensure that transport and transport information is accessible to all and does not contribute to social exclusion or disadvantage, whether through severance or unaffordability. ▪ Ensure transport services provide convenient travel options. ▪ Provide transport services appropriate to meet the needs of the projected ageing population.
	<p>Relevant SEA Objective: 6. Landscape: Protect and enhance the landscape character, townscape character and visual amenity.</p>	

SEA Topic	Environmental Baseline Features	Key Issues
	7. Accessibility and Connectivity: Ensure appropriate connectivity and affordable access for all to employment, education, facilities and services, and social and leisure opportunities.	
Inclusive Growth	<ul style="list-style-type: none"> ▪ Overall, deprivation in Shetland as measured by the SIMD 2020 is generally low, with no data zones in Shetland falling within the 20% most deprived in Scotland and only one area of relatively high deprivation within north Lerwick. ▪ However, over 50% of the Shetland data zones are within the Index's most deprived 10% in terms of geographic access to services. ▪ Further, the cost of living in Shetland can be high (35% higher for a single person living in a remote island settlement than those living in an urban area on the mainland), with transport and delivery costs accounting for a considerable proportion of this additional expense ▪ In terms of employment, the five sectors which account for most employment in the Shetland Islands region, in descending order, are: Schools, Construction, Retail, Social Work and Public Administration. ▪ The five sectors which account for most output within the region are: Aquaculture, Fish Processing, Public Administration, Retail and Construction. ▪ Tourism is also an important and growing industry in Shetland. ▪ The Draft NPF4 (2021) proposes creation of carbon neutral coastal and island communities; support the blue and wellbeing economies (e.g., plans for Shetland Space Innovation Campus); protect and enhance blue and green infrastructure (e.g., active travel); strengthen resilience and decarbonise connectivity (e.g., a net zero island air network and decarbonisation of ferry services, continued expansion of electric vehicle charging networks and improved digital connectivity). 	<ul style="list-style-type: none"> ▪ Support the delivery of new and upgraded active and public transport infrastructure to increase connectivity and support the growth and diversification of key economic sectors to deliver sustainable and inclusive economic growth and realise the opportunities from the low carbon economy. ▪ Improve access to key amenities, the natural environment and economic opportunities for all demographic groups and communities. ▪ Enable the efficient, effective, affordable and sustainable movement of people and freight to increase economic productivity, competitiveness and opportunities for all.
	<p>Relevant SEA Objective: 8. Inclusive Growth: Improve social and economic prosperity for all by enhancing productivity and competitiveness and through reducing societal inequalities.</p>	
Human Health	<ul style="list-style-type: none"> ▪ The population of the region is approaching 23,000 and is both declining and ageing. 	<ul style="list-style-type: none"> ▪ Provide transport services appropriate to meet the needs of the projected ageing population of the region.

SEA Topic	Environmental Baseline Features	Key Issues
	<ul style="list-style-type: none"> ▪ In the Shetland Islands, life expectancy at birth is higher than at Scotland level for both females and males; life expectancy is showing an upward trend. ▪ Hospital provision within the Health Board is comprised of Gilbert Bain Hospital in Lerwick and Lerwick Health Centre. Air connectivity with Aberdeen Royal Infirmary is a critical component of Shetland’s transport infrastructure. ▪ The Draft NPF4 (2021) proposes creation of carbon neutral coastal and island communities (e.g., sustainable and fair access to affordable healthier food will support future resilience and broader objectives including reduced child poverty and improved health outcomes). 	<ul style="list-style-type: none"> ▪ Provide transport services that enable participation and reduce rural isolation. ▪ Protect the health and wellbeing of resident and workplace populations. ▪ Facilitate and encourage active travel to promote healthy and active lifestyles to help reduce obesity levels and improve other health and wellbeing outcomes, supporting public health benefits. ▪ Protect and enhance access to areas of high quality open space provision. ▪ Protect and enhance access for all to healthcare, community and leisure facilities. ▪ Avoid adverse health effects from the development and upgrading of transport facilities and services.
	<p>Relevant SEA Objective: 9. Human Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.</p>	
Material Assets	<ul style="list-style-type: none"> ▪ Contaminated land is not identified as a significant issue within the Shetland Islands, although there are a number of sites which may require remediation. ▪ The Draft NPF4 (2021) proposes creation of carbon neutral coastal and island communities (e.g., a bespoke and flexible approach to the concept of 20-minute neighbourhoods, for example by identifying service hubs in key locations with good public transport links); protect and enhance blue and green infrastructure (e.g., peatland restoration); strengthen resilience and decarbonise connectivity (e.g., improved digital connectivity). 	<ul style="list-style-type: none"> ▪ Align with and support the implementation of the adopted Local Development Plan and other relevant regional and local policies applicable to Shetland. ▪ Promote the efficient use of natural resources, including moving towards a low carbon and circular economy to increase resource efficiency, reduce demand on non-renewable resources and lower carbon emissions associated with resource use and extraction. ▪ The need to mitigate climate change, including through promoting sustainable land use patterns and the decarbonisation of the transport sector. ▪ Make the best and most efficient use of existing infrastructure and available land. ▪ Maintain and upgrade transport assets and develop new sites that can be adapted for future changes in use, technology and to respond to increasing impacts from future changes in climate and adverse/extreme weather events. ▪ Maintain and enhance the security and safety of transport infrastructure.

SEA Topic	Environmental Baseline Features	Key Issues
	Relevant SEA Objective: 10. Material Assets: Manage, maintain and where possible improve the efficient and effective use of natural resources, ecosystem services, land and infrastructure to meet identified needs.	

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- 3.3.5 Whilst all of the key environmental issues covered in the baseline and policy review should be addressed in the new RTS, the following must be afforded particular importance given their significance at national and international levels and their local relevance:
- Responding to the climate emergency (both in terms of the causes of climate change and adaptation to climate change); and
 - Contributing to the delivery of sustainable and inclusive economic growth.
- 3.3.6 It is recognised that the response to the climate emergency is closely related to other environmental topic areas, including air quality, biodiversity, soils (both in terms of their carbon storage and the effect of climate change on soils), water, human health and socio-economics. As transport is Scotland's biggest contributor to climate change, emitting over a quarter of all greenhouse gas emissions, the RTS provides an opportunity to contribute to net zero targets, thus also indirectly supporting these wider topic areas.

3.4 Evolution of the Baseline in the Absence of the Emerging RTS

- 3.4.1 In the absence of the emerging RTS, it is predicted that transport infrastructure and provision in the region would face challenges in meeting changing transport demands, including the need to support emissions reductions, accessible public transport as well as the delivery of inclusive economic growth. In the absence of a new Strategy, after the expiration of the current RTS, ZetTrans would be in breach of the requirements under the Transport (Scotland) Act 2005 to prepare and maintain a RTS for Shetland, and when doing so to have regard to the current National Transport Strategy (NTS2). This would result in a regional policy vacuum and would prevent ZetTrans from having an up to date strategy aligned with current regional strategies and national policies including the emerging National Planning Framework (NPF4).
- 3.4.2 In relation to the environmental topics prescribed in Schedule 2 of the SEA Act, it should be noted that environmental impacts from individual transport infrastructure projects would depend on their location, design and operational characteristics, and these would be assessed through the consenting of each project rather than through the emerging RTS. However, in the absence of the new RTS, the following changes to the environmental / SEA baseline might be predicted:
- **Population:** If not carefully co-ordinated, there will be limited ability to shape the transport system to meet the needs of islanders, support population retention and underpin sustainable and inclusive economic growth. In addition, this could impede the delivery of inclusive growth and stifle economic productivity, as well as resulting in physical environmental and health impacts (see below).
 - **Human Health:** Opportunities to encourage transport modal shift to active travel and public transport could be lost. Additionally, if significant switch to active modes of transport is not achieved, physical and mental health issues, including obesity, inactivity and social exclusion may adversely affect the resident population of the ZetTrans region. Health may therefore deteriorate which could impact on life expectancy .
 - **Biodiversity, Flora & Fauna:** If not carefully co-ordinated through the emerging RTS, the need for new major transport infrastructure to cope with issues unique to island communities such as inter-island connectivity could put pressure on biodiversity and geodiversity, including the loss and fragmentation of habitats. Unchecked increases in traffic and noise could also result in habitat degradation and species disturbance.
 - **Soil:** If not carefully co-ordinated, the need for new major transport infrastructure to cope with issues unique to island communities could lead to the loss of important soil resources and peatland, soil erosion and land contamination.
 - **Water:** If not carefully co-ordinated, the need for new major transport infrastructure to cope with issues unique to island communities could result in increased risk of flooding and the pollution of the water environment. The provision of new and upgraded ferry infrastructure also need to be co-ordinated to avoid adverse marine environmental impacts, including

potentially on the integrity, qualifying features and conservation objectives of statutorily designated sites.

- **Air Quality & Climatic Factors:** In the absence of better integration between transport planning and land use/ spatial planning, and substantial modal shifts towards sustainable modes of travel, an increase in road traffic associated with a decline in public transport use would (based on projected EV uptake in the immediate term) increase fossil fuel combustion, carbon emissions and local atmospheric pollution, in particular greater release of particulate matter. This would lead to reduced air quality and act against wider policy efforts to decarbonise key economic sectors, including transport, to mitigate climate change.
- **Material Assets:** The absence of the emerging RTS could result in the failure of ZetTrans and Shetland Islands Council to attract substantial public and private sector funding needed to maintain existing transport infrastructure, better integrate transport modes and to deliver the new or upgraded infrastructure required to meet the needs of an island population. This would jeopardise the ability of ZetTrans, as the statutory RTP for the Shetland area, to support the delivery of sustainable and inclusive economic growth.
- **Cultural Heritage:** If not carefully co-ordinated, the need for new transport infrastructure to cope with issues unique to island communities could increase development pressures in areas of historical or archaeological interest and could undermine the integrity and setting of sensitive heritage assets.
- **Landscape:** If not carefully co-ordinated, the need for new major transport infrastructure to cope with issues unique to island communities could adversely impact on the landscape character of and key landscape features, as well as adversely affecting visual amenity.

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4 Strategic Environmental Assessment (SEA) Process

4.1 Introduction

4.1.1 This section provides an overview of the SEA process which has been undertaken to assess the likely significant environmental effects of the emerging Draft RTS. Section 4.2 outlines the statutory requirements. The overall purpose of the assessment and the framework of SEA Objectives is set out in Section 4.3. Section 4.4 provides the assessment methodology, including details of how the SEA is integrated with the development of the RTS, sets out the SEA Framework and the approach to consultation. Consideration of alternatives within the RTS is presented in Section 4.5; finally, Section 4.6 provides an overview of how the SEA process has informed the development of the RTS.

4.2 Addressing Statutory Requirements

4.2.1 The Environmental Assessment (Scotland) Act 2005 ('the 2005 Act') requires Responsible Authorities, including RTPs such as ZetTrans, to assess the likely significant effects on the environment of implementing relevant and qualifying plans and programmes, as defined within the Act. This assessment must also examine the likely significant effects of implementing reasonable alternatives to the plan or programme under consideration. The assessment is carried out by following a staged process of reporting known as SEA.

4.2.2 Under the 2005 Act, once the need for SEA has been established a three-stage process is usually followed:

- **SEA Scoping:** Responsible authorities must provide the SEA Consultation Authorities with sufficient information to enable them to consider the proposed scope, level of detail and consultation period for an Environmental Report to accompany the emerging plan or programme under consideration. This requirement was fulfilled through the submission of a SEA Scoping Report to the Consultation Authorities on 3rd September 2021 for a 35-day period. Details of how these scoping consultation responses have been addressed in this SEA are provided in Section 4.3;
- **Preparation of and Consultation regarding an Environmental Report:** The relevant Responsible Authority must prepare an Environmental Report (ER) to "*identify, describe and evaluate the likely significant effects on the environment of implementing*" the emerging plan and its reasonable alternatives. The ER also needs to provide a "*description of the measures envisaged concerning monitoring*" of likely significant environmental effects from implementing the plan. Both the ER and associated emerging strategy must be consulted on in tandem prior to the final approval of the strategy. The scope, level of detail and consultation period of the SEA align with the approach agreed through SEA Scoping; and,
- **Preparation of a Post Adoption SEA Statement:** Following modifications as necessary to respond to comments submitted regarding the Draft RTS and associated ER, ZetTrans will update the Draft RTS and then submit the proposed finalised RTS to the Scottish Ministers for approval. Following approval of the final RTS, a statement must then be prepared to set out, amongst other matters, how environmental considerations have been taken into account and how any likely significant effects of the RTS on the environment (as predicted through this SEA process) will be monitored.

4.2.3 To satisfy statutory requirements it is necessary for this ER to provide certain information. The approach to addressing relevant requirements is shown in Table 4-1 below.

Table 4-1 How Requirements of the 2005 Act are met in this SEA ER

SEA Requirement	ER Section
a) An outline of the contents, main objectives of the plan or programme and relationships with other relevant plans and programmes	▪ Section 2
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	▪ Section 3 ▪ Appendix B
c) The environmental characteristics of areas likely to be significantly affected	
d) Any existing environmental problems which are relevant to the plan or programme	
e) The environmental protection objectives, established at international, community or national level which are relevant to the plan or programme and the way those objectives and any environmental consideration have been taken into account during its preparation	▪ Section 2.4 ▪ Appendix A
f) The likely significant effects of the plan or programme on the environment	▪ Section 5 ▪ Appendix E
g) The measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment of implementing the plan or programme	▪ Section 6
h) An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken, including any difficulties encountered in compiling the required information	▪ Section 4
i) A description of measures envisaged concerning monitoring	▪ Section 6
j) A non-technical summary of the information provided under the above headings	▪ Refer to separate Non-Technical Summary Report
k) Taking the environmental report and the results of the consultations into account in decision-making	▪ Sections 3, 4, 5, 6

4.3 SEA Purpose and Objectives

4.3.1 This report has been prepared by Stantec to assess the extent to which the Draft RTS addresses relevant environmental issues. In doing so, this report responds to relevant statutory requirements, considers the development of the emerging RTS to date and presents an initial assessment of likely significant effects from the proposed RTS Objectives. This forms the second stage of a multi-stage SEA that will be carried out to assess the likely significant environmental effects from the emerging RTS throughout its development.

4.3.2 The framework for the SEA has been established through early formulation of a set of ten objectives which reflect the key priorities for the environmental assessment. These objectives were drafted at the scoping stage of the process and subsequently consulted on with the SEA Consultation Authorities. They are set out in Table 4-2.

Table 4-2 SEA Objectives

SEA Objective	Objective Wording
1. Climate Change:	Respond to the climate emergency by decarbonising infrastructure assets, promoting natural infrastructure, facilitating a low carbon economy and adapting to accommodate the effects of climate change.

2. Air Quality and Amenity	To maintain air quality and, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.
3. Biodiversity, Geodiversity and Soil	Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding designated and non-designated sites, species, habitat connectivity, soil resources and habitats and by protecting green infrastructure.
4. Water, Flood Risk and Resilience	Conserve, protect and enhance water environments, water quality and water resources, whilst adapting to climate change and reducing flood risks.
5. Cultural Heritage	Conserve, protect and enhance the historic environment cultural assets and promote Shetland's distinct culture.
6. Landscape	Protect and enhance the landscape character, townscape character and visual amenity.
7. Accessibility and Connectivity	Ensure appropriate connectivity and affordable access for all to employment, education, facilities and services, and social and leisure opportunities.
8. Inclusive Growth	Improve social and economic prosperity for all by enhancing productivity and competitiveness and through reducing societal inequalities.
9. Human Health	Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.
10. Material Assets	Manage, maintain and where possible improve the efficient and effective use of natural resources, ecosystem services, land and infrastructure to meet identified needs.

4.4 Approach to SEA

4.4.1 This section describes the approach to SEA, identifies the key stages and the assessment methods used. Consultation on the SEA to date is discussed and the final sub-section sets out the assumptions and limitations in undertaking the environmental assessment.

SEA Project Team

4.4.2 Stantec has provided drafting and technical support to ZetTrans to support the preparation of the Draft RTS and regular discussions have been held with senior officers at ZetTrans throughout the process of preparing the Draft RTS. This has allowed informal and early feedback of key issues identified by the SEA project team, resulting in iterative amendments to strengthen the RTS as it developed. Further details of how the SEA process has informed the preparation of the Draft RTS are provided in Section 5.

Key Stages of the SEA

4.4.3 The SEA has been undertaken iteratively and in step with the development of the emerging RTS. The key stages of RTS development and parallel SEA activities are set out in Table 2-1.

4.4.4 The approach to environmental assessment at this stage when developing components of the Draft RTS has focused on three key groups of Strategy elements as follows:

- compatibility appraisals of the preliminary elements (or 'strategic framework') of the Draft RTS including the Vision and Objectives;
- environmental appraisal of the long list of transport options generated in the transport planning analysis of problems and opportunities; and
- environmental assessment of the subsequent draft RTS themes and associated policies (as presented in the draft Strategy).

Assessment Methods

- 4.4.5 The early stages of the SEA process included development of an assessment methodology which was set out in the SEA Scoping Report. This included the identification of the SEA framework (including SEA objectives – see Section 4.2) to provide the basis for comprehensive environmental assessment of the RTS components and a consistency of approach. This has been updated slightly in response to feedback from the SEA Consultation Authorities (see the sub-section below on ‘consultation’) and as the RTS drafting and assessment process has developed. The SEA framework is presented in Appendix C.
- 4.4.6 The framework is based around ten SEA Objectives, the potential effects of each RTS element is assessed against these SEA Objectives. The framework includes a series of guide questions and supporting criteria to inform the consideration in a consistent and objective manner. Due to the high-level nature of the Strategy, the SEA team has applied professional judgement drawing from experience of assessing similar plans and programmes to determine the likelihood of significant environmental effects and to identify mitigation where appropriate.
- 4.4.7 The approach to environmental assessment at each of the above key RTS stages has required a flexible method adapted to each RTS component. The methods used are explained in the following paragraphs.
- 4.4.8 The compatibility assessment of the preliminary elements (or ‘strategic framework’) of the Draft RTS followed a qualitative assessment method where the potential for environmental effects from the key emerging RTS elements at that stage (the Transport Planning Objectives and RTS Objectives) was considered by the SEA team with respect to each SEA Objective, and with reference to the guide questions in the SEA Framework. The findings of the initial compatibility appraisals were presented using simple tables with indicative environmental ‘compatibility scores’ and a supporting narrative. These appraisals were undertaken initially at the Case for Change stage and the findings presented in the Case for Change SEA ER. The appraisals have been reviewed and updated to reflect changes to the RTS elements (e.g., through changes to the wording of the RTS Objectives) following the consultation on the Case for Change in 2022. The updated appraisals based on the finalised wording of the RTS Objectives are presented in Section 5.2.
- 4.4.9 The generation and appraisal of the long list of transport options for the Strategy was undertaken in accordance with Scottish Transport Appraisal Guidance (STAG) methods. The SEA team inputted into this process, providing an overarching check that all reasonable alternative options had been identified and providing an appraisal of the environmental and climate change criteria required by STAG based on a seven-point scale¹ of impact criteria to assign an indication of significance of the predicted impact alongside the impact commentaries. These appraisal inputs then informed the sifting of options to refine the list to those which offered the best performance against the RTS Objectives and the STAG criteria. The findings of the environmental appraisal of the transport options are captured both in the STAG Options Appraisal Report and in Section 5.3 of this report.
- 4.4.10 Following the options appraisal, the RTS process involved the development of eight Themes, each containing an associated set of Policies. The final key stage of the SEA environmental assessment involved the application of the SEA framework to assess the predicted environmental effects of these Policies. These also drew on the findings of the appraisals of the relevant options (as linked to each theme) from the STAG-based work.
- 4.4.11 For each element of the RTS, the SEA topic/objective was considered in turn by the assessment team and environmental effects were predicted with reference to the guiding questions and criteria in the SEA Framework and drawing on the judgement and professional experience of

¹ The scale provides a range of predicted impact categories from major through moderate and minor beneficial or adverse and one for neutral/no effect.

the assessment team. The predicted environmental effects of the RTS elements were then evaluated with reference to a set of impact criteria as shown in Table 4-3 to determine their likely significance.

Table 4-3 Significance Criteria for Assessing Environmental Effects of RTS Policies

Score	Description	Symbol
Significant (Major) Positive Effect	The proposed policy contributes significantly to the achievement of the SEA Objective	++
Minor Positive Effect	The proposed policy contributes to the achievement of the SEA Objective but not significantly	+
Neutral Effect	The proposed policy is related to but does not have any effect on the achievement of the SEA Objective	0
Minor Negative Effect	The proposed policy detracts from the achievement of the SEA Objective but not significantly	-
Significant (Major) Negative Effect	The proposed policy detracts significantly from the achievement of the SEA Objective. Mitigation is therefore required	--
Uncertain Effect	The proposed policy has an uncertain relationship to the SEA Objective or the relationship would be dependent on the way in which the aspect is managed	?
No Clear Relationship	There is no clear relationship between the proposed policy and the achievement of the SEA Objective, or the relationship is negligible	~

4.4.12 The predicted effects and their significance were recorded in a series of assessment frameworks (tables) to capture information on the nature of the predicted effects, their likely significance, and proposed mitigation (and enhancement) measures to be taken forward when a delivery plan is developed during the later stages of the RTS development process. These frameworks are presented in Appendix D and the key findings of this environmental assessment are presented in Section 5.4 of this report.

4.4.13 A high-level commentary on potential cumulative effects of the Draft RTS has also been included in Section 5.4 to recognise in particular the opportunity for synergies from enhanced active travel and public transport across the region to reduce emissions and other environmental effects.

Consultation

4.4.14 Statutory consultation with the SEA Consultation Authorities was undertaken at both the Scoping and Case for Change stages of the RTS and SEA processes.

4.4.15 At the Scoping Report stage, SEA Consultation Authorities were issued with a copy of the SEA Scoping Report and requested to provide comments regarding the proposed scope and approach to undertaking the SEA of the emerging RTS. It was requested that comments were provided within 5 weeks of receiving the report. The following consultees responded at this stage:

- NatureScot;
- Scottish Environment Protection Agency (SEPA); and
- Historic Environment Scotland (HES).

4.4.16 The Consultation Authorities were generally satisfied with the scope, level of detail and approach to the SEA presented in the Scoping Report including the SEA objectives and assessment framework. However, the scope of the SEA Framework has been refined in response to comments provided by the SEA Consultation Authorities, with greater focus now included regarding:

- promoting natural infrastructure as a way of tackling climate change;
- Inclusion of reference to ecosystem services;
- connectivity to wider ranging services and facilities; and
- clear coverage of both designated and non-designated cultural heritage assets and Shetland's distinct culture.

4.4.17 An online survey was carried out at the Case for Change stage. This was issued to both members of the public and stakeholders. The views of the SEA consultation authorities were also sought through the SEA Gateway. The consultation authorities were in general agreement with the assessment undertaken, with no substantive comments.

4.4.18 A schedule of the comments received from the SEA Consultation Authorities, and responses from the SEA team on how the issues raised have been addressed is included in Appendix E.

Assumptions and Limitations

4.4.19 The identification of any assumptions and uncertainties is an important element of the SEA process, as the emerging RTS will need to be unambiguous to ensure the plan can be implemented as intended.

4.4.20 The SEA has been undertaken alongside a relatively high level and strategic document in the RTS which is intended to cover a significant timespan of up to approximately 15 to 20 years. There is some inherent uncertainty therefore in the accuracy of predictions made for the environmental assessment of long term policies where the detail of implementation is still to be worked up. Whilst the Strategy does not include any detail on specific spatial transport interventions, the process of identifying and appraising options and the subsequent linking of options with policies in the draft Strategy has allowed the environmental assessment team to better judge the types of intervention which could potentially be associated with each policy.

4.4.21 This has reduced the uncertainties inherent in the assessment of a strategy of this nature and it is considered that the environmental assessment has been founded on sufficient prescription in the policies to allow for a competent strategic level assessment of potential significant effects. To address potential uncertainty in the degree of effectiveness of the RTS policies, the SEA team has also taken account of the typical measures which the options set provides, and the assessment assumes that policies and their subsequent delivery measures would be implemented broadly and comprehensively across the ZetTrans region in order to better understand and project their likely environmental and sustainability consequences. The reliability of these assessments has been improved through close working between the SEA and transport planning teams through the whole RTS process so that the types of options and their potential impacts were better understood.

4.4.22 The SEA assessment and reporting matrices (see Appendix D) have been designed to allow uncertainties and assumptions affecting the implementation of the emerging RTS to be identified early and effectively within the RTS preparation process.

4.4.23 The iterative nature of the SEA process has enabled mitigation and enhancement recommendations to be devised and incorporated into the emerging RTS to address any identified issues, in particular to avoid likely significant adverse effects from occurring. Finally, the commitment to continued environmental assessment at an appropriate level through the future stages of RTS delivery and incorporation of mitigation principles from this SEA (see Section 6.2) will help to ensure that any uncertainties at this stage in how policies may be taken forward can be proactively addressed through later delivery.

- 4.4.24 No significant difficulties or limitations have been encountered in preparing this SEA Environmental Report.

4.5 Consideration of Reasonable Alternatives

- 4.5.1 The SEA legislation requires that the likely significant environmental effects of implementing the Strategy and reasonable alternatives to it are identified, described and evaluated. The reasons for selecting the alternatives dealt with should also be outlined.
- 4.5.2 Alternatives and options have been considered in the RTS development process from the outset. The overall direction of the Strategy, as expressed through its Vision and Objectives, inherently considered alternatives through refinement of their wording to reflect and address priorities for transport in the ZetTrans region and in taking account of consultee feedback and suggestions on their amendment. This process included consideration of a wide range of policy drivers, spatial characteristics and transport 'key issues' as set out in the Case for Change Consultation report. The SEA process contributed to this refinement and direction through consideration of the compatibility of developing themes and wording for the RTS Vision and Objectives with environmental priorities expressed through the developing SEA objectives and framework.
- 4.5.3 The consideration of alternatives was an integral part of the identification and development of the 'delivery' elements of the RTS, principally in the form of the transport options which were generated and appraised through integrated working between the client, transport planning and SEA and equalities assessment teams. These options included a wide range of responses including policies, interventions, fiscal measures and generic indications of physical transport schemes which were broadly grouped into a series of themes. The ZetTrans RTS Preliminary Appraisal report (Stantec UK, 2022) sets out the initial option generation process, the packaging of those options and their appraisal using STAG criteria.
- 4.5.4 By considering a very long list of potential options to address transport challenges in the region, a broad view of the alternatives available for the new transport strategy was adopted. An initial phase of option sifting was undertaken, and it was determined that several options should not be taken forward for subsequent appraisal. Table 4.1 of the ZetTrans RTS Preliminary Appraisal report (Stantec UK, 2022) sets out the options that were sifted at this stage and the rationale for these decisions, reasons included feasibility, policy compliance and a lack of public acceptability.
- 4.5.5 This initial sifting process resulted in over 70 options being taken forward for appraisal. The transport planning, STAG and SEA processes ensured that there was full consideration of the potential for adverse and beneficial effects of these options which helped to refine and sift the most suitable (and therefore, reasonable) alternatives for further consideration. These alternative courses of action were therefore subject to environmental assessment by integrating the SEA and RTS workstreams. The findings of the STAG process are presented in a supporting transport appraisal report to the RTS (Stantec UK, 2022).
- 4.5.6 As the RTS is a high level and strategic document, there remains considerable flexibility in the identification and consideration of alternatives for implementation of transport solutions during later stages of implementation. This process will facilitate ongoing appraisal of the interventions which emerge and the SEA provides a framework to underpin and support required further environmental design and assessment input to the future RTS Delivery Plan.

4.6 How the SEA informed the RTS

- 4.6.1 Integration of the SEA process and team with the RTS and transport planning workstreams has allowed for an iterative approach to RTS development whereby feedback from the SEA team at key stages of Strategy development has informed subsequent RTS updates. This is considered

to have improved the environmental context and contribution to better environmental outcomes. The key stages of this integrated approach have included:

- A review of the coverage of environmental issues in the draft RTS Case for Change (CfC) report which identified that the CfC report generally provided a strong evidence-based platform on which to develop the RTS and underpin action to tackle key environmental issues. The RTS draft objectives were reviewed against the SEA objectives and considered to be compatible with the SEA objectives.
- This review, and a supporting 'compatibility appraisal' of the RTS Objectives, also made recommendations on how RTS Objectives should be further developed to set out clearer outcomes, more explicit coverage of some environmental issues (including climate change mitigation and adaptation) and hence improve the environmental performance of the proposed RTS. The Strategy has therefore been developed following the Case for Change with very clear and explicit integration of environment related issues.
- The CfC ER recommended that at the next stage of RTS development, a set of clear outcomes is developed to support and underpin the achievement of each RTS objective; this has been addressed in the RTS. The ER also recommended an overarching Vision was included in the RTS, which has now been addressed.
- The SEA at the Case for Change stage also identified a series of emerging environmental issues from synthesis of baseline information which was fed back to be taken into account in the development of the RTS, broadening the scope from problems identified by users of the transport system, to include broader context such as the policy horizon and opportunities.
- The Draft RTS for consultation incorporates text on the input of the SEA (and equalities) assessments into development of the Strategy and many of the principal themes running through the document's various chapters are inherently of an environmental nature.
- An initial SEA 'coverage' assessment was also undertaken on the initial draft of the long list of options. This analysis identified that the options provided good coverage of relevant strategies and policy commitments. An initial review of the compatibility of these options with the SEA objectives was also undertaken, providing feedback on how options could be developed to improve compatibility with all SEA objectives (noting however the challenges of predicting environmental effects / outcomes when the options are necessarily high level and not locationally specified). The development, specification and appraisal of the emerging options is set out in further detail in the Preliminary Options Appraisal Report (Stantec UK, 2022) which will be made available during the public consultation period on the Draft RTS.
- The STAG assessment of the options and the subsequent SEA framework based assessment of RTS Policies has provided a mechanism to identify predicted beneficial and adverse effects of the RTS and to develop mitigation measures which, provided they are committed through the implementation phases of the Strategy, will secure minimal adverse environmental effects and provide enhancement opportunities. A key role of the SEA process is therefore to develop appropriate mitigation and enhancement which can help address uncertainties in future Strategy delivery and strengthen the sustainability performance of the RTS. The suite of mitigation principles identified from the detailed environmental assessment of the RTS policies is set out in Section 6.2.

4.6.2 Through this approach, it is considered that the iterations of the RTS at each key stages have taken better account of environmental issues than they would have done without the SEA and has contributed to formulation of a draft Strategy which optimises beneficial environmental effects, minimises adverse effects and identifies opportunities for environmental and social enhancement. The Draft RTS has very strong themes around climate change and social justice, for example and the proposed transport measures and interventions are well aligned with the

objective to achieve emissions reduction, climate resilience and other environmental and health outcomes.

- 4.6.3 In taking the RTS forward to implementation stages, it will be important to maintain the focus on achieving these beneficial outcomes for people and the environment. Further details on proposed methods for monitoring the process and embedding mitigation are set out in Section 6.3 of this report.

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5 Findings of the Environmental Assessment

5.1 Introduction

5.1.1 This section sets out the findings of the environmental assessment of each key component of the Draft RTS. Section 5.2 presents the assessment of compatibility of the RTS and SEA vision and objectives. Section 5.3 sets out a summary of the key findings of the environmental appraisal of the RTS options and the assessment of the likely significant effects of the RTS policies is set out in Section 5.4.

5.2 Assessment of Vision and Objectives

5.2.1 An assessment of the compatibility of the RTS Objectives was undertaken at the Case for Change stage; and the Vision at the Draft RTS stage. The Vision and Objectives were appraised against the SEA Objectives to inform identification of any clear inconsistencies between the two sets of objectives and to identify any potentially significant environmental effects. The findings of the assessment have been updated to reflect subsequent amendments to RTS Objectives and are set out in **Error! Reference source not found.**

5.2.2 The RTS Vision states that:

“Our transport network in Shetland and our connections to the rest of Scotland support our social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to our net zero emission targets.”

5.2.3 Six RTS Objectives were developed at the Case for Change stage in response to the identified transport problems. Considering the commentary contained within the SEA Case for Change and other consultation, the Objectives were updated. As such, the RTS Objectives are:

- Strategy Objective 1 - To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups to / from the rest of Scotland.
- Strategy Objective 2 - To address the barriers which constrain access to and/or impose unreasonable costs on travel and freight transport for all groups within Shetland.
- Strategy Objective 3 - To facilitate and encourage safe walking, cycling and wheeling for everyone, including for leisure and tourism.
- Strategy Objective 4 - To improve alternative, more sustainable travel options in Shetland for all including those without access to or who would prefer not to use a car.
- Strategy Objective 5 - To transition towards an environmentally and financially sustainable, post-carbon transport system.
- Strategy Objective 6 - To support safe, resilient, and efficient movement of all people and freight across Shetland.

5.2.4 The table below considers the compatibility of the RTS Vision and Objectives with the SEA Framework. In the table reference is made to Draft RTS Objectives numbers which can be read from the full list above.

5.2.5 In overall terms, the Vision and suite of proposed RTS Objectives have evolved in response to previous SEA reviews and clearly identify the role of the transport system in ‘facilitating’ positive environmental and health outcomes, as well as referencing the need for the transport system to

be developed and operated sustainably. This provides an appropriate high-level platform from which to develop specific policies and proposals to address a range of key environmental (as well as socioeconomic and wider) issues.

RTS Strategic Objectives

- 5.2.6 An assessment of the compatibility of the proposed RTS Vision and Strategic Objectives with the SEA Objectives defined within the RTS SEA Framework (Appendix C) is presented in Table 5.1 below.

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Table 5-1 Compatibility of RTS Objectives with SEA Framework (refer to full wording of RTS objectives above)

SEA Objectives	RTS Vision		RTS Objectives				Commentary	
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland		
<p>1. Climate Change: Respond to the climate emergency by decarbonising infrastructure, promoting natural infrastructure, facilitating a low carbon economy and adapting to accommodate the effects of climate change.</p>	++	-?	-?	+	+	++	+	<p>The RTS Vision directly references supporting a proportionate contribution to net zero emission targets.</p> <p>In isolation, RTS Objectives 1 and 2 conflict with SEA Objective 1 relating to climate change. The current ferry and air transport within Shetland and to the rest of Scotland are by their nature carbon intensive. Addressing the barriers to travel, could increase travel and thus (without intervention), carbon emissions. This conflicts with the climate emergency. However Objective 5 supports the transition towards an environmentally sustainable post-carbon transport system, noting the control and influence Shetland Islands Council and ZetTrans have over the internal and external transport connections and the opportunity to directly contribute to the decarbonisation of transport in Shetland as well as ensuring that new transport services and infrastructure are planned and delivered sustainably.</p> <p>RTS Objectives 3, 4 and 5 support active travel measures, more sustainable travel</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary	
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland		
							<p>options and a post-carbon transport system which support this SEA Objective.</p> <p>RTS Objective 6 focuses on making car-based travel and the movement of goods safe, resilient and efficient; and all modes of travel resilient and able to adapt to the threat posed by climate change. As such it is compatible with this SEA Objective.</p> <p>The RTS Objectives do not explicitly refer to measures to reduce the need to travel (such as improved broadband connections), which would benefit this SEA Objective.</p>	
<p>2. Air Quality and Amenity: To maintain air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.</p>	+	-?	-?	+	+	++	+	<p>The RTS Vision seeks to enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contribute to net zero emission targets. Whilst not engaging specifically with air quality issues, this indirectly helps to address air quality and amenity issues.</p> <p>In isolation, RTS Objectives 1 and 2 conflict with SEA Objective 2 relating to air quality and amenity. The current ferry and air transport within Shetland and to the rest of Scotland result in emissions to atmosphere, noise and vibration (albeit the</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland	
							<p>noise and vibration issues were not identified as problems locally either through the consultation or baseline environment review). Addressing the barriers to travel, would increase these services and thus (without intervention) would increase these effects. However, Objective 5 supports the transition towards an environmentally sustainable post-carbon transport system, which is likely to address such concerns.</p> <p>RTS Objectives 3, 4 and 5 support active travel measures, more sustainable travel options and a post-carbon transport system which support this SEA Objective.</p> <p>RTS Objective 6 focuses on making car-based travel and the movement of goods efficient. As such it is compatible with this SEA Objective.</p> <p>The RTS Objectives do not consider measures to reduce the need to travel (such as improved broadband connections), which would benefit this SEA Objective.</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland	
<p>3. Biodiversity, Geodiversity and Soil: Conserve, protect, restore and enhance biodiversity and geodiversity interests, including through safeguarding designated and non-designated sites, species, soil resources and habitats and by protecting and enhancing green infrastructure</p>	+	?	?	?	?	?	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets. Whilst not engaging specifically with biodiversity, geodiversity and soils, this provides a suitable platform to address physical environmental issues.</p> <p>Overall, the relationship between the RTS Objectives and the Biodiversity, Geodiversity and Soil SEA Objective is uncertain. There is no explicit consideration of impact on biodiversity, geodiversity and soil in the RTS Objectives. However, these issues will be considered as the RTS Delivery Plan is developed and relevant interventions are identified, developed, and taken forward.</p> <p>However, RTS Objectives 3, 4, 5 and 6 support active travel, more sustainable travel options, transition towards an environmentally sustainable post-carbon transport system and efficient movement of people and freight. As such, they have the potential to support this SEA Objective,</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary	
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland		
							depending on the way in which the aspect is managed as the RTS develops.	
<p>4. Water, Flood Risk and Resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst adapting to climate change and reducing flood risks.</p>	+	?	?	?	?	?	+	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets. Whilst not engaging specifically with water, flood risk and resilience, this provides a suitable platform to address physical environmental issues.</p> <p>Overall, the relationship between the RTS Objectives and the Water and Flood Risk elements of this SEA Objective is</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland	
							<p>uncertain. There is no explicit consideration of impact on water quality and flood risk in the RTS Objectives. However, these issues will be considered as the RTS Delivery Plan is developed and relevant interventions are identified, developed, and taken forward.</p> <p>However, RTS Objectives 3, 4, 5 and 6 support active travel, more sustainable travel options, transition towards an environmentally sustainable post-carbon transport system and efficient movement of people and freight. As such, they have the potential to support this SEA Objective, depending on the way in which the aspect is managed as the RTS develops. Where relevant the subsequent interventions to implement these Objectives should include appropriate consideration and safeguards in respect of water quality and flood risk.</p> <p>RTS Objective 6 is compatible with the Resilience element of this SEA Objective, through supporting travel networks resilience and ability to adapt to the threat posed by climate change.</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary	
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland		
<p>5. Cultural Heritage: Conserve, protect and enhance the historic environment, designated and non-designated cultural assets and promote Shetland's distinct culture.</p>	+	?	?	?	?	+	?	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets. Whilst not engaging specifically with cultural heritage, this provides a suitable platform to protect the historic environment.</p> <p>Overall, the relationship between the RTS Objectives and the Cultural Heritage SEA Objective is uncertain. There is no explicit consideration of impact on cultural heritage in the RTS Objectives. However, these issues will be considered as the RTS Delivery Plan is developed and relevant interventions are identified, developed, and taken forward.</p> <p>RTS Objective 5 supports transition towards an environmentally sustainable transport system, as such it has the potential to support this SEA Objective.</p> <p>RTS Objectives 1, 2,3, 4 and 6 have the greatest potential to align with Cultural Heritage as they could make heritage assets more accessible to residents and</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland	
							tourists alike. However, increased visitor numbers should be supported by any required infrastructure to cope with larger volumes of people. Where relevant, interventions to implement these Objectives should include appropriate safeguards in respect of cultural heritage to conserve, protect and enhance the historic environment and cultural assets.
6. Landscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	?	?	?	?	+	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets. Whilst not engaging specifically with landscape, this provides a suitable platform to address physical environmental issues.</p> <p>Overall, the relationship between the RTS Objectives and the Landscape SEA Objective is uncertain. There is no explicit consideration of impact on landscape,</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland	
							<p>townscape and visual amenity in the RTS Objectives. These issues will be considered as the RTS Delivery Plan is developed and relevant interventions are identified, developed, and taken forward.</p> <p>RTS Objective 5 supports transition towards an environmentally sustainable transport system, as such it has the potential to support this SEA Objective.</p> <p>RTS Objective 1, 2, 3, 4 and 6 have an uncertain relationship with this SEA Objective as potential impacts (beneficial or adverse) would depend on their implementation. Where relevant, interventions to implement these Objectives should include appropriate consideration and safeguards in respect of landscape character and visual amenity.</p>
<p>7. Accessibility and Connectivity: Ensure appropriate and affordable access for all to employment, education, facilities, services, and social and leisure opportunities.</p>	++	++	++	++	++	++	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets. Whilst not engaging specifically with landscape, this provides a suitable platform to address physical environmental issues.</p>

SEA Objectives	RTS Vision	RTS Objectives						Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland		
								<p>The Accessibility SEA Objective receives good coverage across all six of the RTS Objectives.</p> <p>Objectives 1 and 2 look to address barriers to all groups to travel to/from the rest of Scotland and within Shetland respectively. RTS Objectives 3 and 4 aim to facilitate active travel for everyone and improve more sustainable travel options for all including those without access to a car; RTS Objective 5 aims for a financially sustainable post-carbon transport system and RTS Objective 6 supports safe and efficient movement of people and goods.</p>
<p>8. Inclusive Growth: Improve social and economic prosperity for all by enhancing productivity and competitiveness and through reducing societal inequalities.</p>	++	+	+	+	+	+	+	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets.</p> <p>All RTS Objectives align with this SEA Objective through seeking to enhance the efficiency and performance of the transport system for all groups whilst increasing accessibility enabling economic growth/prosperity.</p>

SEA Objectives	RTS Vision	RTS Objectives						Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland		
								RTS Objectives 1, 2 and 6 are particularly compatible with this SEA Objective by seeking to address the barriers specific to Shetland and improve efficiency.
<p>9. Human Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.</p>	++	+	+	++	+	+	+	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets.</p> <p>Overall, the Health SEA Objective is well represented throughout all RTS Objectives. RTS Objectives 1 and 2 seek to address the Shetland specific barriers to transport which affect the ability of Shetland residents to see friends and family and participate in mainland-based activities, including access to health care. This brings benefits for mental health and social wellbeing.</p> <p>RTS Objectives 3 to 6 reduce the reliance on carbon-based transport, thus reducing emissions to air and potentially subsequently improving health.</p>

SEA Objectives	RTS Vision	RTS Objectives						Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland		
								<p>RTS Objective 3, supports active travel, has clear links to the Health SEA Objective as it directly seeks to improve health (both physical and mental) and wellbeing through transport interventions.</p> <p>By supporting safe transport across all modes of travel, RTS Objective 6 relates well to the Health SEA Objective.</p>
<p>10. Material Assets: Manage, maintain and where possible improve the efficient and effective use of natural resources, ecosystem services, land and infrastructure to meet identified needs.</p>	++	?	?	+?	+?	++	?	<p>The RTS Vision seeks to support social and inclusive economic prosperity, provide equitable access to opportunities, enable people to live healthy and active lives, facilitate the development of sustainable and inclusive communities, and contributes to net zero emission targets. It provides a supportive platform to deliver efficient use of resources and delivery of infrastructure to meet identified needs.</p> <p>Overall, the relationship between the RTS Objectives and the Material Assets SEA Objective is uncertain. There is no explicit consideration of the efficient and effective use of natural resources, ecosystem services, land and infrastructure to meet identified needs in the RTS Objectives. These issues will be considered as the</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland	
							<p>RTS Delivery Plan is developed and relevant interventions are identified, developed, and taken forward.</p> <p>However, RTS Objective 5 supports the transition towards an environmentally sustainable post-carbon transport system, noting the direct control Shetland Islands Council and ZetTrans have over Shetland's internal transport and their influence over the external transport connections. Whilst the objective relates to environmental sustainability, there is no explicit consideration of the efficient and effective use of natural resources, ecosystem services and land and at this early stage.</p> <p>RTS Objectives 3, 4, and 6 support active travel, more sustainable travel options, and efficient movement of people and freight. As such, they have the potential to support this SEA Objective, depending on the way in which the aspect is managed as the RTS develops.</p> <p>Where relevant interventions to implement these Objectives should include appropriate safeguards in respect of the efficient and effective use of natural</p>

SEA Objectives	RTS Vision		RTS Objectives				Commentary
	1 Barriers to/from Scotland	2 Barriers within Shetland	3 Facilitate walking, cycling, wheeling	4 Improve sustainable transport options in Shetland	5 Transition to post-carbon transport system	6 Support movement of people and freight across Shetland	
							resources, ecosystem services, land and infrastructure to meet identified needs.
KEY:	++	Strongly compatible	-	Incompatible			
	+	Compatible	~	No Clear Relationship			
	0	Neutral	?	Uncertain			

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- 5.2.7 The assessment provided in Table 5-1 demonstrates that in general the proposed RTS Objectives provide an appropriate high-level platform from which to develop specific interventions to address a range of key environmental (as well as socio-economic and wider) issues.
- 5.2.8 The assessment has identified some areas of potential conflict between objectives to promote accessibility with requirements to meet carbon emissions reductions targets. This may be particularly apparent within Shetland given it is recognised that car, ferry and air-based travel will remain important socially and economically, given the population density and island context. The potential for conflict would be mitigated through facilitation of rapid decarbonisation of transport in the region.

5.3 Assessment of Transport Options

- 5.3.1 This section summarises the findings of the appraisals of the long list of transport options considered during the RTS development in response to the analysis of transport problems and opportunities across the ZetTrans region.
- 5.3.2 The options were classified into a series of themed groups which allowed for consideration of similar types of transport option collectively. A summary of the findings of the environmental appraisal of the options within each group of options is presented in Table 5-2 **Error! Reference source not found.** Further information on the process of transport option development and STAG appraisal is set out in a stand-alone ZetTrans Regional Transport Strategy Preliminary Appraisal report (Stantec UK, 2022) which will be made available during consultation on the Draft RTS and this SEA ER.

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Table 5-2 Environmental appraisal of transport options

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
<p>1. Transforming our communities A group of four options (options 1A to 1D) promoting sustainably locating new developments, reallocating road space to active travel routes, reducing traffic speeds and implementing parking restrictions.</p>	<ul style="list-style-type: none"> ▪ The options perform well in relation to environmental issues. Sustainably locating new developments, such as through the 20-minute neighbourhood model, reduces the need to travel and provides opportunities to integrate active travel within site layouts. ▪ Measures to slow traffic and reduce inconsiderate parking can also encourage active travel which would also help reduce emissions where walking and cycling trips replace car journeys. These options, along with reallocating road space to active travel routes, perform particularly well in relation to the health and accessibility and connectivity SEA objectives. ▪ Reduced car-based travel would see benefits in terms of climate change, air quality (although it is noted this is not a particular concern in Shetland), noise and resource use (material assets SEA objective). 	<ul style="list-style-type: none"> ▪ Success of the options and their contribution to the environment and health would depend on the scale of implementation (e.g., broad adoption in planning and development would be required to achieve significant changes) and their integration with other options (e.g., implementing parking charges is unlikely to reduce car use without alternative means of transport becoming a more attractive option). ▪ Land-use change is a long term process therefore measures would need to be introduced rapidly and at scale to achieve realisable benefits before the long term. ▪ All new infrastructure would need to be suitably located to avoid significant effects on locally sensitive areas and communities. Environmental impact assessment of development proposals may be required with appropriate mitigation and enhancement measures, dependent on their scale, local sensitivities and receptors. ▪ Journey planning information would need to be provided and delivered in formats accessible to all in order to reach relevant groups.
<p><i>Overall, negligible to moderate beneficial impacts are predicted (prior to mitigation):</i></p>		
<p>Scoring: 0 - ✓✓</p>		
<p>2. Connecting our communities A group of three options (options 2A to 2C) to invest in active travel routes (both new and existing) and widening the availability of cycling.</p>	<ul style="list-style-type: none"> ▪ Where these options reduce car-based travel, they perform well in relation to the climate change and air quality and amenity SEA objectives. ▪ An improved standard of walking and wheeling routes could also result in positive health, safety, and wellbeing outcomes through enhanced personal security and improved health outcomes associated with higher levels of active travel. This is particularly important in the Shetland context given that physical activity levels are below that of the Scottish average and the archipelago performs less well in terms of health outcomes on some measures. There would also be equality and accessibility benefits as a result 	<ul style="list-style-type: none"> ▪ Success of the options and their contribution to the environment and health would depend on the scale of implementation and their integration as part of the wider transport system. ▪ New greenfield active travel routes will require careful siting and design to prevent and minimise negative environmental impacts during construction, including on peat and other carbon rich soils, biodiversity and archaeology. ▪ Opportunities should be sought to enhance the physical environment, such as through peatland restoration.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<p>of opening up opportunities for certain equality groups as above.</p> <ul style="list-style-type: none"> ▪ The options could also have a minor benefit to the economy through opening up tourism opportunities, including green / eco-friendly tourism which has been identified as a potential growth area for Shetland, and helping people enter the labour market / access employment opportunities they could not otherwise access. ▪ However, where new 'greenfield' active travel routes are implemented at scale there is potential for significant environmental impacts in some corridors through construction such as to peat (and other carbon rich soil), biodiversity and archaeology. 	<ul style="list-style-type: none"> ▪ Journey planning information would need to be provided and delivered in formats accessible to all in order to reach relevant groups.
<i>Overall, moderate adverse to moderate beneficial impacts are predicted (prior to mitigation):</i>		
	Scoring: xx - ✓✓	
<p>3. Extending public transport connectivity <i>A group of eight options (options 3A to 3H) to change existing bus timetables, provide new bus services (including express services), introduce or enhance Demand Responsive Transport (DRT), revise taxi provision and multi-modal improvements.</i></p>	<ul style="list-style-type: none"> ▪ Increased bus and DRT services (including to provide multi-modal options) could result in a negative or positive impact with respect to climate change and the environment (air quality). On the one hand, they could lead to reduced emissions if there is modal shift to public transport. On the other hand, they may lead to an increase in emissions where it results in more vehicle kilometres and modal shift does not occur. It is noted that tailpipe emissions associated with increased vehicle kilometres would not be an issue if zero emission vehicles were introduced in combination with this option. ▪ Enhanced taxi provision may increase vehicle kilometres and thus tailpipe emissions; however, there would be a moderate benefit in terms of equality and accessibility as the taxi-based options would enhance access for those in isolated locations where public transport connectivity is particularly poor resulting in high transport costs and affordability issues. This would result in enhanced access to employment, education, healthcare, and social opportunities. There would be health, safety and wellbeing 	<ul style="list-style-type: none"> ▪ Success of these options and their contribution to the environment and health would depend on the location and scale of implementation along with their integration as part of the wider transport system. ▪ Where new vehicles are introduced, the opportunity should be sought for them to be zero or ultra-low emission and fully accessible for all users. ▪ The RTS provides an opportunity to undertake a holistic review of public transport connectivity to ensure that changes to services support an appropriate modal shift, whilst supporting accessibility. ▪ Consideration should be given to combining any increases in public transport provision with options to decarbonise the fleet and increase accessibility.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations	
	<p>benefits in the form of improved access to health and wellbeing infrastructure and better health outcomes.</p> <ul style="list-style-type: none"> Access to health and wellbeing infrastructure would be improved (and accidents could be reduced through mode shift) providing health, safety and wellbeing benefits. There would be improved public transport network coverage cross the day leading to equality and accessibility benefits. 		
<i>Overall, minor adverse to minor beneficial impacts are predicted (prior to mitigation):</i>			
Scoring: ✘ - ✔			
<p>4. Improving the quality of, and access to our public transport <i>A group of eight options (options 4A to 4H) to improve the quality of bus waiting facilities (including at Viking Bus Station), improve the quality of the on-board experience (including for those less able), reduced fares (bus and internal ferry), integrated ticketing, journey information, and single branding within Shetland.</i></p>	<ul style="list-style-type: none"> Improving the experience of bus users is unlikely to have a material effect with respect to climate change or environment although there could be impacts associated with any new construction, including localised visual impact of new shelters. However, there would be a major benefit in terms of equality and accessibility as the option would enhance access for those in society who may otherwise have been excluded from using public transport / travel more generally. This would result in enhanced access to employment, education, healthcare, and social opportunities. There would also be health, safety and wellbeing benefits in the form of improved security and better access to health and wellbeing infrastructure and thus health outcomes. Increased assistance for those less able could enable them to make journeys / more journeys thus improving both economic and social participation. Reduced bus and ferry fares may promote increased bus use, providing equality and accessibility benefits. If this option generated modal shift from cars, there would be climate change benefits. These improvements to the quality and access to public transport, could support a modal shift away from the car, with subsequent benefits to the environment and climate change. Whilst they could also encourage an increase in journeys that may not otherwise have been made, this group of options does not increase the provision of public 	<ul style="list-style-type: none"> Success of these options and their contribution to the environment and health would depend on the location and scale of implementation along with their integration as part of the wider transport system. It is likely that the potential benefits of the options in this group would be more effective when delivered in combination with other complementary measures. Improved accessibility to transport would need to be integrated and consistent across the region to offer a realistic alternative the private vehicle. New and enhanced bus waiting facilities should be located and designed to prevent and minimise localised negative environmental impacts, seeking opportunities for enhancement, such as reduced visual impact. 	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<p>transport, just its quality and access to it. Increased travel could result in economic, social and accessibility benefits.</p>	
	<p><i>Overall, negligible to minor beneficial impacts are predicted (prior to mitigation):</i></p>	
	<p>Scoring: ○ - ✓</p>	
<p>5. Connecting our islands <i>A group of 13 options (options 5A to 5M) to improve internal ferry and air connections between the Shetland's islands and the Shetland Mainland. Internal ferry options: reduced car fares, replacement with fixed links, reduced freight fares, shorter ferry crossings, retrofitting existing ferries, additional sailings, improved booking process, conversion of Lo-Lo to Ro-Ro, island based vessels. Internal flight options: operate additional flights through use of existing second aircraft or additional third aircraft, provide a 6- or 7-day service.</i></p>	<p><u>Internal ferry</u></p> <ul style="list-style-type: none"> ▪ Reduced car fares would help to address a major barrier to travel for several island communities, increasing car-based travel providing equality and accessibility benefits for those travelling with a car. However, it would encourage car use (within the capacity of the ferries) and thus emissions, and could reduce demand for public transport. ▪ Significant work has previously been undertaken to review the potential to replace ferry services to / from Bressay, Unst, Whalsay and Yell with fixed links such as bridges or tunnels: <ul style="list-style-type: none"> ○ If free, a fixed link would almost entirely remove the constraints for cars, public transport and freight travelling to and from these islands. ○ Unless active travel links are incorporated within a fixed link, they would increase the dominance of motorised transport in the isles (potentially leading to severance for those making active travel journeys). ○ A fixed link would clearly be an environmentally intrusive construction project, would incorporate significant embodied carbon and would generate additional vehicle kilometres. It would though offset the emissions from the current diesel ferry fleet, although the adoption of zero or low carbon propulsion systems in future rounds of ferry replacement should ensure this is less of an issue for future vessels. ○ The construction and operation of fixed links has the potential to significantly impact important habitats such as marine and terrestrial SPAs and SACs. 	<ul style="list-style-type: none"> ▪ Fixed links merit a comprehensive study in their own right, covering costs, deliverability, environmental and climate change effects and island social and economic impacts the balance of embodied carbon versus ferry fleet emissions reductions would need to be determined on a case-by-case basis. Environmental impact assessment of development proposals are likely to be required with appropriate mitigation and enhancement measures, dependent on local sensitivities and receptors. Habitat Regulations Appraisal screening will be required, both in relation to construction (such as loss of habitat) and operation (such an increase in vehicles, air pollution and people within sensitive habitats). ▪ Environmental impacts during harbour modification works would require further, more detailed consideration to prevent, reduce and mitigate effects.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<ul style="list-style-type: none"> ○ However, providing fixed connections to the isles would offer significant economic benefits in terms of providing unfettered access to mainland employment, business, service and leisure opportunities. This could assist in stemming population out migration and attract new residents to the isles. It does though have to be acknowledged that effectively making the isles part of the mainland could lead to a need to consider different service delivery models for e.g., health, education etc. and would also expose island businesses such as local shops to increased competition (although in-turn potentially providing island residents with lower prices). ○ A fixed link would generate significant wider economic benefits. ▪ Reduced freight fares have been screened out from further consideration as the internal ferry journey is often only a very small part of a much larger and more expensive journey. Any reduction in cost would effectively represent a transfer of revenue from the Council to the haulier. ▪ Opportunities for shorter ferry crossings are largely already implemented, hence are limited to Bluemull Sound routes by providing Fetlar with a dedicated vessel that could provide direct rather than triangular connections to Unst and Yell. As such this option is likely to realise only limited environmental benefits. ▪ Retrofitting the existing hydrocarbon fuelled internal ferries, with zero or low carbon propulsion systems would provide clear benefit to the causes of climate change. Whilst it is technically feasible, it may not be economic for older vessels for which there are replacement aspirations. ▪ Additional ferry sailings would improve access to the islands, including those that are more remote which can be effectively cut-off on some days, providing positive benefits for access and connectivity, and potentially further opportunities for economic activity. However, this would increase emission of greenhouse gases both directly and 	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<p>potentially indirectly (e.g., where it indirectly results in increased onwards travel).</p> <ul style="list-style-type: none"> ▪ Designating ferry sailings as ‘freight only’ would benefit transport of certain time sensitive such as from aquaculture, however it would reduce availability of passenger ferries with associated access implications. ▪ Conversion of the current Lo-Lo (Lift on – Lift off) to Ro-Ro (Roll on – Roll off) Fair Isle and Foula ferries would require extensive harbour works to deliver increased reliability, reduced turn-around time and thus increased resilience to weather, with the associated economic and access improvements. Environmental impacts during construction of harbour modifications are likely. ▪ Provision of a Skerries only ferry would eliminate the one hour journey each way of the current Whalsay based vessel, the reduced emissions benefits are likely to be somewhat balanced by increased sailings from Skerries, providing the associated economic and accessibility benefits, including direct employment opportunities through the new ferry service. Environmental impacts during construction of harbour modifications are likely. <p><u>Internal air</u></p> <ul style="list-style-type: none"> ▪ Use of the existing second aircraft when seats are fully booked would help support visitors as well as residents, although it is noted that this is constrained by maintenance requirements and pilot flying hours. Availability of accommodation on Fair Isle and Foula caps visitor numbers, capping the economic benefits of this option. ▪ Increasing internal air service to Fair Isle and Foula to 6 or 7-day service would increase access, particularly for high school children who travel home every three weeks, missing some school hours to do so. There would be some increased emissions through the increased flights. Ability to implement this option is limited by airport and airstrip opening hours/manning levels. ▪ Operation of a third aircraft would provide greater opportunity to increase inter-island flights however flights 	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<p>are likely to operate at a loss and is not therefore considered further at this time.</p>	
	<p><i>Overall, major adverse to moderate beneficial impacts are predicted (prior to mitigation):</i></p>	
	<p>Scoring: xxx - ✓✓</p>	<p>Overall Impact Score</p>
<p>6. Enhancing our external connections and supply chain <i>A group of 22 options (options 6A to 6V) relating to external ferries and external air. External ferry options: reduced fares, increase ferry terminal parking, customer working group, new vessels, modified vessels, price incentives, review of approach to booking, additional vessels, change Kirkwall call frequency, increase reserved freight slots, additional freight sailings. External air options: reduce fares, additional flights, larger aircraft, integrate bus and flight timetable</i></p>	<p><u>External ferries</u></p> <ul style="list-style-type: none"> ▪ Reduced external ferry fares (either for cars, passengers, or cabins) would reduce one of the cost barriers facing islanders travelling to the mainland and those visiting Shetland (supporting the economy), albeit this would be limited to those with access to a car for reduced car fares. Reduced fares would encourage more travel (within the capacity of the existing services), with associated emissions, and potential for accidents within the onward travel. Subsidy costs would increase. ▪ Increased car parking at Holmsgarth ferry terminal may encourage increased driving to the terminal and would require construction of further parking facilities, with associated local environmental impacts. ▪ A customer working group would seek to manage larger bookings to accommodate demand more efficiently, however capacity would be likely to remain a key issue. ▪ New, replacement vessels will be required within the lifespan of the RTS, providing an opportunity to provide a substantial increase in the vehicle deck, onboard sleeping accommodation and freight capacity; with further opportunities for low/zero-carbon propulsion systems, benefitting air quality and greenhouse gas release. However, if these opportunities are not realised, larger vessels are likely to increase both direct emissions, as well as allow for increased onward travel. ▪ New replacement ‘freight-plus’ vessels would increase freight capacity, increase passenger capacity, improve on-board accommodation and be significantly faster. However, they would most likely be conventionally powered in the short term, with medium term opportunities for retrofitting. 	<ul style="list-style-type: none"> ▪ Reduced ferry fares should be considered within the context of onward sustainable travel options. ▪ The environmental impact of replacement vessels (both passenger and freight) should be viewed as an opportunity to achieve zero carbon aspirations and improve air quality. Further detailed review is recommended in terms of embodied and operational carbon. ▪ The overall effect of integrating the bus external flight timetable would require further assessment to determine the likely success in relation to reducing journeys made by car.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<p>The increased freight load and speed could provide significant economic benefit in relation to the export of goods, particularly time sensitive goods.</p> <ul style="list-style-type: none"> ▪ There are limited options to increase the sleeping capacity on existing Ro-pax vessels, limiting the effects of this option. ▪ Review of the first come, first served approach to booking could allow increased availability for Islanders who need to book at short notice, compared to visitors who tend to book holiday in advance. ▪ Provision of additional vessels (Ro-pax and freight) would be transformative in terms of increased capacity and connections; however would also increase travel substantially with associated climate change effects. However, this option is considered very unlikely to be up taken by Transport Scotland within the lifetime of the RTS and thus is discounted. ▪ Calls to Kirkwall add 90 minutes to the Shetland-Aberdeen journey time; reducing the frequency of Kirkwall calls would reduce Shetland-Orkney connectivity and connectivity for Orkney residents, although it would increase efficiency through allowing slower speeds. Both decreasing and increasing the calls to Kirkwall are discounted from further consideration. ▪ Reduced freight fares are unlikely to generate significant additional vehicle movements and has been screened out. ▪ Increasing the number of slots reserved for freight on the Ro-pax service would benefit the economy, whilst limiting availability for passengers. <p><u>External air</u></p> <ul style="list-style-type: none"> ▪ Reduced air fares for all travellers would reduce the barrier of travel to the mainland for residents, businesses and visitors. If this increased demand, negative environmental impacts would be generated. ▪ Additional flights with existing or additional aircraft, or use of larger aircraft, would either need to be provided commercially, or on a subsidised basis. They would bring 	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<p>additional carbon emissions impacting on climate change and air quality; whilst increasing accessibility.</p> <ul style="list-style-type: none"> ▪ Increased fare flexibility (such as ability to change to a different flight or obtain a refund) would marginally improve accessibility. ▪ Changes to flight timetables whilst maintaining the same number of flights, would benefit some whilst hindering others. ▪ Integrating bus and flight timetables would likely require a flexible demand responsive service. The overall effect will depend on the balance between increased bus journeys and the number of cars journeys avoided. 	<p><i>Overall, major adverse to moderate beneficial impacts are predicted (prior to mitigation):</i></p> <p>Scoring: xxx - ✓✓</p>
<p>7. Decarbonising our transport <i>A group of five options (options 7A to 7E) reducing carbon emissions from transport through provision of zero or low emission: buses, internal ferries, internal aircraft, external aircraft; and encouraging electric vehicle uptake.</i></p>	<ul style="list-style-type: none"> ▪ New zero emission, accessible, buses (replacing the aging fleet) would benefit both the environment (air quality, climate change) as well as improve accessibility whilst providing improved on-board facilities. Such measures would likely promote some modal shift towards public transport. ▪ New internal ferry vessels (replacing the ageing fleet) provide opportunities for more efficient hull design, improved accessibility, along with zero or low carbon propulsion (as technology allows), enabling a step change reduction in carbon emissions. If any harbour modifications are required to accommodate the new vessels, environmental impacts during construction are likely. ▪ New internal aircraft (replacing the two aviation gasoline fuelled aircraft) with low carbon (e.g. hybrid battery and internal combustion engine) or zero carbon (e.g. hydrogen fuel cell) fuels could become proven technology within the Shetland environment within the medium term. This would allow a step change reduction in carbon emissions, whilst retaining the current lifeline services. 	<ul style="list-style-type: none"> ▪ Environmental impacts during harbour modification works would require further, more detailed consideration to prevent, reduce and mitigate effects. ▪ Further consideration is required of the refuelling infrastructure requirements of the alternative fuels, and their associated environmental impacts. ▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation of measures. ▪ To maximise benefits, the transition of fleets to low emission vehicles should be co-ordinated and widely adopted across sectors. ▪ Introduction of low emissions public transport vehicles should incorporate other measures to facilitate uptake of public transport use such as bike buses and incorporate fully accessible designs for all user groups.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	<ul style="list-style-type: none"> ▪ Longer-range zero and low carbon technology is less proven for the longer flights; thus replacement of external aircraft is potentially viable in the longer term. ▪ Encouraging uptake of electric vehicles (EVs) requires support for both the higher vehicle purchasing costs, and improvements to the charging network (including rapid chargers and electrical grid capacity). Such measures may help overcome inequality issues relating to the higher purchase costs. ▪ For all these options there is potential for indirect environmental impacts through the provision of the infrastructure required for the alternative fuel sources (e.g., any electrical grid upgrades required to support the EV charging network; hydrogen fuel infrastructure; harbour refuelling infrastructure). ▪ The options would support potentially significant beneficial outcomes for the SEA objectives on Health and Accessibility. 	
	<i>Overall, minor adverse to major beneficial impacts are predicted (prior to mitigation):</i>	
	Scoring: x / ✓ - ✓✓✓	
<p>8. Embracing new technologies <i>A group of four options (options 8A to 8D) embracing new technologies including micromobility, mobility as a service, connected and autonomous vehicles and autonomous buses.</i></p>	<ul style="list-style-type: none"> ▪ Micromobility (such as bikes, e-bikes, electric scooters and electric skateboards) encourage mobility for all and encourage a modal shift helping to reduce car kilometres and the associated emissions. Accessibility benefits extend to green tourism. ▪ Mobility as a Service (MaaS) allows collective booking of transport services (e.g., public transport, car clubs, taxis, DRT etc) to support the move away from personal owned transport, supporting more sustainable modes and reduced emissions. ▪ Connected and autonomous vehicles (CAV) operate without human intervention. Partially automated vehicles are currently available, with 'driverless' vehicles under development. The environmental effects of such measures would depend on the fuel type used and the extent of 	<ul style="list-style-type: none"> ▪ Success of these options and their contribution to the environment and health would depend on the location and scale of implementation along with their integration as part of the wider transport system. It is likely that the potential benefits of the options in this group would be more effective when delivered in combination with other complementary measures. ▪ Uptake of electric powered micromobility (e-bikes, e-scooters, e-skateboards) may require measures to ensure safety of other active travel users due to potentially higher speeds of these new forms of transport.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations	
	<p>efficiency improvements versus any increase in vehicle kilometres travelled.</p> <ul style="list-style-type: none"> Autonomous buses may, in the future, overcome the expected shortage in bus drivers on Shetland. The environmental effects would depend on the fuel type used and the extent of efficiency improvements versus any increase in vehicle kilometres travelled. 		
<i>Overall, minor adverse to minor beneficial impacts are predicted (prior to mitigation):</i>			
Scoring: ✘/✔ - ✔			
<p>10. Enhancing road network efficiency <i>A group of five options (options 9A to 9E) promoting road network efficiency through car-pooling/sharing, car multi-modal, smaller scale road modification (climbing lanes/2+1 carriageway), upgrading single track roads, and constructing alternative routes.</i></p>	<ul style="list-style-type: none"> Car-pooling and sharing can reduce the number of vehicle journeys (and associated vehicles on ferries) and can remove the need for vehicle ownership through informal or formal schemes. Car share schemes could support the transition to EVs. Car multi-modal support car-pooling by provision of onward travel through public transport or active travel from car parking facilities associated with car-pooling schemes (encouraging their uptake). Options to improvements to the road network range from construction of climbing lanes and sections of 2+1 carriageways in areas of low average or unreliable speeds, to upgrading single track roads to two-way carriageways, to building an alternative route where there is a single point of failure. Such measures would improve journey times and reliability, thus are likely to encourage increased travel by car with associated increased emissions, noise etc. There would be environmental impacts associated with the construction such as biodiversity loss, impact to soils, visual amenity and landscape. Such impacts would increase based on the scale of the works, and their location. However, the stopping and starting associated with single track roads has a big impact on fuel consumption, especially for commercial vehicles. For existing traffic, aside 	<ul style="list-style-type: none"> Options to enhance the road network efficiency should be delivered together with complementary measures to ensure overall increases in road traffic are not encouraged. All new/modified infrastructure would need to be designed and built-in accordance with relevant design standards for resilience located in suitable areas to avoid significant effects on locally sensitive areas and communities. The carbon implications of interventions would need to be considered in the context of emissions reductions/net zero targets in Scotland. 	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations	
	<p>from embodied carbon this may be beneficial in terms of climate change and as such upgrading of single-track roads to two-way carriageways is carried forward for further consideration, whilst the other options have been screened out from further consideration.</p>		
<i>Overall, moderate adverse to minor beneficial impacts are predicted (prior to mitigation):</i>			
	Scoring: xx - ✓		

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5.4 Assessment of Policies

- 5.4.1 To implement the proposed RTS Objectives, a suite of Policies have been developed, grouped into eight overarching Themes and forming the basis of future implementation of the Strategy. This section summarises the findings of the environmental assessment of the Policies within each of the eight RTS Themes. The SEA scoring of each individual Policy is set out in the environmental assessment tables in Appendix D.
- 5.4.2 The assessment shown within this section is two-fold. An overall summary of the environmental assessment of each RTS Theme is presented in Table 5-3 drawing on the consideration of the predicted environmental effects of the Policies within each Theme. Following this, a text-based summary of the assessment of the combined environmental effects of the RTS Policies is presented for each of the SEA Objectives in turn. This approach has allowed for understanding and presentation of the predicted environmental effects of the Draft RTS from both the perspective of each RTS Theme, and from the perspective of each SEA topic.

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Table 5-3 Summary of Environmental Assessment by RTS Theme

RTS Theme	Overall Score	Commentary
<p>RTS Theme 1 Enabling and encouraging active travel: Improving the public realm and facilitating walking, wheeling, and cycling within settlements as well as providing active travel connections between them.</p> <p>Policies:</p> <ol style="list-style-type: none"> 1. We support and encourage an increase in walking, wheeling and cycling participation in Shetland for environmental, accessibility and health reasons 2. In line with Scottish Government, we commit to rebalancing the spend in transport to support active and sustainable travel 3. We support the principle of reallocating road space from general traffic to walking, wheeling and cycling as a means to promote safer active travel and encourage use of active travel modes 4. We support the principle of reducing speed limits in our communities 5. We support the principle of improving the management and enforcement of traffic and parking around our schools 6. We support a network of traffic free or quiet way routes to connect our communities 7. We will support and continue to develop the case for long distance walking and cycling routes 8. We support the integration of active travel and public transport connections 9. We support the upgrade of cycle parking at all of our public buildings, transport interchanges, and key on-street locations 10. We commit to designing our active travel infrastructure to a high quality in accordance with the most up-to-date best practice and design guidance as this evolves to meet the needs of all users 11. We support the integration of active travel in the planning of all new developments. 	<p>++</p>	<p>These Policies are clearly compatible with the SEA Objectives and significant beneficial effects are predicted for climate change, air quality and amenity, access and connectivity and human health. Improving active travel infrastructure may give rise to beneficial changes for people accessing and enjoying facilities, services and the wider environment, while reducing emissions through reduced vehicle-based travel.</p> <p>Where delivered at scale the Policies could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts.</p> <p>Active travel routes and reallocation of road space provide opportunities to benefit biodiversity (through biodiversity improvements and access to nature), water and flood risk (through incorporation of sustainable drainage and green/blue infrastructure) and heritage, landscape, townscape (through appropriate design and enhanced access to areas of interest).</p> <p>Long distance walking and cycling routes provide particular support to tourism and the associated economic benefits.</p> <p>Improving active transport and land use integration may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment, while reducing emissions through lower levels of car travel. The uptake of active travel is strongly influenced by distance, compact neighbourhoods with diverse and connected land uses, support its uptake. Inclusion of the Policy to carefully site and design transport interventions to prevent and minimise negative environmental impacts assesses positively across all SEA Objectives</p>

RTS Theme	Overall Score	Commentary
<p>12. We will seek the implementation of initiatives which widen access to cycle ownership and /or hire through cycle sharing schemes (including e-cycles)</p> <p>13. Our active travel network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors</p>		
<p>RTS Theme 2 Improving the quality of, and access to our public transport: Delivering affordable and accessible public transport, enhancing the public transport infrastructure including vehicles and stops and improving ticketing options and information.</p> <p>Policies:</p> <p>14. Our bus network should be fully accessible to all. This also requires full compliance with the requirements of the Equality Act 2010</p> <p>15. Our bus network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors</p> <p>16. A minimum level of facilities should be provided at our bus station and stops, ferry termini, and airfields and airports</p> <p>17. Our bus network should provide a high quality and consistent onboard experience</p> <p>18. Public transport (bus, air, and ferry) information should be fully accessible and provided in a variety of formats to meet the specific needs of all users</p> <p>19. Our public transport system (bus, air, and ferry) should be affordable for all</p>	+	<p>These Policies relating to the bus network support an enhanced positive customer experience when using buses, including journey planning, increased accessibility, integration and the onboard experience and whilst waiting. As such, collectively they support the transition to the bus network, supporting a modal shift. They are compatible with the SEA Objectives, with beneficial effects predicted, including for climate change, air quality and amenity, access and connectivity, growth, human health and material assets. Where delivered at scale, and integrated with the wider transport system, they could contribute to achievement of regional and national net zero targets (particularly if implemented in conjunction with the decarbonisation of public transport, RTS Theme 6) and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts.</p> <p>Accessing public transport (bus, air, ferry) information and affordable fares have the potential to provide significant social and economic benefits to the island communities, who are reliant on these services for connectivity within Shetland and to the mainland. However, this is dependent in part on the routes, timing and capacity of these services (which are addressed within RTS Themes 3, 4 and 5).</p>
<p>RTS Theme 3 Extending bus connectivity: Improving bus connectivity through improved frequency, extended operating hours, additional services and enhanced multi-modal connectivity.</p> <p>Policies:</p>	+	<p>Extending bus connectivity is generally compatible with the SEA Objectives and in a number of cases significant beneficial effects are predicted including for access and connectivity and inclusive growth; further significant beneficial effects are predicted for climate change particularly if implemented in conjunction with the decarbonisation of public transport (RTS Theme 6) and</p>

RTS Theme	Overall Score	Commentary
<p>20. We will continue to support and develop the delivery of a financially and operationally sustainable bus network in Shetland (including staffing and succession planning)</p> <p>21. We will aim to widen public transport connectivity to key locations and transport interchanges in order to provide new travel options and alternatives to the private car</p> <p>22. We support measures to reduce social exclusion for those without access to a car</p> <p>23. We support the principle of new models of rural public transport provision, including enhanced DRT</p> <p>24. We will explore the application of bus related powers granted through the Transport (Scotland) Act 2019 to support the delivery of an enhanced bus network in Shetland</p>		<p>improvements to public transport quality (RTS Theme 2). The Policies are also predicted to have some beneficial effects for SEA topics of air quality and amenity, human health, and material assets. Where delivered at scale, they could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts. Enhanced bus connectivity may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment.</p>
<p>RTS Theme 4 Connecting our islands: Improving internal ferry and air connections and exploring the case for fixed links so as to better connect Shetland’s island communities.</p> <p>Policies:</p> <p>25. Our internal ferry network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors</p> <p>26. We are committed to contributing to the sustainability of our island communities by reducing or removing the cost, capacity and connectivity barriers to personal and business travel, the delivery of public services and the movement of goods between our islands</p>	<p>From +</p>	<p>It is recognised that the internal ferry and air connections provide vital links to maintain the sustainability of the island communities; they provide access to services, facilities, education and employment opportunities, support tourism, transport goods, etc, and thus provide vital social and economic services.</p> <p>Reducing or removing the cost, capacity and connectivity barriers, and the potential to increase the level of ferry and air services, would improve access to the islands, including those that are more remote which can be effectively cut-off on some days, providing positive benefits for access and connectivity, and potentially further opportunities for economic activity. However, this would increase emission of greenhouse gases both directly and potentially indirectly (e.g., where it indirectly results in increased onwards travel), albeit this would be offset at least in part when implemented in conjunction with the decarbonisation of the sector such as through Policy 31 here, and Theme 6.</p> <p>Fixed links:</p>

RTS Theme	Overall Score	Commentary
<p>27. We commit to maintaining the ferry fleet and associated infrastructure and to invest in these assets and crews to a level which ensures a continuing reliable and resilient service</p> <p>28. We commit to maintaining the inter-island air service to at least its current level and to explore opportunities to improve the service where necessary and deliverable</p> <p>29. We will progress the feasibility and case for fixed links and act on the conclusions as part of our future wider inter-island connectivity planning across all modes of travel</p> <p>30. We will support island-based vessels and crews where safe, deliverable and practicable</p> <p>31. We will ensure that all future ferry and aircraft replacement programmes will contribute towards the delivery of the Council's Climate Change Strategy</p> <p>32. Inter-island services will be fully accessible taking account of the needs of all users</p>	<p>To -</p>	<ul style="list-style-type: none"> ▪ If free, a fixed link would almost entirely remove the constraints for cars, public transport and freight travelling to and from the relevant islands. ▪ Unless active travel links are incorporated within a fixed link, they would increase the dominance of motorised transport in the isles (potentially leading to severance for those making active travel journeys). ▪ A fixed link would clearly be an environmentally intrusive construction project, would incorporate significant embodied carbon and would generate additional vehicle kilometres. It would though offset the emissions from the current diesel ferry fleet, although the adoption of zero or low carbon propulsion systems in future rounds of ferry replacement should ensure this is less of an issue for future vessels. ▪ Dependent on location, the construction and operation of fixed links has the potential to significantly impact important habitats such as marine and terrestrial SPAs and SACs. ▪ However, providing fixed connections to the isles would offer significant economic benefits in terms of providing unfettered access to mainland employment, business, service and leisure opportunities. This could assist in stemming population out migration and attract new residents to the isles. It does though have to be acknowledged that effectively making the isles part of the mainland could lead to a need to consider different service delivery models for e.g., health, education etc. and would also expose island businesses such as local shops to increased competition (although in-turn potentially providing island residents with lower prices). ▪ A fixed link would generate significant wider economic benefits. <p>The feasibility of fixed links should include consideration of the potential for significant effects on European sites. At the current stage of RTS development, the potential for fixed links is not location specific, such that meaningful screening for any Habitats Regulations Appraisals (HRAs) cannot be currently undertaken. However, this will be kept under review as part of the feasibility assessment and may be a key determining factor in the viability of fixed links.</p> <p>The Policy for all future ferry and aircraft replacement programmes to contribute towards the delivery of the Council's Climate Change Strategy offers significant potential for a step change in resource use and greenhouse gas emissions. The extent of this benefit will depend on how extensive the</p>

RTS Theme	Overall Score	Commentary
		'contribution towards' climate change is (e.g., this could be limited to more efficient fleet, or a carbon neutral fleet).
<p>RTS Theme 5 Enhancing our external connections and supply chain: Enhancing external ferry and air connections to the Orkney Islands and the Scottish mainland.</p> <p>Policies:</p> <ol style="list-style-type: none"> 32. The RTS supports improved connectivity with Scotland's mainland in the form of higher capacity and cheaper travel 33. We will make the case to Scottish Government for new vessels for the Aberdeen – Lerwick / Kirkwall route and actively engage our communities and businesses in this process to ensure the most appropriate vessels for our routes 34. We will actively engage with our communities and businesses to define our requirements for the specification for the next Northern Isles Ferry Services Contact and work with Scottish Government to deliver this. 35. We will make the case to the Scottish Government and Loganair to reduce the cost, capacity and connectivity barriers for travelling to and from the Scottish mainland for our communities and businesses 	-	<p>It is recognised that the external ferry and air connections provide vital external connections and supply chain, and thus provide important social and economic connections and services. Supporting improved connectivity with Scotland's mainland in the form of higher capacity and cheaper travel would provide both social and economic benefits.</p> <p>However, this would increase emission of greenhouse gases both directly from increased ferry and aircraft operations and potentially indirectly (e.g., where it indirectly results in increased onwards travel). Given the length and nature of the route, there is lower potential for low carbon fleets to be used to offset this increase, however further consideration should be given to this issue (which is supported through RTS Theme 6).</p>

RTS Theme	Overall Score	Commentary
<p>RTS Theme 6 Decarbonising our transport: Supporting the decarbonisation of transport through the adoption of zero emission vehicles, vessels and aircraft</p> <p>Policies:</p> <p>36. We will support the delivery of the emerging Shetland’s Climate Change Strategy</p> <p>37. We support the implementation of measures which facilitate the decarbonisation of the vehicle fleet in Shetland and between Shetland and the Scottish mainland, including cars, buses, commercial vehicles, aircraft and ferries</p> <p>38. We will seek to support the roll out of EV charging infrastructure to support decarbonisation of car-based travel</p> <p>39. We note that EVs are not a zero-carbon option and recognise the risks associated with lower EV running costs. We therefore support measures (subject to equality impacts) to prevent renewed growth in private car travel, and to encourage the use of alternative modes in line with the NTS2 Sustainable Travel Hierarchy and national car kilometre reduction targets</p> <p>40. We will seek to support the roll-out of other alternative fuels to promote the decarbonisation of our transport network, ports, ferry terminals, airports and airfields</p> <p>41. We will support Council ports and Lerwick Port Authority in realising opportunities in offshore wind farm construction and operations and maintenance</p>	<p>++</p>	<p>Decarbonising of the vehicle fleet in Shetland and between Shetland and the Scottish mainland, including cars, buses, commercial vehicles, aircraft and ferries vehicles, would have significant beneficial effects on climate change mitigation, offering the potential for step-change reduction in emissions in the transport sector. Such measures offer the potential to be industry leading, influencing others. Further benefits would also result in relation to the SEA topics of air quality, biodiversity, access and connectivity, growth and human health. The Policies are generally not predicted to have a significant effect on the other SEA Objectives.</p> <p>Dependent on implementation of the Policies, there is potential for some adverse effects on natural and cultural heritage receptors from improved transport infrastructure such as alternative refuelling facilities and from material use to support manufacture of electrical and electronic components. At this stage it is assumed that with appropriate design, assessment, mitigation and enhancement any new works could be delivered without significant adverse environmental effects</p>
<p>RTS Theme 7 Embracing new technologies: Capitalising on innovations and new technology.</p> <p>Policies:</p> <p>42. New and emerging technologies will be monitored for their applicability in the Shetland context</p>	<p>+?</p>	<p>These Policies to make the most of new opportunities are generally compatible with the SEA Objectives, with beneficial effects predicted for climate change, air quality and amenity, access and connectivity, inclusive growth and material assets.</p> <p>Enhanced innovative personal transport may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider</p>

RTS Theme	Overall Score	Commentary
<p>43. We will embrace the opportunities provided by new technology to improve our provision of transport services across Shetland, including the adoption of new technology on our ferry and air services</p> <p>44. We will keep opportunities for the more widespread use of connected and autonomous vehicles under review and identify any actions required to facilitate their safe introduction in Shetland</p> <p>45. We will support opportunities to better serve our remote island communities through adopting new technological solutions</p> <p>46. The RTS supports the development of car sharing services across the region to reduce the need for personal car ownership</p> <p>47. Provision for future innovative personal transport such as e-scooters will be embedded within the design of our active travel network</p>		<p>environment. Where delivered at scale, the lower carbon Policies (such as car sharing and e-scooters), could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts. Conversely, connected and autonomous vehicles (CAVs) give rise to some uncertainty since they may generate additional traffic movements, such as additional bus-km through removal of limited access to drivers.</p>
<p>RTS Theme 8 Enhancing network efficiency: Supporting the safe, resilient, and efficient movement of people and freight across the transport network.</p> <p>Policies:</p> <p>48. All our transport networks must be maintained to a high standard to ensure the reliable and efficient movement of people and goods and the delivery of services across Shetland</p> <p>49. Incremental improvements to our road network are supported where there are efficiency and environmental benefits, specifically in relation to single track roads</p> <p>50. The RTS recognises the need to consider how climate change may affect our transport networks and services and the associated risks this brings and those responsible should form appropriate action plans in response</p> <p>51. Our transport networks should continue to have an overarching focus on safety with a view to reducing road traffic casualties in particular</p>	<p>+</p>	<p>These Policies are predicted to have a varied effect on most of the SEA Objectives, from positive to negative. Overall, they assess positively for access and connectivity, inclusive growth and human health.</p> <p>Dependent on implementation of the Policies, there is potential for adverse effects on natural and cultural heritage receptors from incremental improvements to the road network. The nature and significance of the impacts will vary based on the location and extent of the works and local sensitivities and will include impacts to biodiversity, soils (including peat), water, flood risk, cultural heritage, landscape and material assets. At this stage it is assumed that with appropriate design, assessment, mitigation and enhancement any new works could be delivered without significant adverse environmental effects.</p> <p>Recognition of the effect of climate change of the transport network and development of appropriate action plans in response assesses positively in relation to climate resilience and is likely to be a key policy.</p> <p>Improving road safety would have beneficial effects for human health through improved (safer) conditions on the region's roads and some minor beneficial effects are predicted for the SEA topics of access and connectivity and inclusive growth.</p>

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- 5.4.3 With the exception of fixed links (see below), the assessment has identified that no significant adverse environmental effects would be predicted from Draft RTS Policies. All of the RTS Themes are predicted to have some beneficial environmental effects, typically where the implementation of the Policies would give rise to increased levels of active travel, improved public transport accessibility and reduced emissions.
- 5.4.4 A number of RTS Themes and Policies are predicted to have significant beneficial effects where implementation of supporting measures would deliver positive impacts and in particular for the Themes which have the potential to achieve a step change in active travel and public transport. These include:
- Theme 1 (Enabling and encouraging active transport) and Theme 6 (Decarbonising our transport) are overall predicted to have significant beneficial effects on the SEA Objectives for climate change. Individual Priorities relating to decarbonisation within Themes 4 (Connecting our islands) and 8 (enhancing network efficiency) also offer these significant beneficial effects for this SEA Objective.
 - Theme 1 (Enabling and encouraging active transport) is overall predicted to also have significant beneficial effects on the SEA Objectives for air and amenity, access and connectivity, human health and material assets.
 - Theme 5 (Enhancing our external connections and supply chain) is predicted to have significant beneficial effects on access and connectivity and inclusive growth, through its support for improved connections to mainland Scotland.
- 5.4.5 There is potential for significant adverse environmental effects through progressing the feasibility and case for fixed-links and acting on the conclusions (within RTS Theme 4). The greatest potential for significant adverse environmental effects is in relation to the SEA Objective for biodiversity as a result of the extensive important features, including designations such as SPAs, and SACs. Without the appropriate consideration of other SEA topics (such as the sensitive heritage, landscape and water receptors in the Shetlands) from the feasibility stage, there is some potential for significant adverse effects for wider SEA topics. In addition, fixed links would effectively link the relevant island(s) to Mainland, removing the connectivity constraints and fundamentally changing their island nature, with associated social and economic impacts (both positive and negative). Fixed links may generate additional vehicle kilometres, which would need to be carefully considered in the context of regional and national commitments to reduce emissions from transport. There is uncertainty on the likely effects at this strategic level as the nature (e.g., bridge, or tunnel between islands), location, extent, and design of any future works is currently unknown. The high-level nature of the Draft RTS does not allow for specific prediction of effects of these measures on the SEA topics. With a clear commitment (see Table 6-1) to consideration of environmental effects within the feasibility assessments, through to project level assessments and controls in the delivery of measures at future stages of RTS implementation, it is not predicted that significant adverse effects would necessarily result however this will need to be closely considered during development of the RTS delivery plan and subsequent feasibility assessments, design, assessment and promotion of any key transport interventions.
- 5.4.6 The other Policies are generally not predicted to have significant environmental effects (beneficial or adverse) however the assessment has identified the potential for environmental enhancement to be achieved in combination with the delivery of Policies which seek to deliver enhanced networks for active travel.
- 5.4.7 There is some uncertainty associated with the effects of improved connectivity between islands and with Scotland's mainland in relation to climate change and air quality within RTS Themes 4 (Connecting our islands) and 5 (Enhancing our external connections and supply chain). Where implemented together with RTS Theme 6 (Decarbonising our transport), these adverse effects may be avoided or reduced.

SEA Objective 1 – Climate Change

- 5.4.8 The Draft RTS Policies are predicted to have a range of beneficial and some negative effects on the Climate Change SEA Objective.
- 5.4.9 RTS Theme 1 (Enabling and encouraging active transport) is predicted to have significant beneficial effects on climate change mitigation, as is RTS Theme 6 (Decarbonising our transport). These provide support for modal shift to active travel; support decarbonisations of vehicles, ports, ferry terminals, airports and airfields; and support for opportunities for offshore renewable energy generation. Similarly, a Policy within RTS Theme 4 (Connecting our islands) ensures all future ferry and aircraft replacement programmes contribute towards delivery of the Council's Climate Change Strategy. These offer the potential for a step-change in addressing the challenges of achieving net zero targets within Shetland.
- 5.4.10 Adaptation to climate change is supported through a Policy within RTS Theme 8 (Enhancing network efficiency) which recognises the need to consider how climate change may affect the transport networks and services and the associated risks this brings.
- 5.4.11 There is potential for adverse effects due to increased carbon emissions through improved connectivity between islands and with Scotland's mainland within RTS Themes 4 (Connecting our islands) and 5 (Enhancing our external connections and supply chain). However, where such measures are implemented together with RTS Theme 6 (Decarbonising our transport), these adverse effects may be avoided or reduced.
- 5.4.12 When considered collectively, the Priorities of the Draft RTS are predicted to have the potential for significant beneficial effects on climate change mitigation and adaptation.

SEA Objective 2 – Air Quality and Amenity

- 5.4.13 The Draft RTS Policies are predicted to have a range of beneficial effects on the Air Quality and Amenity SEA Objective and some uncertain/potentially negative effects. The effects mirror those of the causes of climate change, where emissions to air, and to an extent noise and vibration issues, are closely linked to the use of hydrocarbons within transport.
- 5.4.14 When considered collectively, the Priorities of the Draft RTS are predicted to have the potential for significant beneficial effects on air quality and amenity.

SEA Objective 3 – Biodiversity, Geodiversity and Soil

- 5.4.15 The predicted effects of the RTS on the Biodiversity, Geodiversity and Soil SEA Objective is mixed with some predicted beneficial effects and potential for adverse effects, including significant adverse effects. Uncertainties exist due to the absence of scheme and location-specific details at this stage of the strategy.
- 5.4.16 The predicted beneficial effects have been identified for the Policies which would work to deliver a transport network that is less reliant on private car journeys (through uptake of active travel and buses) and decarbonisation of the transport (RTS Theme 6), resulting in a reduction in air pollutant emissions which can be harmful to biodiversity, geodiversity and soils (and indirectly by avoiding the need for extensive road improvements). These indirect beneficial effects are not predicted to be significant at the regional scale.
- 5.4.17 There is some uncertainty around the implementation of new or upgraded transport infrastructure (such as long-distance walking and cycling routes and incremental minor improvements to the road network) which has the potential for some adverse effects on biodiversity, geodiversity and soil dependent on the location of the schemes and the baseline sensitivity of the areas affected (such as where long-distance routes may be constructed through peatland habitats). At this stage specific improvement proposals have not been

identified and a commitment has been made in this SEA to key mitigation principles to ensure that new works were delivered sensitively, avoided significant adverse effects and were developed together with enhancement of blue/green habitats wherever possible.

- 5.4.18 Provision and upgrading of transport infrastructure, such as reallocation of road space for active travel, also provides opportunities to enhance local biodiversity through the creation and connectivity of new linear habitats, designing schemes with nature-based solutions which have the potential to offer biodiversity net gain. These also provide enhanced transport facilities for people to benefit from accessing greenspaces and natural areas as part of active travel journeys.
- 5.4.19 There are potential opportunities to undertake restoration of important peatland habitat when progressing transport schemes.
- 5.4.20 There is potential for significant adverse environmental effects to biodiversity through progressing the feasibility and case for fixed-links and acting on the conclusions (within RTS Theme 4) as a result of the extensive important features, including designations such as SPAs, and SACs. There is uncertainty on the likely effects at this strategic level as the nature (e.g., bridge, or tunnel between islands), location, extent, and design of any future works is currently unknown. The high-level nature of the Draft RTS does not allow for specific prediction of effects. With a clear commitment (see Table 6-1) to consideration of environmental effects within the feasibility assessments, through to project level assessments and controls in the delivery of measures at future stages of RTS implementation, it is not predicted that significant adverse effects would necessarily result however this will need to be closely considered during development of the RTS delivery plan and subsequent feasibility assessments, design, assessment and promotion of any key transport improvement schemes.
- 5.4.21 The feasibility of fixed links should include consideration of the potential for significant effects on European sites. At the current stage of RTS development, the potential for fixed links is not location specific, such that meaningful screening for any Habitats Regulations Appraisals (HRAs) cannot be currently undertaken. However, this will be kept under review as part of the feasibility assessment and may be a key determining factor in the viability of fixed links.
- 5.4.22 The Strategy is predicted to have some beneficial and some adverse effects (potentially significant) dependent on the detail of future implementing measures. The uncertainty in predicting environmental effects on these receptors has been reduced through identification of important mitigation principles which the assessment has assumed would be committed to in the later stages of Strategy delivery. There are opportunities for local biodiversity enhancement in delivering new transport measures particularly through the adoption of nature-based solutions as part of transport and active travel networks.

SEA Objective 4 – Water, Flood Risk and Resilience

- 5.4.23 Generally, the Priorities in the draft Strategy are predicted to have minor (and non-significant) effects on the SEA Objective for Water, Flood Risk and Resilience.
- 5.4.24 Policies that may result in significant new transport infrastructure, such as fixed links, have potential for adverse effects on the water environment both during their construction and operation. However, assuming the appropriate level of environmental assessment is undertaken, and key avoidance and mitigation measures implemented, these effects are not predicted to be significantly adverse at this stage.
- 5.4.25 Adaptation to climate change is supported through a Policy within RTS Theme 8 (Enhancing network efficiency) which recognises the need to consider how climate change may affect the transport networks and services, which include increased flood risk.

- 5.4.26 There are opportunities for enhanced use of nature based solutions for (new and upgraded) transport networks, including sustainable drainage systems, re-naturalisation of watercourses and establishment of wetlands.
- 5.4.27 When considered collectively, the Priorities of the Draft RTS are not predicted to have significant effects on water resources and flooding.

SEA Objective 5 – Cultural Heritage

- 5.4.28 Overall, it is predicted that there would be generally neutral effects on the Cultural Heritage SEA Objective.
- 5.4.29 Where new and extended infrastructure are developed on greenfield or previously undeveloped land, the potential for impacts on archaeological resources would need to be considered further as proposals were located, designed and assessed. Similarly, new, reinstated, extended and improved infrastructure has potential to impact on built heritage, both within the infrastructure itself (where the infrastructure is a heritage asset), and in proximity to the infrastructure. It should be noted that many of the heritage assets within Shetland are not designated, hence consideration should include non-designated heritage assets. It has been assumed in this SEA that mitigation principles to avoid, reduce and mitigate such adverse effects would be committed to in the later stages of delivery.
- 5.4.30 Providing an enhanced public transport service and improved active travel facilities are predicted to make accessing historic and cultural sites easier for people and there would be potential for a resultant increase in visitor numbers and increased awareness and appreciation of the region's historic and cultural assets. Similarly reallocating road space to active travel may offer opportunities to enhance the setting and appreciation of heritage assets.
- 5.4.31 None of the Policies in the RTS have been predicted to have significant effects on cultural heritage and when taken together, the Strategy is not predicted to have significant effects. Overall, the Strategy is predicted to have potential for some minor beneficial and adverse (non-significant) effects on cultural heritage and archaeology. There are opportunities for transport improvements to contribute to enhanced understanding and interpretation of the region's history and cultural heritage for all people through better access to sites and areas of interest and importance.

SEA Objective 6 – Landscape

- 5.4.32 Overall, the Policies in the Draft RTS are predicted to have neutral effects on the Landscape SEA Objective.
- 5.4.33 Policies encouraging bus transport and active travel are predicted to have some beneficial effects in terms of improving townscape and amenity in urban and built-up areas through helping to reduce traffic congestion. This would contribute to improved air quality, reduced noise and lower visual intrusion which would make spending time in these environments more pleasant.
- 5.4.34 Implementation of Policies to substantially enhance active travel networks would have potential to increase the accessibility of green spaces, open areas and new landscapes. Similarly, the delivery of improved public transport (access, capacity and affordability) would increase opportunities for all people to access areas of high-quality landscape.
- 5.4.35 Any new infrastructure to enhance transport connections and improve connectivity has the potential for adverse effects if not located and designed sympathetically with the local landscape or townscape character. Siting of transport infrastructure will be a key consideration as the RTS is implemented, given the presence of National Scenic Areas, 'wild land', and the general tranquillity of the region. Specific transport interventions have not been identified at this stage. However, the assessment has adopted a number of key mitigation principles which have

reduced the uncertainty of the assessment and provided these were implemented at future stages of delivery then significant adverse landscape and visual effects of the Strategy would not be predicted.

- 5.4.36 None of the Policies in the RTS has been predicted to have significant effects on landscape and when considered collectively, the Policies are not predicted to have significant effects on landscape and townscape. The Strategy is predicted to have potential for some beneficial and some adverse non-significant effects. There are opportunities for transport development in the region to contribute to enhanced enjoyment of landscape and townscape through enhanced accessibility of open spaces and civic areas by active travel and public transport. Where designed and delivered sensitively, Policies supporting active travel also provide new opportunities for the enhancement of attractive and healthy communities.

SEA Objective 7 – Accessibility and Connectivity

- 5.4.37 The Accessibility and Connectivity Objective receives good coverage across all RTS Themes which are predicted to have a beneficial effect on accessibility for all groups. This is set against a background of a dispersed rural population, coupled with high transport costs.
- 5.4.38 RTS Themes 4 and 5 support increased connectivity between the islands and the Shetland Mainland and between Shetland and the Scottish mainland, including through increased capacity, improved integration, better accessibility, and cheaper travel. Should fixed links come forward, they would offer a step change in the access to the relevant islands, effectively making them part of the Shetland Mainland in terms of access.
- 5.4.39 When considered collectively, the Policies of the Draft RTS are predicted to have the potential for significant beneficial effects on accessibility and connectivity.

SEA Objective 8 – Inclusive Growth

- 5.4.40 Overall, the Inclusive Growth SEA Objective is covered well by the Strategy's Themes and their associated Policies. Themes 4 and 5 support enhanced connectivity between the islands as well as with the Scottish mainland, offering both improved access to services, including employment opportunities for residents, improved access for tourists, and improvements to the supply chain to support economic activity. These offer the potential to overcome some of the current constraints to economic activity experienced in the Shetlands.
- 5.4.41 Theme 6 which promotes the decarbonisation of the transport system may promote investment and demand in low carbon industries and energy generation which may have beneficial effects on inclusive growth.
- 5.4.42 Within islands, support is included for low user-cost measures such as active travel.
- 5.4.43 When considered collectively, the Policies of the Draft RTS are predicted to have the potential for significant beneficial effects on inclusive growth.

SEA Objective 9 – Human Health

- 5.4.44 The majority of Themes assessed are predicted to have a beneficial effect on this objective. A large proportion of the Policies are designed to enhance opportunities for access to services, including healthcare facilities and open spaces which would be predicted to have beneficial effects on human health. Additionally, a number of the Policies aim to increase the proportion of trips undertaken by active travel allowing people to incorporate exercise into their daily trips and increasing levels of physical activity. Exercise is known to have beneficial effects on both mental health / wellbeing and physical health.

- 5.4.45 RTS Theme 6 (Decarbonising our transport) is predicted to improve air quality (whilst noting this is not a significant issue in the Shetland Islands) through reductions in transport emissions which in turn will have beneficial effects on health, particularly respiratory health and for groups such as children and older people who are typically most sensitive to the adverse effects of air pollution.
- 5.4.46 There are some predicted significant beneficial effects to human health from reducing transport-related road accidents and improving the resilience of the road network.
- 5.4.47 When considered collectively, the Policies of the Draft RTS are predicted to have the potential for beneficial effects on human health.

SEA Objective 10 – Material Assets

- 5.4.48 The majority of RTS Themes assessed are predicted to have some beneficial effects on the Material Assets SEA Objective through encouraging more efficient forms of transport and protecting and enhancing critical infrastructure. Where the Policies are implemented at scale across all forms of transport in Shetland, the effects have the potential to be significant.
- 5.4.49 RTS Theme 1 (Enabling and encouraging active transport), is predicted to have a significant beneficial effect on this objective through reduced resource use.
- 5.4.50 Policies which deliver improvements to public transport (bus, ferry and air) to make it more attractive and accessible are likely to result in greater uptake of public transport, along with wider DRT and active travel options where they form part of an integrated transport system. Where such measures support modal shift towards more sustainable modes of transport, increased resource efficiency is likely to result. However, unique to Shetland, improvements (including increased capacity) to ferry and air services (internal and external) could result in increased resource use, where they are undertaken without efficiency improvements.
- 5.4.51 There is some predicted uncertainty around the effects of implementation of Policies which could promote new or upgraded infrastructure (such as fixed links) from the resultant demand on new materials. Promotion of a circular economy in Shetland would be key to efficient materials management and reducing the indirect environmental effects associated with resource extraction, processing and end of life / waste management. Transport system improvements should always be developed wherever possible through re-use and reallocation of existing assets to avoid and reduce the need for new materials and non-renewable resources.
- 5.4.52 When considered collectively, the Policies of the Draft RTS are not predicted to have significant effects on material assets. Overall, the Strategy is predicted to have mainly beneficial non-significant effects provided implementing measures take account of the potential for environmental effects from non-renewable resource use.

5.5 Cumulative Effects

- 5.5.1 The preceding discussion of predicted effects of the Strategy on the individual SEA Objectives has identified that the Draft RTS, when implemented, is likely to have a range of predominantly beneficial environmental effects, in some cases significant. The analysis in Section 5.4 also identifies the key Policies which are considered to particularly contribute to significant effects for each environmental theme captured by the relevant SEA Objective. This approach has allowed for consideration of the total contribution of the Policies in the RTS to the environmental themes in the SEA which supports further consideration of potential cumulative effects of the Strategy.
- 5.5.2 Whilst the high-level nature of the Draft RTS precludes a detailed appraisal of cumulative effects, some strategic-level commentary on cumulative effects of the plan is set out here. These are addressed first for the potential for different predicted effects of the Strategy to combine and

result in effects on sensitive receptors that are different from those when single theme environmental effects are considered (termed here as in-combination effects). The potential for implementation of the Strategy to cumulatively affect receptors when considered with the effects of other key policies and plans in Shetland is also briefly addressed (and referred to as cumulative effects).

In-Combination Effects of the RTS

- 5.5.3 Across Shetland, receptors sensitive to in-combination effects can be considered in terms of all the communities and areas of population and the supporting civic, community and transport infrastructure that serves them. Key natural heritage sites include those designated for their high quality and sensitivity (such as the National Scenic Areas), important habitats including those supporting internationally important assemblages of birds and other species, the coastal and inter-tidal zone, and the region's rich and varied cultural heritage.
- 5.5.4 At the strategic level of the RTS only broad consideration of in-combination effects and receptors is possible. The SEA has identified the potential for significant adverse environmental effects to biodiversity in the event that fixed links are taken forward. Given that more than one fixed link is being considered at this early stage, the potential for in-combination effects of fixed links will require further consideration as part of their feasibility assessment.
- 5.5.5 No other significant adverse environmental effects in relation to the ten topic-based themes and objectives (provided adverse effects are avoided or effectively mitigated) have been identified, which lowers the potential for impacts to combine and have additive or synergistic effects on key receptors which may be significant.
- 5.5.6 It is recommended that as the Strategy is implemented a framework for continued consideration of environmental impacts is taken forward commensurate with the detail and location-specific nature of the delivery stages. To ensure that environmental and sustainability effects are considered holistically (and in relation to cumulative effects) it may be appropriate to develop a framework based on a natural-capital approach. This would characterise the range and scale of natural (and man-made) assets and services in the region from which a more informed understanding of the potential impacts of sub-programmes and key transport interventions could be identified.
- 5.5.7 The main potential for the RTS to have in-combination effects is on residents, through the potential for increased geographic access to services and reduced transport costs. Whilst deprivation is generally low in Shetland, access to services is also low, coupled with high transport costs. Transport is increasingly being defined by policy makers as a human right and the potential benefits of the RTS, where it can be implemented and sustained at scale, would support significant beneficial environmental and health effects to these communities.
- 5.5.8 The potential for significant beneficial in-combination effects of the Draft RTS is therefore predicted in areas where a step-change in accessibility and mobility is delivered from its implementation contributing to improved health, amenity, accessibility to key services and improved socio-economic prospects (including productivity).

Cumulative Effects of the RTS

- 5.5.9 There are many policies, plans and programmes relating to land use and transport development in Shetland, including some of those identified in Appendix A. A proportionate approach to consider potential cumulative effects with other strategies has been followed reflecting the strategic nature of the RTS, its predominantly beneficial predicted effects, and the inherent complexity and uncertainty in forecasting cumulative effects.
- 5.5.10 The key plans which are considered to have potential for significant cumulative effects with the RTS are those likely to have a 'reinforcing' impact on its predicted beneficial effects. These

include the Scottish Government's National Transport Strategy 2 (and associated delivery plans), the Scottish Climate Change Plan Update, and the 'road-map' proposals to achieve a 20% reduction in road vehicle kilometres by 2030. These policies, and their relevant subordinate and related action plans in areas such as electric vehicles, cycling, road safety and micromobility, set out high level proposals and commitments in complementary themes to the RTS including:

- emissions reductions (relevant to SEA Objectives for climate change mitigation and air quality and amenity);
- uptake of active travel (relevant to SEA Objectives for health and accessibility); and
- step changes in public transport services and integration (relevant to SEA Objectives for accessibility and connectivity, material assets and inclusive growth).

5.5.11 Taken together with these strategies, and with other complementary regional level programmes and interventions, it is predicted that the RTS would have significant beneficial cumulative environmental effects on climate, air quality, human health, accessibility and productivity. The extent of the beneficial outcomes and when they might be achieved would depend on the effectiveness and timescales of the delivery measures taken forward by ZetTrans and its partner organisations.

5.5.12 The potential for significant adverse cumulative effects has also been considered. The predicted adverse environmental effects of the Draft RTS are limited in number and scope. The Policies of the RTS where potentially adverse environmental effects are predicted (or are uncertain) relate to those whose implementation may involve development of new fixed links between islands.

5.5.13 There are no specific locations or designs for any of these interventions at this stage of the Draft RTS. To ensure that significant adverse cumulative effects with other similar or linked transport plans and programmes are avoided in future, the implementation of future projects should be taken forward in collaboration with other key delivery agencies including Shetland Islands Council, transport operators and Sustrans. Delivery of new transport projects would therefore be complementary with, and supportive of, national level interventions which may come forward in the region from programmes such as the National Planning Framework (NPF4). Engagement with the key environmental authorities including SEPA, NatureScot and Historic Environment Scotland (HES) will also ensure that relevant connected initiatives and programmes are integrated with transport development, including for example SEPA's strategic infrastructure sector plans, NatureScot's programmes on biodiversity, climate change, nature recovery, access and placemaking and HES's programme of work on climate adaptation and resilience.

5.5.14 This would ensure that new and upgraded transport infrastructure and facilities were planned and delivered to maximise beneficial outcomes and take account of all relevant environmental and sustainability constraints and opportunities. It is considered that an integrated approach together with implementation of the other environmental mitigation principles set out in this SEA (see Section 6.2) would avoid the potential for significant adverse cumulative environmental effects with other key plans and programmes in the region.

6 Mitigation and Monitoring

6.1 SEA Mitigation

6.1.1 A series of environmental mitigation measures in the form of high-level principles have been defined through the SEA process, particularly following initial options appraisal and in the assessment of the RTS Policies. Mitigation in this SEA is presented in the form of principles and general commitments as it reflects the level of detail of the draft Strategy as evidenced in the Policies and their supporting narratives. The key mitigation identified at this stage is set out in Table 6-1.

Table 6-1 SEA Mitigation Measures

Group	Mitigation Commitment
General Mitigation Principles	
<ul style="list-style-type: none"> ▪ The mitigation principles outlined in this report will be developed and applied through the RTS delivery stages including through continued application of an appropriate level of environmental assessment as the details of interventions are progressed. ▪ These environmental assessments will be supported, where appropriate, through the development of environmental baseline information specific to the key transport corridor(s) where transport measures are being considered. ▪ The implementation of future RTS interventions will be taken forward in collaboration with other key delivery agencies including the local authority, bus operators and Sustrans. ▪ Engagement with the key environmental authorities including SEPA, NatureScot and Historic Environment Scotland will be maintained to ensure that relevant connected initiatives and programmes are integrated with RTS delivery. 	
Policy Specific Mitigation Measures	
<p>Vehicles, fleet and Decarbonisation</p>	<ul style="list-style-type: none"> ▪ Increased provision of public transport capacity (bus, ferry and air) and services should deploy zero or ultra-low emission vehicles as soon as is practicable. ▪ Public transport operators should be supported to achieve decarbonisation of existing vehicle fleets where practicable. ▪ Where new electric vehicle (EV) charging infrastructure is developed, opportunities should be taken to provide as wide as possible access for local communities and other users. ▪ Transition to electric vehicles should be supported with circular economy activities and initiatives to support the re-use, re-manufacture and recycling of key materials such as battery components.
<p>Relevant RTS Themes:</p> <ul style="list-style-type: none"> ▪ 1. <i>Enabling and encouraging active transport</i> ▪ 4. <i>Connecting our islands</i> ▪ 6. <i>Decarbonising our transport</i> ▪ 7. <i>Embracing new technologies</i> 	
<p>Transport Infrastructure</p>	<ul style="list-style-type: none"> ▪ New transport infrastructure should be developed wherever possible through re-use and reallocation of existing transport assets / road space (in accordance with the Scottish Government’s Investment Hierarchy²) and where new facilities or infrastructure are required these should be designed and constructed following circular economy principles to minimise use of primary resources. ▪ Any new or upgraded transport infrastructure would be subject to appropriate levels of environmental assessment and consenting. Feasibility assessments will consider environmental effects from the outset to ensure constraints and opportunities inform the strategic decision-making process (such as further SEA); with the subsequent project level environmental assessment (such as

² As set out in the 2021 Infrastructure Investment Plan: <https://www.gov.scot/publications/analysis-responses-consultation-draft-infrastructure-investment-plan-2021-22-2025-26/>

Group	Mitigation Commitment
	<p>Environmental Impact Assessment through the planning system) and controls to inform the development of designs, mitigation measures and sensitive construction environmental management. Integration of environmental issues from feasibility through to construction would aim to avoid and reduce possible significant adverse environmental effects across all SEA topic areas.</p> <ul style="list-style-type: none"> ▪ Screening for Habitats Regulations Appraisal will be undertaken as part of the feasibility assessment of fixed links, where required. ▪ Where materials are required to develop transport infrastructure priority should be given to the use of secondary, recycled and remanufactured materials and products before use of non-renewable resources.
	<p>Relevant RTS Themes:</p> <ul style="list-style-type: none"> ▪ 1. <i>Enabling and encouraging active transport</i> ▪ 2. <i>Improving the quality of, and access to our public transport</i> ▪ 4. <i>Connecting our islands</i> ▪ 5. <i>Enhancing our external connections and supply chain</i> ▪ 6. <i>Decarbonising our transport</i> ▪ 7. <i>Embracing new technologies</i> ▪ 8. <i>Enhancing network efficiency</i>
<p>Transport Networks and Enhancement</p>	<ul style="list-style-type: none"> ▪ Support should be provided to reducing the need to travel (such as improved broadband connections and development of 20-minute neighbourhoods). ▪ Development of 20-minute neighbourhoods and other land use and transport integration measures should identify and implement opportunities for related environmental improvements to the public realm including for example green / blue infrastructure, local habitat enhancement and where relevant interpretation of cultural heritage. ▪ Development of active travel network infrastructure should identify and implement opportunities for related environmental improvements including for example green / blue infrastructure, local habitat enhancement and where relevant interpretation of areas cultural heritage interest/importance. ▪ New active travel infrastructure should be designed, constructed and maintained in accordance with environmental best practice to avoid or reduce the potential for adverse effects from changes in land use. ▪ Measures to protect and enhance the natural and built environment should seek to work with nature and adopt approaches based on green / blue infrastructure. Opportunities for enhancement of local environments and habitats (including through delivery of biodiversity net gain) should be taken in the delivery of new schemes. ▪ Measures to adapt the transport system to climate change should take account of the embodied carbon in designs and materials and wherever possible solutions should seek to work with nature and adopt approaches based on green / blue infrastructure. Opportunities for enhancement of local environments and habitats should be taken in the delivery of new schemes. ▪ Collaborative working with relevant flood risk agencies and local authorities should be pursued in integrating transport resilience works with flood prevention activities, wherever possible working at a watercourse catchment scale.
	<p>Relevant RTS Themes:</p> <ul style="list-style-type: none"> ▪ 1. <i>Enabling and encouraging active transport</i> ▪ 2. <i>Improving the quality of, and access to our public transport</i> ▪ 3. <i>Extending bus connectivity</i> ▪ 4. <i>Connecting our islands</i> ▪ 5. <i>Enhancing our external connections and supply chain</i> ▪ 6. <i>Decarbonising our transport</i> ▪ 7. <i>Embracing new technologies</i> ▪ 8. <i>Enhancing network efficiency</i>
<p>Access and Fairness</p>	<ul style="list-style-type: none"> ▪ Measures using pricing to reduce demand for car travel should be designed equitably to ensure that they do not have unintended consequences for people with socio-economic disadvantage, in line with national and regional commitments to a Just Transition to Net Zero.

Group	Mitigation Commitment
	<ul style="list-style-type: none"> ▪ The implementation of active travel infrastructure should be fully accessible for all users and integrated across the region to realise full benefits. ▪ Enhancement to bus, ferry and air services and facilities should be designed and operated to ensure that the needs of all users and disabilities groups are accommodated. ▪ Enhancement to bus, ferry and air services and facilities should be designed and operated to ensure that the needs of all users and disabilities groups are accommodated.
Relevant RTS Themes: <ul style="list-style-type: none"> ▪ 1. <i>Enabling and encouraging active transport</i> ▪ 2. <i>Improving the quality of, and access to our public transport</i> ▪ 3. <i>Extending bus connectivity</i> ▪ 4. <i>Connecting our islands</i> ▪ 5. <i>Enhancing our external connections and supply chain</i> ▪ 6. <i>Decarbonising our transport</i> ▪ 7. <i>Embracing new technologies</i> ▪ 8. <i>Enhancing network efficiency</i> 	

6.1.2 These mitigation commitments provide a framework for the development of specific interventions in more detail alongside the articulation of the RTS Delivery Plan. Future elaboration of this framework will include identification of specific lead responsibilities for ZetTrans and other partners and associated timeframes. At this stage it is important to note that the principles are committed to by ZetTrans which has allowed them to be used in considering the potential residual (i.e., post mitigation) environmental effects of the draft Strategy as reported in Section 5.

6.2 Monitoring Framework

6.2.1 The 2005 Act requires SEA Environmental Reports to provide a “description of the measures envisaged concerning monitoring in accordance with section 19”. Section 19 requires the responsible authority to “monitor the significant environmental effects” in a manner which enables it to “identify any unforeseen adverse effects at an early stage” and to “undertake appropriate remedial action”.

6.2.2 The Draft RTS includes a set of Key Performance Indicators (KPIs) linked to the RTS Objectives, these are closely related to those for monitoring the NTS2. They will be used to measure the change in performance of the transport system in Shetland against the baseline initially established in the ZetTrans Case for Change report. Monitoring will be produced on a two-yearly basis.

6.2.3 Many of these indicators are considered to be suitable to help track progress in the delivery of the Strategy with respect to environmental outcomes. Further, monitoring of environmental effects will be better integrated and practical to undertake where the indicators used are shared with those proposed for the main RTS monitoring process. The indicators considered to be useful in tracking progress against both RTS Objectives and SEA Objectives have been captured in Table 6-2.

Table 6-2 Indicators for Monitoring RTS Environmental Effects

SEA Objective	Monitoring & Tracking Indicators	Relevant RTS Objectives
1. Climate Change	<ul style="list-style-type: none"> ▪ The composition of the car, bus, ferry and aircraft fleet by fuel type will be regularly monitored, as will 	Objectives: 5

SEA Objective	Monitoring & Tracking Indicators	Relevant RTS Objectives
	<p>the number and quality of publicly available EV charging points</p> <ul style="list-style-type: none"> ▪ The UK Department for Business, Energy and Industrial Strategy publishes local authority greenhouse gas emissions by sector including a split of transport by mode. These, and any other bespoke Shetland net-zero statistic will be monitored. ▪ Although an inward-facing matter, SIC and ZetTrans will monitor capital and revenue expenditure with respect to active travel, bus, road, ferry and air travel. Vacancy rates and unfilled posts across the transport sectors will also be monitored 	
2. Air Quality and Amenity	None identified	
3. Biodiversity, Geodiversity and Soil	None identified	
4. Water, Flood Risk and Resilience	None identified	
5. Cultural Heritage	None identified	
6. Landscape	None identified	
7. Accessibility and Connectivity	<ul style="list-style-type: none"> ▪ Annual travel volumes through Sumburgh Airport and on NorthLink Ferries are regularly published and can be monitored ▪ Residents' and business' experience and perception of barriers to travel to / from the rest of Scotland will be monitored in a biennial Shetland Travel / Transport survey ▪ Travel volumes on Shetland's buses, ferries and aircraft will be monitored annually ▪ The Scottish Household Survey Travel Diary provides partial information around the levels of walking and cycling by Shetland residents, the levels of non-car based travel by Shetland residents, and also household car availability. ▪ The level of, and attitude to walking, wheeling and cycling will be monitored in a biennial Shetland Travel / Transport survey ▪ A network of cycle counters will be installed at key locations, maintained and monitored ▪ Ferry cancellations (external and internal) ▪ Monitoring of incidents on the road network, including in relation to severe weather events ▪ Residents' and business's perception of the efficiency and resilience of the network will be monitored in a biennial Shetland Travel / Transport survey 	Objectives: 1, 2, 3, 4, 6
8. Inclusive Growth	None identified	
9. Human Health	<ul style="list-style-type: none"> ▪ The Scottish Household Survey Travel Diary provides partial information around the levels of 	Objectives: 3, 4, 6

SEA Objective	Monitoring & Tracking Indicators	Relevant RTS Objectives
	<p>walking and cycling by Shetland residents, the levels of non-car based travel by Shetland residents, and also household car availability.</p> <ul style="list-style-type: none"> ▪ The level of, and attitude to walking, wheeling and cycling will be monitored in a biennial Shetland Travel / Transport survey ▪ A network of cycle counters will be installed at key locations, maintained and monitored ▪ Road-based casualties by severity and type local authority level are regularly published and will be monitored 	
10. Material Assets	None identified	

6.2.4 These indicators will be developed and refined following feedback from consultation on the Draft RTS.

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7 Next Steps

7.1 Consultation on this Environmental Report

- 7.1.1 This SEA Environmental Report and its Non-Technical Summary have been published for consultation alongside the Draft RTS which has been prepared by ZetTrans together with supporting reports including the Equalities Duties Report.
- 7.1.2 The Draft RTS and supporting assessment reports, including this environmental assessment, will be published for consultation (of at least 12 weeks) in the second half of 2022. The consultation process will reach a broad range of stakeholders and the general public who will be able to provide their feedback through a dedicated website facility (see below). The Draft RTS and SEA Environmental Report, together with other supporting reports, will be made available for public access on ZetTrans website ([ZetTrans | Shetland's Transport Partnership](#)). The documents will also be made available in hard copy for inspection, should this be requested, at the principal offices of ZetTrans.
- 7.1.3 Details of how to participate in the consultation will be published by ZetTrans and, in accordance with statutory requirements, an advert will be placed in a local newspaper inviting expressions of interest and stating where a copy of the relevant plan can be inspected. A web-based consultation facility will be established with access to the online feedback forms available on the ZetTrans website.
- 7.1.4 The SEA Environmental Report and a copy of the Draft RTS (the 'relevant documents') will also be provided to the SEA Consultation Authorities via the Scottish Government's SEA Gateway for formal consultation on the Strategy and the SEA under the requirements of the Environmental Assessment (Scotland) Act 2005.

7.2 Next Stages of RTS Preparation and SEA

- 7.2.1 This Report will be consulted on in tandem with the Draft RTS. All representation received regarding both documents will then be analysed by ZetTrans and the independent SEA project team to determine whether:
- substantial changes need to be made to the Draft RTS, potentially resulting in the need to re-consult on substantive actions and an associated SEA ER Addendum; or,
 - only minor modifications need to be made to the Draft RTS prior to submission to the Scottish Ministers for approval (i.e., no further consultation would be necessary).
- 7.2.2 The Scottish Ministers will then review the finalised RTS and determine whether it can be approved with or without any further modifications. Following approval of the finalised RTS, ZetTrans will formally adopt and publicise the Strategy. At this time, an SEA Post Adoption Statement (PAS) will be prepared to explain how the SEA process has closely informed the development of the finalised RTS and how the feedback from consultation has been taken into account in finalising the Strategy. The PAS will also set out proposals for future monitoring of the environmental effects of the RTS.

Appendix A Review of Plans and Programmes

Table A-1 Policy documents of relevance

SEA Topic	Relevant Plans, Programmes and Strategies
International³	
Air and Climate: Air & Climatic Factors	<p>World Health Organization (1999) Guidelines for Community Noise, WHO Air Quality Guidelines, United Nations (1979) Geneva Convention on Long Range Transboundary Air Pollution, The United Nations Framework Convention on Climate Change (UNFCCC) (1992), Kyoto Protocol to the UN Convention on Climate Change (2005), United Nations (2009) The Copenhagen Accord, United Nations (2010) Cancun Adaptation Framework, United Nations (2016) Paris Agreement.</p> <p>European / EU legislation and plans now of indirect relevance include: Ambient Air Quality Directive 2008/50/EC and Air Quality Framework Fourth Daughter Directive 2004/107/EC, Environmental Noise Directive 2002/49/EC, Renewable Energy Directive 2009/28/EC</p>
Physical Environment: Biodiversity, Flora & Fauna, Soil, Water, Cultural Heritage & Landscape	<p>The Ramsar Convention on Wetlands (1971), EU Convention on the Agreement on the Conservation of African – Eurasian Migratory Waterbirds (2006) (The Bonn Convention), United Nations (1992) The Rio Convention on Biodiversity, Strategic Plan for Biodiversity 2011 - 2020 + Aichi Biodiversity targets, UNESCO (1972) Convention Concerning the Protection of the World Cultural and Natural Heritage.</p> <p>European / EU legislation and plans now of indirect relevance include: Convention on the Conservation of European Wildlife and Natural Habitats - The Bern Convention (1981), Birds Directive 2009/147/EC/, Habitats Directive 92/43/EEC as amended by 97/62/EC, Convention for the Protection of the Architectural Heritage of Europe (Granada Convention), European Landscape Convention (The Florence Convention).</p>
Socio-economics: Population, Human Health & Material Assets	<p>United Nations (2016) Habitat III (Quinto), United Nations Economic Commission for Europe (1998) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (The Aarhus Convention), World Health Organisation (2004) Children’s Environment and Health Action Plan for Europe, Transforming our World: The 2030 Agenda for Sustainable Development (2015)</p>
Interrelated Effects	<p>Johannesburg Declaration on Sustainable Development, Communication COM (2005) 666: Taking Sustainable use of resources forward</p> <p>European / EU legislation and plans now of indirect relevance include:</p>

³ Some European Union (EU) legislation remains of indirect relevance.

SEA Topic	Relevant Plans, Programmes and Strategies
	Strategic Environmental Assessment (SEA) Directive 2001/42/EC European Spatial Development Perspective (ESDP) (97/150/EC), Environmental Impact Assessment Directive 2014/52/EU amending Directive 2011/92/EU
National (UK) - legislative and policy frameworks informed by relevant higher-level frameworks	
Air and Climate: Air & Climatic Factors	The Environment Act 1995, The Air Quality Standards Regulations (2010) as amended, Air Quality Strategy for England, Scotland, Wales and Northern Ireland, UK's Air Quality Action Plan (Defra, revised January 2016), Defra (2011) Air Quality Plans for the Achievement of EU Air Quality Limit Values for Nitrogen Dioxide (NO2) in the UK: List of UK and National Measures, Climate Change Act 2008, DECC (2011) UK Renewable Energy Roadmap, DECC (2014) UK National Energy Efficiency Action Plan, HM Government (2017) UK Climate Change Risk Assessment 2017
Physical Environment: Biodiversity, Flora & Fauna, Soil, Water, Cultural Heritage & Landscape	Wildlife and Countryside Act 1981, Environmental Protection Act 1990, The Protection of Badgers Act 1992, Conservation of Habitats & Species Regulations 2010 (as amended), UK National Ecosystem Assessment (2011) UK National Ecosystem Assessment: Understanding Nature's Value to Society, The Conservation of Habitats and Species Regulations 2010 as amended, JNCC (2012) The UK Post 2010 Biodiversity Framework, Natural Environment and Rural Communities Act 2006, HM Government (2018) 25 Year Environment Plan, Environmental Protection Act 1990, DECC (2010) Department for Transport (2011) National Policy Statement for Ports, The Marine and Coastal Access Act (2009), Department for Environment, Food & Rural Affairs (2011) UK Marine Policy Statement, The Ancient Monuments and Archaeological Areas Act (1979) National Parks and Access to the Countryside Act (1949), Forestry Act (1967)
Socio-economics: Population, Human Health & Material Assets	The Enterprise and Regulatory Reform Act (2013), Equality Act (2010), Health Effects of Climate Change in the UK 2008 - An update of the Department of Health Report 2001/2002, Health Protection Agency (2009) Health Strategy for the United Kingdom 2, Health and Safety Executive (2009) The Health and Safety of Great Britain: Be Part of the Solution, Sustainable Development Commission (2010) Sustainable Development: The Key to Tackling Health Inequalities, HM Treasury (2014) National Infrastructure Plan, HM Government (2009) The UK Renewable Energy Strategy.
Interrelated Effects	HM Government (2005) The UK Sustainable Development Strategy, Defra (2011) Mainstreaming Sustainable Development, Department for Transport (2008) Delivering a Sustainable Transport System, HM Government (2005) One Future – Different Paths. Shared Framework for Sustainable Development.
National (Scotland) - legislative and policy frameworks informed by relevant higher-level frameworks	
Air and Climate: Air & Climatic Factors	Air Quality (Scotland) Regulations (amended) 2016, Cleaner Air for Scotland - the road to a healthier future, The Environment Act 1995 & Part IV of the Environment Act 1995 Local Air Quality Management Policy Guidance, The Environmental Noise (Scotland) Regulations 2006, Transportation Noise Action Plan, Planning Advice Note 1/2011: Planning and Noise, Climate Change (Scotland) Act 2009 and Orders, The Climate Change (Emissions Reductions Targets) (Scotland) Act 2019, The Scottish Government's Climate Change Plan, Third Report on Proposals and Policies 2018-2032, Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles 2013, 'Climate Ready Scotland'- Scotland's Climate Change Adaptation Programme, Transportation Noise Action Plan (2019-2023) Update to the Climate Change Plan 2018-2032, Scottish Government.

SEA Topic	Relevant Plans, Programmes and Strategies
<p>Physical Environment: Biodiversity, Flora & Fauna, Soil, Water, Cultural Heritage & Landscape</p>	<p>Nature Conservation (Scotland) Act 2004, Wildlife and Natural Environment (Scotland) Act 2011, Scottish Government: Scottish Forestry Strategy 2006 and Implementation Plan 2015 – 2018, It's in your Hands: Scotland's Biodiversity Strategy (2005), 2020 Challenge for Scotland's Biodiversity (2013), Scotland's Biodiversity, a Route Map to 2020 (6 Big Steps for Nature), Scotland's Biodiversity List, Scottish Biodiversity Strategy indicators, Scottish Government and its Key Agencies: The Scottish Soil Framework (2009), State of Scotland's Soils Report 2011, National Soil Map of Scotland, Scotland's National Peatland Plan 2015, Scottish Government's draft Peatland and Energy Policy Statement 2016, Soil Monitoring Action Plan & Implementation Plan, Contaminated Land (Scotland) Regulations 2000 as amended, Scottish Government's Statutory Guidance: Edition 2 (2006), Getting the best from our land: A Land Use Strategy for Scotland 2016 – 2021, Water Environment and Water Services (Scotland) Act 2003, Water Environment (Controlled Activities) (Scotland) Regulations 2011 as amended (CAR), Groundwater Protection Policy for Scotland: Environmental Policy (SEPA, 2009), River Basin Management Plan for the Scotland River Basin 2015 – 2027, Flood Risk Management (Scotland) Act 2009, Marine (Scotland) Act 2010, The Historic Environment Policy for Scotland (2019) (HEPS), Our Place in Time - The Historic Environment Strategy for Scotland 2014, Historic Environment Circular 1, The Town and Country Planning (Historic Environment Scotland) Amendment Regulations 2015, The Historic Environment (Scotland) Act 2014, Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997, Ancient Monuments and Archaeological Areas Act 1979 (as amended, 2014), Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended, 2014), PAN71 Conservation Area Management 2004, Scotland's Scenic Heritage, SNH Landscape Policy Framework, Planning etc. (Scotland) Act 2006, Creating Places: The Scottish Government's policy statement on architecture and place, National Parks (Scotland) Act 2000, Scotland's Landscape Charter.</p>
<p>Socio-economics: Population, Human Health & Material Assets</p>	<p>General Registers of Scotland: National Population Projections (2018), Equality Act 2010 (as amended specific to Scotland), Scottish Government: Fairer Scotland Action Plan, Going Further: Scotland's Accessible Travel Framework, National Bus Travel Concession Scheme for Older and Disabled Persons (2006 and amended), Scotland's Economic Strategy (2015), Town Centre Action Plan, Scottish Government: Let's Get Scotland Walking - A National Walking Strategy 2014, Cycling Action Plan for Scotland, A Healthier Scotland - Actions and Ambitions on Diet, Activity and Healthy Weight 2017, Mental Health Strategy 2017 – 2027, Good Mental Health for All, Scottish Government: Go Safe on Scotland's Roads It's Everyone's Responsibility: Scotland's Road Safety Framework to 2020, Audit Scotland (2011) Transport for Health and Social Care, Scottish Government: Short Life Working Group (2013) Healthcare Transport Recommendations, A connected Scotland - Tackling social isolation and loneliness and building stronger social connections, Going Further: Scotland's Accessible Travel Framework, Scottish Government: Good Places, Better Health. A New Approach to the Environment and Health in Scotland: Implementation Plan (2008), Creating Places (2013), Place Standard Tool (2016), Scottish Planning Policy (2014), National Planning Framework 3 (2014), Scottish Government: Equally Well (2008), First Equally Well Review (2010), Second Equally Well Review (2014), Equally Well Implementation Plan and Outcomes Frameworks (2008), Transport (Scotland) Act 2005, Scotland's Energy Strategy 2017, Switched On Scotland Roadmap 2013, Switched On Scotland Phase Two: An Action Plan for Growth, Infrastructure Investment Plan (2015), Scotland's NTS2 (2020), Strategic Transport Projects Review 2 Phase 1 Report (2021), Scottish Planning Policy (2014), National Planning Framework 3 (NPF3) (2014), NPF4 (emerging).</p>

SEA Topic	Relevant Plans, Programmes and Strategies
Interrelated Effects	National Transport Strategy 2 (NTS2) (2020), NTS2 1 st Annual Delivery Plan (2020), Strategic Transport Projects Review 2 (STPR2) (emerging), National Planning Framework 4 (NPF4) (emerging), Scottish Planning Policy (2014), NPF3 (2014), Place Principle (2019) Designing Streets (2010), Infrastructure Commission for Scotland Report, Scotland's Economic Strategy 2015, Infrastructure Investment Plan (2015), Cycling Action Plan for Scotland, National Walking Strategy, Delivering the Goods - Scotland's Rail Freight Strategy (2016), Rail Enhancements & Capital Investment Strategy, Scottish Ferries Plan, National Roads Development Guide, Climate Ready Scotland Adaptation Programme (2019), Land Use – Getting the best from our land (2021-2026), The Scottish Government's Programme for Government (2022-2023), The Scottish Government's Infrastructure Investment Plan 2021-22 to 2025-26 (2021), The Scottish Government's Environmental Strategy for Scotland
ZetTrans Region - policy frameworks informed by relevant higher-level frameworks	
Air and Climate: Air & Climatic Factors	Shetland Islands Council Carbon Management Strategy Carbon Management Plan 2015-2020; Shetland's Climate Change Strategy (currently being developed)
Physical Environment: Biodiversity, Flora & Fauna, Soil, Water, Cultural Heritage & Landscape	Living Shetland. Shetland Local Biodiversity Action Plan (Shetland Biodiversity Partnership) 2004, Shetland Islands Marine Spatial Plan (2015), Shetland Islands Regional Marine Plan (draft, 2021), Shetland: Local Flood Risk Management Plan (2016)
Socioeconomics: Population, Human Health & Material Assets	Economic Development Strategy 2018-2022 (SIC) 2018, Shetland Active Travel Strategy (ZetTrans 2020-2025), Shetland Outdoor Access Strategy 2019 (SIC), Shetland Core Paths Plan 2009 (SIC), Housing Needs & Demand Assessment (Shetland), Shetland's Islands with Small Populations Locality Plan (2020), 10-year plan to attract people to live, work, study and invest in Shetland (currently being revised), Shetland's Tourism Strategy (2018-2023), On Da Level: Achieving a Fairer Shetland - Report and Recommendations from Shetland's Commission on Tackling Inequalities (2016); Shetland Our Place: Place Standard Final Report (2017), Shetland Transport Strategy Refresh 2018 – 2028 (ZetTrans) 2018, Shetland's Partnership Plan (2018) and associated Delivery Plan (2019-2022), Shetland's Islands with Small Populations Locality Plan (2020), Shetland's Tourism Strategy and Action Plan (2018-23), Active Shetland Strategy 2018-2023
Interrelated Effects	Shetland Local Development Plan 2014, Shetland Islands Council Corporate Plan 2021-2026, Shetland Partnership Delivery Plan 2019-22, ZetTrans Active Travel Strategy (2020), National Plan for Scotland's Islands (2019).

A.1 Key Policy Considerations

- A.1.1 As set out in Table A-1, an extensive policy review of relevant plans, programmes and strategies which need to be taken into account in the development of the emerging RTS and this associated SEA has been carried out.

International

- A.1.2 Mitigating and adapting to climate change is a critical policy consideration at an international level with multiple agreements in place to address the climate emergency. The UNFCCC is the forum for international action on climate change with the aim of stabilising GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The UNFCCC focuses on mitigating (reducing) GHG emissions, adapting to climate change, reporting of national emissions, and financing of climate action in developing countries. Agreed at COP 21, the Paris Agreement commits signatories to reducing global greenhouse gas emissions with the long-term goal of withholding a temperature increase by no more than 2°C. The recent COP 26 gathering in Glasgow led to the Glasgow Climate Pact, reaffirming the Paris Agreement goal of limiting the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5 °C. The pact recognises that GHG emissions need to fall by 45% by 2030 if the world is to stay on track to reach net zero by 2050 and requests countries revisit their 2030 targets by the end of 2022. In addition, the Cancun Adaptation Framework recognises that adaptation is required to be given the same priority as mitigation including reducing vulnerability and increasing resilience. Proposals for transport infrastructure development and services set out in the emerging RTS should contribute to meeting the requirements and targets set out in international climate change policies and agreements.
- A.1.3 As the United Kingdom formally left the European Union (EU) in 2020, European legislation and associated policies are no longer of direct relevance to domestic policies or strategies such as the RTS. However, EU legislation has historically developed policy frameworks to address environmental issues which have subsequently been implemented at UK and Scotland levels, and prior to leaving the EU, existing EU legislation was transposed and incorporated into UK and Scottish legislation. This means some EU legislation remains of indirect relevance to the emerging RTS in terms of having established frameworks and requirements which the RTS will still need to implement in accordance with UK and Scottish legislation.

National

- A.1.4 The Scottish Government's update to the Climate Change Plan 2018-2032 (2020) sets out a commitment to reduce greenhouse gas emissions to 75% of 1990 levels by 2030, 90% by 2040 and net-zero by 2045. The Plan recognises the key role that the decarbonisation of transport will play in reducing Scotland's emissions.
- A.1.5 The upgrade to the Climate Change Plan follows on from the publication of Climate Ready Scotland Adaptation Programme in 2019 which sets out the current state of the climate in Scotland including average rainfall increases, temperature rises and changes in mean sea level around the UK. The Programme sets out low and high emission scenarios, predicts a high emissions scenario of a summer temperature increase of 2.6°C and a winter temperature increase of 2.2 °C by 2070 with associated changes in rainfall in the summer (14% drier) and in winter (18% wetter). The transition to a low-carbon transport system will be critical to mitigating and adapting to the impacts of climate change in Scotland. This is backed up by several national policy documents, including NTS2.
- A.1.6 The National Transport Strategy 2 (2020) sets out the transport strategy for Scotland over the next 20 years, seeking to deliver a transport system which is sustainable, inclusive, safe and accessible across Scotland. NTS2 provides a strategic framework comprising four key priorities and associated enablers to ensure that NTS2:

- **“Reduces inequalities:** providing fair access to services that are accessible and affordable for all;
 - **Takes Climate action:** to help deliver the net-zero emissions target, adapting to the effects of climate change and promoting greener, cleaner choices;
 - **Helps to deliver inclusive economic growth;** which is efficient, reliable, high quality and innovative; and,
 - **Improves our health and wellbeing:** delivering a safer and secure Scotland, with a wide variety of travel choices for communities”.
- A.1.7 NTS2 also sets out proposals (as stated in the Scottish Government’s Climate Change Plan) to reduce reliance on private transport to help to address the ongoing climate emergency, including a reduction in car kilometres by 20% in 2030, an ambition to phase out new petrol and diesel cars by 2032, decarbonise Scotland’s passenger railways by 2035 and decarbonise scheduled internal Scottish flights by 2040. The delivery of inclusive economic growth is also a key pillar of NTS2, seeking to increase the resilience of Scotland’s transport system and foster greater integration of transport and wider infrastructure policies and investments. It aims to increase Scotland’s competitiveness and help Scotland to become an innovative leader in beneficial transport innovations.
- A.1.8 STPR2 is a Scotland-wide review of the strategic transport network across all transport modes which aims to help deliver the visions, priorities, and outcomes for transport set out within NTS2. STPR2 will report in two phases. Phase 1 made recommendations on transport interventions for investment in the short term and was published in February 2021.
- A.1.9 The National Islands Plan from the Scottish Government was published in December 2019 and provides a framework for action in order to meaningfully improve outcomes for island communities. The Plan includes 13 Strategic Objectives all designed to improve the quality of life for island communities. The National Islands Plan was prepared in response to The Islands (Scotland) Act which was passed in the Scottish Parliament in 2018 and sets out the purpose of the National Islands Plan. The objectives and strategies within the Plan to improve outcomes for island communities are underpinned by four key values: fairness, integration, environmental protection and inclusiveness. The 13 Objectives within the National Islands Plan are all relevant to the emerging ZetTrans RTS however the following are deemed most significant:
- Strategic Objective 1 Population Levels – To address population decline and ensure a healthy, balanced population profile;
 - Strategic Objective 2 Sustainable Economic Development – To improve and promote sustainable economic development;
 - Strategic Objective 3 Transport – To improve transport services; and.
 - Strategic Objective 9 Climate Change and Energy – To contribute to climate change mitigation and promote clean, affordable and secure energy.
- A.1.10 Scotland’s third Land Use Strategy was published in March 2021, and sets out the Government’s vision for achieving sustainable land use in Scotland. The Strategy sets out a set of key considerations for climate change adaptation and mitigation, understanding the need for nature based solutions for island communities. The Strategy also recognises that the islands need thriving business environments that allow for a wide range of economic opportunities.
- A.1.11 The Scottish Government’s Programme for Government (2022-2023) is guided by the National Performance Framework.
- A.1.12 The Scottish Government’s Infrastructure Investment Plan 2021-22 to 2025-26 (2021) sets out priorities for public investment through a long-term strategy. With progress updated annually, it sets out why the Scottish Government invests, how it invests and what it intends to invest up to 2040 by sector. This Infrastructure Investment Plan focuses on the importance of infrastructure

investment to aid in the recovery from the economic, health and social harm from Covid-19 and also to address the adjustments required following the UK's exit from the EU in December 2020.

- A.1.13 Scotland's National Strategy for Economic Transformation (2022) sets out the priorities for Scotland's economy as well as the actions needed to maximise the opportunities of the next decade. The vision is to create a wellbeing economy: a society that is thriving across economic, social and environmental dimensions, and that delivers prosperity for all Scotland's people and places. The aim is to achieve this while respecting environmental limits, embodied by climate and nature targets.
- A.1.14 The National Planning Framework 3 (2014) designates a suite of National Developments which benefit from Scottish Government support in policy terms and sets out a national spatial strategy to deliver sustainable economic growth. This includes planned investment in key economic sectors and infrastructure, identifying improved digital and transport connectivity as one of the four key planning outcomes for the plan. Within NPF3 Lerwick is noted as an important transport hub, with the harbour providing inter-island ferry connections and links to Aberdeen, Orkney and further afield, and it is benefiting from continuing growth in the cruise market.
- A.1.15 The emerging RTS will also need to be aligned with emerging policy documents, including the Islands Connectivity Plan which will replace the Ferries Plan. This document will link with the emerging STPR2 and provide a long-term programme of investment in vessels and ports in Scotland. At the current time, our understanding is that the Plan will not include inter-island transport and will instead focus only on links between Shetland and the Scottish mainland.
- A.1.16 The emerging RTS must take account of all priorities identified in this policy review, including NTS2, Scotland's Economic Strategy, NPF3 and the Infrastructure Investment Plan especially with regard to transport climate change and inclusive growth. The emerging RTS also needs to be aligned with emerging policy priorities including the recommendations of STPR2, expected Islands Connectivity Plan and the Revised Draft NPF4.
- A.1.17 The Shetland Islands Council Local Development Plan (2014) sets out the strategic and detailed planning policy framework for development within the local planning authority area. The LDP's policies for transport support integrated transport to support sustainable economic growth, access to jobs and training, social inclusion and wellbeing and healthy communities. Furthermore, policies support inter-island Links such as air services, ferry services and associated infrastructure.
- A.1.18 LDP2 will provide the vision for how communities will grow and develop in the future. It will provide certainty for communities and investors alike about where development should and should not take place and the infrastructure required to support growth. LDP2 will be prepared in the context of planning reforms arising from the Planning (Scotland) Act 2019, including preparation of NPF4 which once finalised will also form part of the statutory Development Plan. Shetland's Local Housing Strategy is also in the process of being updated. This document will provide a comprehensive housing strategy for Shetland covering both social and private housing. The implementation of the emerging RTS will need to take account of the spatial strategy and transport requirements contained within LDP2 and the Local Housing Strategy once adopted.
- A.1.19 Living Shetland, the Shetland Local Biodiversity Action Plan (2004), aims to translate national targets for habitats and species into effective action at the local level; promote biodiversity conservation and enhancement; and identify biodiversity resources and priorities in the local area. In addition, the Shetland Outdoor Access Strategy (2019) sets out a vision for outdoor access and the Shetland Core Paths Plan (2009) outlines a framework of paths that can be used by residents and visitors throughout the local authority.
- A.1.20 In terms of economic development, the Economic Development Strategy 2018-2022 (2018) outlines issues faced by the local authority's economy and sets out the conditions for growth to support businesses, residents and communities. The strategy notes the importance of strong

external and internal transport links and well-developed ports and harbour facilities to the local economy.

A.1.21 The Shetland Islands Marine Spatial Plan (2015) provides an overarching policy framework to guide marine development and activity. It notes the importance of marine transport, ports and harbours to the local and regional economy and employment, with specific policy provisions for future ferry links and harbour development. Ports and harbours support a number of key island industries such as oil and gas and fishing and will continue to play a prominent role in emerging industries including the renewable energy sector. In addition to supporting commercial activity, marine transport also plays a significant role in passenger travel and providing key services to remote island communities.

A.1.22 In June 2018, ZetTrans published the Shetland Transport Strategy Refresh 2018-2028, an update to the Shetland Transport Strategy 2008. The strategy promotes the maintenance, enhancement and improvement of transport infrastructure and services throughout the area. A number of strategic objectives are set out which include:

- enabling access to economic opportunities such as employment, training, businesses and labour markets;
- supporting communities to thrive socially, physically and economically; and
- enhancing the natural environment by promoting healthy, sustainable and low-carbon travel choices.

A.1.23 In addition, ZetTrans published an Active Travel Strategy in 2021 which aims to meet the following outcomes:

- Reduce the effects of climate change and other negative environmental impacts by developing a low carbon transport system;
- Support resilience in the local economy by creating better access to local businesses and services;
- Improve physical and mental health by promoting active travel choices; and
- Create a more equal society by improving access to low cost and convenient transport options.

A.1.24 In terms of public health, the Active Shetland Strategy 2018-2023 was developed by the Shetland Islands Council to tackle inequalities; improve community wellbeing and resilience; support early intervention and prevention; and utilise physical activity and sport to raise attainment and wider academic achievement.

A.1.25 In terms of climate change, Shetland Islands Council is currently preparing a Climate Change Strategy for Shetland which will set out the regions approach to mitigation and adaptation as well as outline how Shetland will achieve Net Zero.

A.1.26 Also of relevance is Shetland's Partnership Plan (2018) and associated Delivery Plan (2019-2022), created by the local authority's Community Planning Partnership established under the Community Empowerment (Scotland) Act 2015, which seeks to reduce inequality and improve the lives of everyone in Shetland.

A.1.27 Shetland's Islands with Small Populations Locality Plan is a Shetland Partnership Locality Plan which summarises the activities and achievements of the Islands with Small Populations Project. It sets out the next steps required to ensure that islands with small populations are central to the Shetland Partnership's plans and future delivery. It is a locality plan that should enable communities and partners to find local solutions to local problems.

- A.1.28 On Da Level, Achieving a Fairer Shetland (March 2016) is a report which comprises a set of recommendations from Shetland’s Commission on Tackling Inequalities. It identifies factors that influence inequality in Shetland and begins to identify solutions.
- A.1.29 The Shetland Tourism Strategy 2018-2023 sets out the strategic aim, priorities and activity areas which will be pursued up to 2023 to ensure maximum benefit to Shetland is realised through the tourism sector.

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Appendix B Baseline Environment

B.1 Introduction

B.1.1 This appendix supports Section 3 of the RTS SEA ER by providing a review of current environmental and socio-economic conditions within the area likely to be affected by the emerging RTS, in particular (but not exclusively) the ZetTrans administrative area. In doing so this review:

- Identifies relevant aspects and characteristics of the environment, including those likely to be significantly affected by the outcome of the new ZetTrans RTS. This includes the identification of sites designated at international or national levels for reasons of biodiversity conservation, geological importance, heritage or landscape value which have the potential to be affected by the emerging RTS;
- Identifies relevant socio-economic trends and baseline conditions, focusing on matters likely to be significantly affected by the outcome of the emerging RTS; and
- Outlines how the identified environmental and socio-economic characteristics and baseline conditions should be addressed within a refreshed RTS and considered within this SEA. The terms ‘must’ and ‘should’ are used to differentiate between statutory requirements to consider particular issues and non-statutory considerations, for example evidence from the baseline analysis which indicates a need to improve environmental quality.

B.1.2 This evidence is then used to:

- Inform consideration of the expected evolution of baseline environmental conditions in the absence of the emerging RTS; and
- Define a suite of key environmental issues which will need to be addressed within the emerging RTS and which should be considered throughout this SEA process (presented in Section 3 of this report).

B.1.3 The purpose of this baseline review is therefore to inform both proposals for the emerging RTS and the content of the SEA Framework which has been used to assess all substantive components of the emerging RTS.

B.2 Overview of Designated Sites

B.2.1 Table B-1 and Figure B-1 below summarise identified sites at international, national or local level for reasons of biodiversity conservation, geological importance, heritage or landscape value which are considered to have the potential to be affected by the emerging RTS. The list has been summarised using Environmental Baseline information contained in Appendix III SEA Environmental Baseline of the Shetland Islands Council Local Development Plan (2022). For proportionality and to avoid repetition of the source information, Appendix III is deferred to with a summary and transport specific aspects referred to here. The context of these designated sites needs to be considered when characterising the environmental baseline position and identifying the relevance of existing issues and problems to the emerging RTS, as detailed in Section B.3.

Table B-1 Summary of Shetland Environmental Designations

Designation	Number of Sites	Total Area Covered in Hectares
Special Protection Areas	15	423,733
Special Areas of Conservation	12	15,345

Designation	Number of Sites	Total Area Covered in Hectares
Ramsar Wetlands of International Importance	1	5,470
Sites of Special Scientific Interest	78	19,931
National Scenic Area	1	41,833
National Nature Reserves	2	1,322
Marine Protected Areas (Nature Conservation and Demonstration and Research)	3	38,897
Marine Consultation Areas	4	540
Protected Seal Haul-out Sites	43	15,133
Local Nature Conservation Sites	49	1,264

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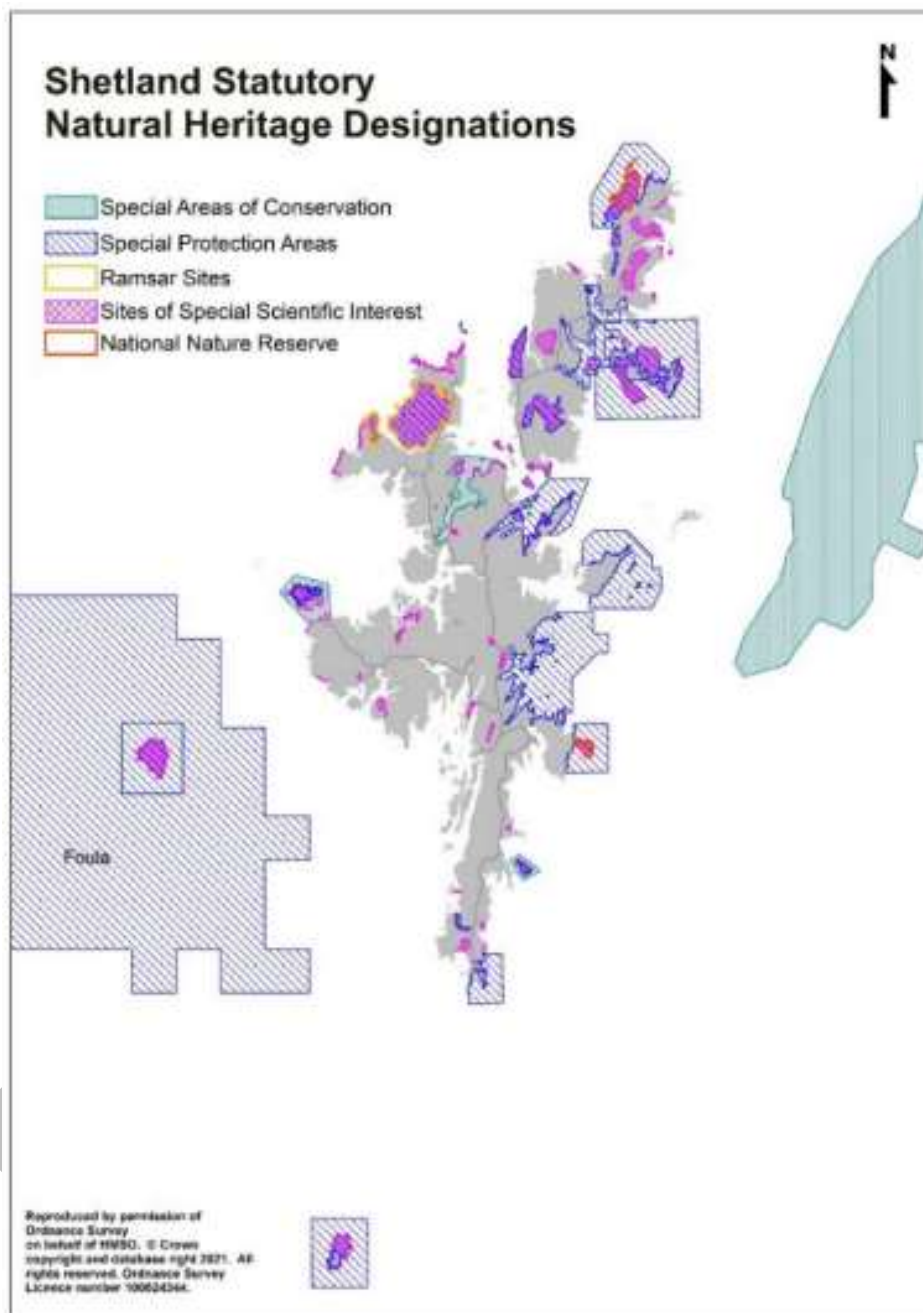


Figure B.1 Statutory Nature Conservation Designations in Shetland (Source: [NatureScot data services](#) | [NatureScot](#))

B.2.2 The ZetTrans area hosts a number of international, national and local environmentally designated sites. The emerging RTS should provide an appropriate level of protection and enhancement opportunities for the designated sites and landscapes and must support the management of designated sites in pursuit of their defined conservation objectives.

B.3 Environmental and Socio-economic Baseline Conditions

B.3.1 Informed by Table B-1, the following section outlines the current environmental conditions (including with respect to population, health and infrastructure) within the area likely to be affected by the emerging RTS, namely the ZetTrans region. This review also identifies

associated existing environmental problems and issues the emerging RTS should address, and which have been considered throughout this SEA process.

B.3.2 For the purpose of brevity, the qualitative baseline is presented in distinct categories, each in accordance with the required SEA objectives as shown below.

- **Air and Climate:** Air and Climatic Factors;
- **Physical Environment:** Biodiversity, Flora and Fauna, Soil, Water, Cultural Heritage and Landscape; and
- **Socio-economics:** Population, Human Health and Material Assets

Air and Climate

Air and Climatic Factors

B.3.3 There are no significant issues with respect to air quality in Shetland, with air quality generally performing well in relation to National Air Quality objectives and there are no Air Quality Management Areas designated in Shetland.

B.3.4 Most air pollution is associated with the main industrial areas of Gremista and Green Head Industrial Estates and the Sullom Voe Oil Terminal. There are also emissions associated with transport including air, sea, and road.

Physical Environment

Biodiversity, Geodiversity, Flora and Fauna

B.3.5 Table B-1 above identified the qualifying features of relevant European sites (SPAs, SPCs and Ramsar sites) and sites designated at the national level and benefiting from statutory protection within the ZetTrans region for specific reasons of ecological importance or biodiversity conservation.

B.3.6 The 15 SPAs in Shetland, include three marine SPAs which are important foraging areas for birds breeding in Shetland. The 12 SACs in Shetland are mainly designated for upland habitat or marine interest. The 78 SSSIs in Shetland cover nearly 14% of the land area, just over half of the sites are designated for geological or geomorphological reasons. Shetland's vegetation is dominated by peatland, heather moorland and montane habitats.

Soil and Ground Conditions

B.3.7 Shetland is a designated UNESCO European Geopark in recognition of its outstanding and diverse geology and there are 33 Geological and 7 Geomorphology SSSIs. Overall, the ZetTrans region comprises a mix of semi-rural and rural landscapes. The ZetTrans region is made up of a mixture of soils including; Humus-Iron Podzols, Magnesium Gleys, Peat, Peaty Gleys and Peaty Podzols. A significant area of Shetland is covered in peat; NatureScot's Carbon and Peatland map identified that over 36% of Shetland was considered to be a 'nationally important resource'. Soil erosion from grazing and natural erosion have left over 70% of blanket bog damaged in Shetland.

B.3.8 Bedrock geology composition is varied across the Shetland Islands with a range of Metamorphic bedrock types from the Appin and Argyll Group (consisting of Graphitic Pelite, Calcareous Pelite, Calcsilicate rock, Psammite, Semipelite, Pelite and Metalimestone), Pre-Caledonian to Caledonian Group, Moine Subgroup (Gneissose Psammite and Sempelite), Lewisian Complex (Gneiss and Mafic), Southern Highland Group (Quartzite), Unst Phyllite Group, Queyfirth Group and Fault Zone Rocks (Mylonitic rock and Fault-breccia). In addition, several Igneous bedrock

types such as Felsic Rock, Felsic Lava, Felsic Tuff and Ultramafite, Finally, sedimentary bedrock types include Conglomerate, Sandstone, Siltstone and Mudstone.

- B.3.9 In terms of agricultural land quality, the amount of land suitable for agriculture in Shetland is limited and dominated by land capable of use for rough grazing, followed by improved grassland.

Water

- B.3.10 Main waterbodies located within the ZetTrans region include Spiggie Loch, Tingwall Loch, Benston, Loch of Northhouse, Loch of Clousta, Sulma Water, Punds Water. A number of water bodies have been identified as having ecological importance by SEPA such as: Burn of Hillwell (high ecological importance), Eela Water, Loch of Vaara, Loch of Girsta, Laxo Burn/Gosswater Burn, Burn of Grunnafirth/Burn of Forse, Burn of Strand/Burn of Griesta, Burn of Dale, Burn of Luxdale/Burn of Voxter, Stromfirth Burn, South Burn of Burrafirth and Gibbie Law's Burn (good ecological importance). Water quality in the region is above the national average, with 96% of surface water bodies in good or excellent condition, and all groundwater bodies in good condition.

- B.3.11 Coastal, fluvial and surface water flood risk are present, with key coastal flood risk being the most significant issue and fluvial flood risk being relatively localised in nature.

Cultural Heritage

- B.3.12 Shetland has a rich cultural history with 365 Scheduled Monuments, 490 Listed Buildings (26 of which are category 'A' listed), and three World Heritage Sites, three Conservation Areas and four Gardens and Designed Landscapes. There are extensive archaeological remains in Shetland including Viking sites, brochs, wheelhouses, standing stones, ancient crofts and ruined chapels. A proportion of the transport infrastructure is also historic.

Landscape

- B.3.13 Shetland is a predominantly rural region with a number of small towns, villages, rural settlements and houses scattered throughout the landscape. Inland landscapes are characterised by rolling hills, heather and rough grassland with historic buildings and features. Main settlements include the capital Lerwick, Sumburgh and Sandwick. The Shetland archipelago consists of over 100 islands, of which 15 are inhabited.
- B.3.14 In addition, the Shetland National Scenic Area covers seven individual areas across Shetland: Fair Isle, Foula, South West Mainland, Muckle Roe, Eshaness, Fethaland and Hermaness. Shetland was designated as a UNESCO Global Geopark in 2015 in light of its international geological significance. The Geopark is managed by Shetland Amenity Trust.

Socio-economics

Population

- B.3.15 Shetland has a total estimated population of 22,870⁴ people (2020), a decrease of 0.8% from 23,060 in 2010. Within the same period, the population of people aged 0-15 and 16-64 decreased by 7.8% and 6.2% respectively. Further, the population of people aged 65+ increased by 28.5% which indicates an ageing population. Population projections forecast that the population of Shetland will continue to decrease by 0.7% to 22,709 over the next decade. In addition to an ageing population, the ZetTrans region is projected to see a decline in the young (0-15) and working age population of 9.2% and 0.3% between 2018 and 2028⁵.

⁴ NOMIS Population Estimates – local authority based by single year of age 2010 and 2020.

⁵ National Records of Scotland, Population Projections for Scottish Areas (2018 Based)

- B.3.16 In terms of spatial distribution, the population of Shetland is dispersed across 15 islands, including the Shetland mainland. The largest settlements are Lerwick, Scalloway, and Brae, with Lerwick accounting for a considerable proportion of Shetland's overall population (approximately 30% in 2016)⁶.
- B.3.17 In terms of deprivation, the Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation across small areas in Scotland. It looks at multiple deprivation based on employment, education, health, access to services, crime and housing in addition to income. Overall, deprivation in Shetland as measured by the SIMD 2020 is generally low, with no data zones in Shetland falling within the 20% most deprived in Scotland and only one area of relatively high deprivation within north Lerwick. However, over 50% of the Shetland data zones are within the Index's most deprived 10% in terms of geographic access to services.
- B.3.18 While deprivation is relatively low, the cost of living in Shetland can be high. Research conducted by Highlands and Islands Enterprise (HIE) in 2016, found that the minimum living cost for a single person living in a remote island settlement was 35% higher than those living in an urban area on the mainland, with transport and delivery costs accounting for a considerable proportion of this additional expense. In the Shetland context, this higher cost of living gives rise to income inequality both between the Shetland Islands and the mainland and within the islands themselves. An assessment of the equalities impacts of the ZetTrans RTS is provided in the Equalities Impact Assessment (EqIA) which accompanies the Draft RTS and this ER.
- B.3.19 In terms of employment, the five sectors which account for most employment in the Shetland Islands region, in descending order, are: Schools, Construction, Retail, Social Work and Public Administration. Further, the five sectors which account for most output within the region are: Aquaculture, Fish Processing, Public Administration, Retail and Construction. On average household expenditure in Shetland in 2017 was £34,374 per annum with £22,030 of this spend within the Shetland region.
- B.3.20 Tourism is also an important and growing industry in Shetland. The total value of tourism in 2017 was £23.2 million, a real terms increase from £15.2 million in 2011⁷.

Human Health

- B.3.21 The ZetTrans region is served by the NHS Shetland Health Board. Hospital provision within the Health Board is comprised of Gilbert Bain Hospital in Lerwick and Lerwick Health Centre. It is important to note that Aberdeen Royal Infirmary although not within the Shetland Health Board area is a key element of Shetland's healthcare provision and provides critical health services such as emergency care and treatment for long-term conditions. As such, air connectivity with Aberdeen Royal Infirmary is a critical component of Shetland's transport infrastructure.
- B.3.22 Life expectancy in the NHS Shetland Health Board for a female at birth is 83.2⁸ (compared to 81.0 for Scotland) and male life expectancy is 80.6 (compared to 76.8 for Scotland) according to data from the Scottish Public Health Observatory (2018-2020). Life expectancy is showing an upward trend.
- B.3.23 Further analysis of health impacts will be provided within the EqIA and RTS.

Material Assets

- B.3.24 Inter-island connectivity is paramount to the economic and social integrity of the ZetTrans region, with a comprehensive inter-island ferry service connecting nine islands (Bressay, Fair Isle, Papa Stour, Foula, Whalsay, Skerries, Unst, Yell and Fetlar) to Shetland mainland and an

⁶ National Records of Scotland, Mid-Year Population Estimates by Settlement 2016

⁷ Fraser of Allander institute (2021). Shetland Economic Accounts 2017

⁸ Scottish Public Health Observatory. Life Expectancy 2018-2020.

inter-island air service providing connections between Shetland mainland and Foula and Fair Isle.

- B.3.25 The ferry service is operated by SIC and consists of 12 ferries which run from 15 terminals across the archipelago, providing a vital link for approximately 3,500 people⁹. Further, ferry services are operated between Shetland and Orkney (Lerwick-Kirkwall operated by Secro NorthLink Ferries) and mainland Scotland (Lerwick-Aberdeen operated by Serco NorthLink Ferries).
- B.3.26 The inter-island air service is provided by Airtask Group. Tingwall Airport located 5 miles north west of Lerwick is the operating base for the service with flights between Tingwall and the airstrips on Fair Isle and Foula. There are flights to the isles each weekday, weather permitting, and Saturday flights during the summer months. One flight to Fair Isle each Saturday departs from Sumburgh Airport.
- B.3.27 Key transport routes and infrastructure within the ZetTrans region include the A970, A971 and A968. These main routes adjoin B-routes and other minor roads, providing key connections across the ZetTrans region. Data from the 2011 Census suggests that a significant proportion of the region's working population drive to their place of work (71.4%), compared with nationally (61.8%), with a significantly lower proportion of the population traveling to work by bus (3.4%) compared to nationally (10%) which may be due to the relatively dispersed nature of the population in Shetland¹⁰. The road network provides key links to the region's ports and airports, most notably Lerwick Harbour, Scalloway Harbour, Sullom Voe Terminal, Tingwall Airport, Sumburgh Airport, Fair Isle Airstrip and Foula Airstrip.
- B.3.28 In addition, the ZetTrans region is served by multiple bus services connecting semi-rural and rural settlements. All services are specified and fully financed by ZetTrans and are operated by a number of different bus companies.

⁹ [Shetland by Ferry | ZetTrans](#)

¹⁰ NRS, Table QS701SC - Method of travel to work. All people aged 16 to 74 in employment the week before the census (excluding full-time students), Census 2011 included in Strategic Transport Projects Review (2021)

Appendix C ZetTrans RTS SEA Framework

SEA Objectives	Guide Questions: Will the RTS (component)...	Criteria to Assess Candidate Transport Interventions and Schemes
<p>1. Climate Change: Respond to the climate emergency by decarbonising infrastructure assets, promoting natural infrastructure, facilitating a low carbon economy and adapting to accommodate the effects of climate change.</p>	<ul style="list-style-type: none"> • Contribute to decarbonisation of the transport system? • Promote modal shift towards sustainable public transport and active travel? • Support a sustainable pattern of development which minimises energy consumption and GHG emissions? • Reduce number of single occupancy car journeys and encourage car sharing? • Promote the use of clean fuels and technologies? • Enhance the resilience of infrastructure assets to adverse weather and the effects of climate change? • Promote the use of nature-based solutions? 	<ul style="list-style-type: none"> • Support a sustainable pattern of development that facilitates achieving carbon neutrality. • Impacts on climate change mitigation: modal shifts and GHG emissions or saving (construction and operational phases). • Adaptability of new and upgraded transport infrastructure and services. • Resilience to adverse weather and the effects of climate change.
<p>2. Air Quality and Amenity: To maintain air quality and, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.</p>	<ul style="list-style-type: none"> • Maintain or enhance air quality? • Avoid unacceptable noise and vibration levels at sensitive locations? Prevent and reduce emissions of harmful pollutants? 	<ul style="list-style-type: none"> • Proximity to congestion pinch points • Likely operational emissions.
<p>3. Biodiversity, Geodiversity and Soil: Conserve, protect, restore and enhance biodiversity and geodiversity interests, including through safeguarding designated and non-designated sites, species, habitat connectivity and soil resources and by protecting and enhancing green infrastructure.</p>	<ul style="list-style-type: none"> • Ensure appropriate safeguards for the integrity, conservation objectives and feature of sites designated at international, national, or local levels for reasons of biodiversity or geodiversity value or species protection? • Support the protection and enhancement of valued species and habitats? • Support safeguarding against habitat loss or fragmentation? 	<ul style="list-style-type: none"> • Proximity to and impacts on sites designated at international, national and local levels for reasons of biodiversity conservation, ecological importance or geological importance (i.e., effects on integrity, objectives and features). • Proximity to and impacts on designated woodlands, important trees or hedgerows and other valued habitats.

SEA Objectives	Guide Questions: Will the RTS (component)...	Criteria to Assess Candidate Transport Interventions and Schemes
	<ul style="list-style-type: none"> • Support the protection and enhancement of protected trees and important woodland areas? • Protect and enhance important soil resources? • Support the protection and restoration of peatland? 	<ul style="list-style-type: none"> • Proximity to and impacts on non-designated biodiversity features including wildlife corridors. • Potential impacts on protected species. • Consideration of climate change on vulnerability and condition of habitats, species and soils.
<p>4. Water, Flood Risk and Resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst adapting to climate change and reducing flood risks.</p>	<ul style="list-style-type: none"> • Avoid deterioration and enhance the overall, ecological and chemical classification of water bodies and the water environment in accordance with the Water Framework Directive? • Affect the volume of surface water runoff into or abstraction from water bodies? • Minimise the risk of flooding to people, property, infrastructure and environmental assets? • Manage residual flood risks appropriately and avoid new flood risks including by incorporating nature based solutions? • Seek to avoid or at least minimise new development in areas prone to flood risk or mitigate the potential for such risk? 	<ul style="list-style-type: none"> • Proximity to Flood Risk Zones. • Proximity to and impacts on the WFD status of waterbodies and aquifers. • Resilience to flood risk.
<p>5. Cultural Heritage: Conserve, protect and enhance the historic environment, cultural assets and promote Shetland's distinct culture.</p>	<ul style="list-style-type: none"> • Conserve, protect and enhance the integrity, character and setting of designated and non-designated heritage assets? • Preserve archaeological sites and protect potential unknown archaeological resources? 	<ul style="list-style-type: none"> • Proximity to and potential effects on designated and non-designated heritage assets, important archaeological sites and their settings. • Opportunities to enhance access to, and enjoyment and understanding of, sites of archaeological and cultural heritage significance.

SEA Objectives	Guide Questions: Will the RTS (component)...	Criteria to Assess Candidate Transport Interventions and Schemes
<p>6. Landscape: Protect and enhance the landscape character, townscape character and visual amenity.</p>	<ul style="list-style-type: none"> • Protect and enhance landscape character? • Safeguard important landscape and townscape features? • Protect visual amenity and valued views? • Protect the unique characteristics of rural and island Shetland? • Maintain and enhance the attractiveness of the public realm and built environment? 	<ul style="list-style-type: none"> • Proximity to and impacts on designated landscapes including wild land. • Impacts on visual amenity and key views. • Impacts on settlement integration or coalescence.
<p>7. Accessibility and Connectivity: Ensure appropriate connectivity and affordable access for all to employment, education, facilities and services, and social and leisure opportunities.</p>	<ul style="list-style-type: none"> • Implement the NTS2 Sustainable Travel Hierarchy across the ZetTrans region where practical? • Improve connectivity to employment, education, personal business and social and leisure opportunities in particular by active travel and public transport? • Improve the accessibility and integration of the transport network, including between islands? • Improve availability and access to transport and travel information? • Respond to periods of increased travel demand e.g., during holiday periods, peak livestock season, Up Helly Aa etc? • Reduce the need to travel? • Maintain or improve connections between island communities and Shetland mainland and between Shetland mainland and the Scottish mainland? • Reduce delay to services and allow for greater journey time reliability? • Help reduce severance effects of the transport network? 	<ul style="list-style-type: none"> • Support the NTS2 sustainable hierarchy. • Address the evidenced physical accessibility problems. • Proximity to and impacts on the public transport network. • Proximity to the existing transport network. • Proximity to and impacts on identified service delays and pinch points. • Proximity to and impacts on the accessibility of community facilities, public services and key amenities. • Proximity to and impacts on the accessibility of education infrastructure. Impacts on journey times to mainland Scotland.
<p>8. Inclusive Growth: Improve social and economic prosperity for all by enhancing</p>	<ul style="list-style-type: none"> • Support better integration of land-use/spatial planning, transport planning and economic development decisions? 	<ul style="list-style-type: none"> • Economic development, employment benefits and social value unlocked by the intervention.

SEA Objectives	Guide Questions: Will the RTS (component)...	Criteria to Assess Candidate Transport Interventions and Schemes
<p>productivity and competitiveness and through reducing societal inequalities.</p>	<ul style="list-style-type: none"> • Help to integrate labour and housing markets to meet identified population needs in a sustainable manner? • Support the delivery of existing and emerging spatial strategies at national, regional and local levels? • Support the growth of the population of Shetland through both retaining and attracting people to live, work and invest in Shetland? • Promote the co-location of synergistic economic activities and land uses? • Support efficient and affordable freight movement between the islands and Shetland mainland and between Shetland mainland and the Scottish mainland? • Support increased and diversified employment opportunities? • Address transport needs resulting from existing and changing demographic characteristics? • Address transport needs resulting from existing and changing socio-economic characteristics? • Support the implementation of relevant equalities duties, as assessed through separate reporting? 	<ul style="list-style-type: none"> • Ability to help reduce identified inequalities (as assessed through separate reporting). • Support the creation of safe and attractive public realm. • Contribution to area-based regeneration and socio-economic renewal. • Impacts on transport efficiency including inter-island and mainland journey times. • Impacts on freight movement. • Proximity to and impacts on key employment locations (existing and planned).
<p>9. Human Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.</p>	<ul style="list-style-type: none"> • Facilitate and encourage use of public transport and active travel? • Improve connections to and access to recreational opportunities and facilities? • Reduce the negative impacts of transport on human health, especially in terms of pollution and air quality? • Reduce the likelihood of transport-related road accidents and casualties? 	<ul style="list-style-type: none"> • Proximity to and impacts on access to healthcare facilities. • Proximity to and impacts on active travel networks. • Proximity to and impacts on open space. • Contribution of biodiversity and the natural environment (and access to them) in people's health.

SEA Objectives	Guide Questions: Will the RTS (component)...	Criteria to Assess Candidate Transport Interventions and Schemes
	<ul style="list-style-type: none"> • Improve connectivity to healthcare facilities, including connectivity to on island facilities, Lerwick (Gilbert Bain Hospital), and Aberdeen (the primary mainland hospital for Shetland)? • Safeguard sensitive environmental receptors to maintain and enhance human health? 	<ul style="list-style-type: none"> • Consideration of post Covid-19 issues for transport and working / living patterns.
<p>10. Material Assets: Manage, maintain and where possible improve the efficient and effective use of natural resources, ecosystem services, land and infrastructure to meet identified needs.</p>	<ul style="list-style-type: none"> • Implement the NTS2 Sustainable Investment Hierarchy across the ZetTrans region? <ul style="list-style-type: none"> • Unlock the delivery of housing to meet identified needs? • Prioritise the re-development of previously developed land? <ul style="list-style-type: none"> • Support the provision of adequate infrastructure, services and facilities to meet identified needs? • Help move Shetland towards a circular economy? 	<ul style="list-style-type: none"> • Alignment with or ability to support land-use/spatial planning and economic development decisions. • Proximity to and impacts on the delivery of major development allocations and committed developments. • Facilitate the redevelopment of previously developed land. • Proximity to and impacts on vacant and derelict land (VDL). • Impacts on best and more versatile agricultural land and pastoral land. • Impacts on marine-based assets / aquaculture. • Impacts on natural resources, including the extraction of mineral resources. • Impacts on ecosystem services.

Appendix D Environmental Appraisal of RTS Policies

D.1 Introduction

D.1.1 This appendix supports Section 5.3 of the Environmental Report and presents the findings of the environmental and climate appraisals of each individual Policy. The significance criteria for assessing the environmental effects are:

Score	Description	Symbol
Significant (Major) Positive Effect	The proposed policy contributes significantly to the achievement of the SEA Objective	++
Minor Positive Effect	The proposed policy contributes to the achievement of the SEA Objective but not significantly	+
Neutral Effect	The proposed policy is related to but does not have any effect on the achievement of the SEA Objective	0
Minor Negative Effect	The proposed policy detracts from the achievement of the SEA Objective but not significantly	-
Significant (Major) Negative Effect	The proposed policy detracts significantly from the achievement of the SEA Objective. Mitigation is therefore required	--
Uncertain Effect	The proposed policy has an uncertain relationship to the SEA Objective or the relationship would be dependent on the way in which the aspect is managed	?
No Clear Relationship	There is no clear relationship between the proposed policy and the achievement of the SEA Objective, or the relationship is negligible	~

RTS Theme and Policies	SEA Objective									
	Climate	Air	Biodiversity	Water	Heritage	Landscape	Access	Growth	Health	Materials
RTS Theme 1: Enabling and encouraging active transport										
1. We support and encourage an increase in walking, wheeling and cycling participation in Shetland for environmental, accessibility and health reasons	++	++	0	0	0	0	++	+	++	++
2. In line with Scottish Government, we commit to rebalancing the spend in transport to support active and sustainable travel	++	++	0	0	0	0	++	+	++	++
3. We support the principle of reallocating road space from general traffic to walking, wheeling and cycling as a means to promote safer active travel and encourage use of active travel modes	++	++	+?	+?	+?	+?	++	+	++	+
4. We support the principle of reducing speed limits in our communities	++	++	0	0	0	0	++	+	+	+
5. We support the principle of improving the management and enforcement of traffic and parking around our schools	++	++	0	0	0	0	++	+	+	+
6. We support a network of traffic free or quiet way routes to connect our communities	++	++	0	0	0	0	++	+	+	+
7. We will support and continue to develop the case for long distance walking and cycling routes	++	++	-?	0	+	+	++	+	++	+
8. We support the integration of active travel and public transport connections	++	++	0	0	0	0	++	+	++	+
9. We support the upgrade of cycle parking at all of our public buildings, transport interchanges, and key on-street locations	++	++	0	0	0	0	++	+	+	+
10. We commit to designing our active travel infrastructure to a high quality in accordance with the most up-to-date best practice and design guidance as this evolves to meet the needs of all users	++	++	+	0	0	0	++	+	++	+
11. We support the integration of active travel in the planning of all new developments.	++	++	0	0	0	0	++	+	++	++

RTS Theme and Policies	SEA Objective									
	Climate	Air	Biodiversity	Water	Heritage	Landscape	Access	Growth	Health	Materials
12. We will seek the implementation of initiatives which widen access to cycle ownership and /or hire through cycle sharing schemes (including e-cycles)	++	++	0	0	0	0	++	+	++	+
13. Our active travel network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors	++	++	0	0	0	0	++	+	++	+
Overall assessment	++	++	0	0	0	0	++	+	++	+
RTS Theme 2 Improving the quality of, and access to our public transport										
14. Our bus network should be fully accessible to all. This also requires full compliance with the requirements of the Equality Act 2010	0	0	0	0	0	0	+	+	+	0
15. Our bus network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors	0	0	0	0	0	0	+	+	+	0
16. A minimum level of facilities should be provided at our bus station and stops, ferry termini, and airfields and airports	0	0	0	0	0	0	+	+	+	0
17. Our bus network should provide a high quality and consistent onboard experience	0	0	0	0	0	0	+	+	+	0
18. Public transport (bus, air, and ferry) information should be fully accessible and provided in a variety of formats to meet the specific needs of all users	0	0	0	0	0	0	+	+	+	0
19. Our public transport system (bus, air, and ferry) should be affordable for all	0	0	0	0	0	0	+	+	+	0
Overall assessment¹¹	+	+	0	0	0	0	+	+	+	+
RTS Theme 3 Extending bus connectivity										

¹¹ For some SEA topics, cumulatively the Policies within this Theme are expected to have a positive environmental effect.

RTS Theme and Policies	SEA Objective									
	Climate	Air	Biodiversity	Water	Heritage	Landscape	Access	Growth	Health	Materials
20. We will continue to support and develop the delivery of a financially and operationally sustainable bus network in Shetland (including staffing and succession planning)	+	+	0	0	0	0	+	+	+	0
21. We will aim to widen public transport connectivity to key locations and transport interchanges in order to provide new travel options and alternatives to the private car	+	+	0	0	0	0	+	+	+	0
22. We support measures to reduce social exclusion for those without access to a car	0	0	0	0	0	0	+	+	+	0
23. We support the principle of new models of rural public transport provision, including enhanced DRT	+	+	0	0	0	0	+	+	+	0
24. We will explore the application of bus related powers granted through the Transport (Scotland) Act 2019 to support the delivery of an enhanced bus network in Shetland	0	0	0	0	0	0	+	+	+	0
Overall assessment	+	+	0	0	0	0	+	+	+	0
RTS Theme 4 Connecting our islands										
25. Our internal ferry network should be developed in a more coherent, recognisable, and integrated way for regular, occasional and new users of the network, including visitors	0	0	0	0	0	0	+	+	+	0
26. We are committed to contributing to the sustainability of our island communities by reducing or removing the cost, capacity and connectivity barriers to personal and business travel, the delivery of public services and the movement of goods between our islands	-?	-?	0	0	0	0	+	+	+	-?
27. We commit to maintaining the ferry fleet and associated infrastructure and to invest in these assets and crews to a level which ensures a continuing reliable and resilient service	0	0	0	0	0	0	+	+	+	0
28. We commit to maintaining the inter-island air service to at least its current level and to explore opportunities to improve the service where necessary and deliverable	-?	-?	0	0	0	0	+	+	+	-?

RTS Theme and Policies	SEA Objective									
	Climate	Air	Biodiversity	Water	Heritage	Landscape	Access	Growth	Health	Materials
29. We will progress the feasibility and case for fixed links and act on the conclusions as part of our future wider inter-island connectivity planning across all modes of travel	-?	-?	-?	-?	-?	-?	++	++	+	-?
30. We will support island-based vessels and crews where safe, deliverable and practicable	0	0	0	0	0	0	+	+	+	0
31. We will ensure that all future ferry and aircraft replacement programmes will contribute towards the delivery of the Council's Climate Change Strategy	++?	+	+	+	0	0	0	+	0	+
32. Inter-island services will be fully accessible taking account of the needs of all users	0	0	0	0	0	0	+	+	+	0
Overall assessment	-?	-?	-?	0?	0?	0?	+	+	+	0
RTS Theme 5 Enhancing our external connections and supply chain										
33. The RTS supports improved connectivity with Scotland's mainland in the form of higher capacity and cheaper travel	-?	-?	0	0	0	0	++	++	+	-?
34. We will make the case to Scottish Government for new vessels for the Aberdeen – Lerwick / Kirkwall route and actively engage our communities and businesses in this process to ensure the most appropriate vessels for our routes	++?	++?	0	0	0	0	++	++	+	++?
35. We will actively engage with our communities and businesses to defining our requirements for the specification for the next Northern Isles Ferry Services Contact and work with Scottish Government to deliver this.	++?	++?	0	0	0	0	++	++	+	++?
36. We will make the case to the Scottish Government and Loganair to reduce the cost, capacity and connectivity barriers for travelling to and from the Scottish mainland for our communities and businesses	-?	-?	0	0	0	0	++	++	+	-?
Overall assessment	?	?	0	0	0	0	++	++	+	0
RTS Theme 6 Decarbonising our transport										
37. We will support the delivery of the emerging Shetland's Climate Change Strategy	++	+	+	0	0	0	0	++?	0	+

RTS Theme and Policies	SEA Objective									
	Climate	Air	Biodiversity	Water	Heritage	Landscape	Access	Growth	Health	Materials
38. We support the implementation of measures which facilitate the decarbonisation of the vehicle fleet in Shetland and between Shetland and the Scottish mainland, including cars, buses, commercial vehicles, aircraft and ferries	++	+	+	0	0	0	0	+	0	+
39. We will seek to support the roll out of EV charging infrastructure to support decarbonisation of car-based travel	++	+	+	0	0	0	0	+	0	+
40. We note that EVs are not a zero-carbon option and recognise the risks associated with lower EV running costs. We therefore support measures (subject to equality impacts) to prevent renewed growth in private car travel, and to encourage the use of alternative modes in line with the NTS2 Sustainable Travel Hierarchy and national car kilometre reduction targets	+	+	0	0	0	0	0	0	0	0
41. We will seek to support the roll-out of other alternative fuels to promote the decarbonisation of our transport network, ports, ferry terminals, airports and airfields	++	+	+	0	0	0	0	0	0	0
42. We will support Council ports and Lerwick Port Authority in realising opportunities in offshore wind farm construction and operations and maintenance	++	+	0	0	0	0	+	++	0	+
Overall assessment	++	+	+	0	0	0	0	+	0	+
RTS Theme 7 Embracing new technologies										
43. New and emerging technologies will be monitored for their applicability in the Shetland context	+	+	0	0	0	0	+	+	0	+
44. We will embrace the opportunities provided by new technology to improve our provision of transport services across Shetland, including the adoption of new technology on our ferry and air services	+	+	0	0	0	0	+	+	0	+
45. We will keep opportunities for the more widespread use of connected and autonomous vehicles under review and identify any actions required to facilitate their safe introduction in Shetland	+	+	0	0	0	0	+	+	0	+

RTS Theme and Policies	SEA Objective									
	Climate	Air	Biodiversity	Water	Heritage	Landscape	Access	Growth	Health	Materials
46. We will support opportunities to better serve our remote island communities through adopting new technological solutions	+	+	0	0	0	0	+	+	0	+
47. The RTS supports the development of car sharing services across the region to reduce the need for personal car ownership	+	+	0	0	0	0	+	+	0	+
48. Provision for future innovative personal transport such as e-scooters will be embedded within the design of our active travel network	+	+	0	0	0	0	+	+	0	+
Overall assessment	+	+	0	0	0	0	+	+	0	+
RTS Theme 8 Enhancing network efficiency										
52. All our transport networks must be maintained to a high standard to ensure the reliable and efficient movement of people and goods and the delivery of services across Shetland	0	0	0	0	0	0	+	0	0	0
53. Incremental improvements to our road network are supported where there are efficiency and environmental benefits, specifically in relation to single track roads	-?	-?	-?	-?	-?	-?	+	+	+	0
54. The RTS recognises the need to consider how climate change may affect our transport networks and services and the associated risks this brings and those responsible should form appropriate action plans in response	++	0	0	+	0	0	+	+	0	0
55. Our transport networks should continue to have an overarching focus on safety with a view to reducing road traffic casualties in particular	0	0	0	0	0	0	+	+	++	0
Overall assessment	+	0	0	0	0	0	+	+	+	0

Appendix E Review of SEA Consultation Responses

Table E-1: Summary of SEA Scoping Consultation Responses

SEA Consultation Body	Comment	Response
NatureScot	<p>Table 3.1: Key Issues Relevant to the SEA of the New RTS for the Shetland Islands</p> <p>The environmental topics Biodiversity, Geodiversity, Flora & Fauna, Soil, Water, Cultural Heritage and Landscape have all been amalgamated under one grouped topic 'Physical Environment'. It isn't clear from the table that each individual environmental topic has been fully considered in terms of key issues. For example, whether non-designated biodiversity interests are considered, or as well as protecting and enhancing green infrastructure assets, there has been consideration of impacts on habitat connectivity/wildlife corridors. There hasn't been consideration of impacts on the general health of soils, including peatland or carbon rich soils. In terms of landscape, there has been no mention of Local Landscape Areas or qualities of Wild Land Areas. Therefore, as a group it appears key issues are potentially being missed and we would recommend that the topics are separated out to ensure that they are considered individually and that all key issues are being identified and included. Any changes to this table will also need to be reflected in Table 4.4.</p>	<p>The 'Physical Environment' topics will be separated to ensure key groups are appropriately considered and assessed. Wording within Table 4.4 will be updated accordingly. The updated Key Issues table will be used when the Initial Appraisal: Case for Change and the Draft RTS are assessed.</p>
	<p>Table 4.1: Previous SEA Framework - Assessment of Continuing Validity.</p> <p>Within row one of the table, we would recommend under 'key criteria to be considered' amending the wording 'Habitats adjacent to roads' to something such as 'non-designated biodiversity features potentially affected, for example habitats</p>	<p>Wording within the document will be amended to take account of non-designated biodiversity features that could potentially be affected to ensure that any impacts are considered beyond habitats adjacent to roads.</p>

SEA Consultation Body	Comment	Response
	adjacent to roads'. This will ensure that any impacts to biodiversity including non-designated biodiversity features are considered beyond just habitats adjacent to roads.	
	Within the 'Biodiversity, Flora & Fauna' row of the table in the 'Assessment of Continuing Validity' column we recommend including consideration of climate change within this topic, given the relationship between biodiversity loss and climate change (twin crises), and as per the Scottish Government's Environmental Strategy for Scotland.	Consideration of climate change to be included within the Biodiversity, Flora and Fauna topic group.
	Within the 'Human Health' row of the table in the 'Assessment of Continuing Validity' column it would be useful to consider how biodiversity (such as through nature-based solutions for active travel) can also help with improving human health.	Consideration of biodiversity to be included within the Human Health topic group.
	Just to note that throughout the document we recommend altering 'health' to 'human health' to make it clear that this is what is being referred to.	Document to be amended to reference to 'human health'.
	<p>Table 4.2: Proposed SEA Objectives for the emerging RTS</p> <p>In the Climate Change row we suggest including within the SEA Objective reference for the importance of natural infrastructure as a way of tackling climate change. Natural infrastructure is being included in the definition of infrastructure within the Scottish Government's Infrastructure Investment Plan 2021-22 to 2025-26.</p>	Consideration of the importance of natural infrastructure to be included in line with the Scottish Government's Infrastructure Investment Plan 2021-22 to 2025-26 definition of infrastructure.
	Under the proposed SEA Objective for Biodiversity, Geodiversity and Soil we recommend that as well as protecting green infrastructure it is enhanced.	Wording within the document to be amended to state 'protecting and enhancing' green infrastructure.

SEA Consultation Body	Comment	Response
	<p>Any changes made to the above SEA Objectives will also need to be altered for the subsequent tables e.g. tables 4.3, 4.4, 5.1, 5.3.</p>	<p>Amendments to be made to all subsequent tables.</p>
	<p>Table 4.3: Relationship between Proposed SEA Objectives and the 2005 Act</p> <p>The letters referred to in this table don't appear to match those set out in Schedule 3 of the Act. In addition, we would recommend considering presenting this information in a way that is easier to understand and doesn't require looking through the full legislation.</p>	<p>Document structure to be reviewed and amended to align Proposed SEA Objectives and the letters in the 2005 Act.</p>
	<p>Table 4.4: Proposed RTS SEA Framework</p> <p>Row 3 of the table 'biodiversity.' should also include non-designated biodiversity features, as well as potential impacts on habitat connectivity/wildlife corridors in the third column. There is also no consideration of impacts on soil features.</p>	<p>Wording to be amended to consider non-designated biodiversity features, potential impact on habitat connectivity/wildlife corridors and soil impacts.</p>
	<p>Row 9 of the table 'Human Health...' should consider impacts of Covid-19 and transport considerations for home working e.g., local living and active travel options with easy access to nature.</p>	<p>SEA Framework will be amended to consider the impacts of COVID-19 and transport considerations as a result (such as increased levels of home working, living locally and active travel).</p>
	<p>5.3: Proposed SEA Methodology</p> <p>There doesn't appear to be any consideration of permanent and temporary impacts as part of the SEA Methodology.</p>	<p>As part of the assessment both permanent and temporary impacts will be considered and this will inform the methodology used.</p>
	<p>Tables 5.1 & 5.2: Proposed Compatibility Matrix.... and Proposed Scoring System...</p>	<p>Symbols to be amended/added to the matrix/scoring system.</p>

SEA Consultation Body	Comment	Response
	<p>Just to note that effects could be both positive and neutral. Therefore, we suggest adding in another score symbol to reflect this such as -/+.</p>	
	<p>Table 5.3: Proposed Assessment Matrix for Proposed RTS Policies</p> <p>It would be useful to provide some examples within this table to demonstrate the thinking behind how the RTS will be assessed.</p>	<p>The Guide Questions will be used to assess each formal consultation document. These have been provided at Scoping stage to demonstrate how the RTS will be assessed.</p>
	<p>Appendix B</p> <p>Table B1: Policy documents of relevance at Scoping Stage</p> <p>As mentioned above it may be easier to highlight relevant plans, programmes or strategies separately for each topic to ensure that they have been considered fully as well as making it easier to see which ones refer to which topic.</p> <p>There are a few plans, programmes and strategies that we recommend are included within the table:</p> <ul style="list-style-type: none"> ▪ The Scottish Government’s Environmental Strategy for Scotland ▪ Scotland’s National Peatland Plan 2015 ▪ Scottish Government’s draft Peatland and Energy Policy Statement 2016 ▪ Carbon and Peatland Map 2016. 	<p>Document structure to be amended to highlight and consider relevant policy documents for each topic.</p> <p>Suggested policy documents listed will be added to the relevant section of the document.</p>
<p>Historic Environment Scotland</p>	<p>Scope and level of detail</p> <p>It is our understanding that you propose a multi-stage Strategic Environmental Assessment (SEA) of the emerging new Regional Transport Strategy for Shetland (the RTS) and that iterative ERs will be prepared to accompany each formal consultation</p>	<p>None required</p>

SEA Consultation Body	Comment	Response
	<p>document which contains substantive proposals for inclusion in the RTS.</p> <p>We note that the historic environment has been scoped into the assessment. On the basis of the information provided, we are content with this approach and are satisfied with the scope and level of detail proposed for the assessment, subject to the detailed comments provided below.</p>	
	<p>Table 4.1: Previous SEA Framework – Assessment of Continuing Validity</p> <p>We are content that the objective for cultural heritage remains relevant, however, the key criteria should be expanded to encompass all designated and non-designated historic environment assets.</p>	<p>Key criteria under the cultural heritage topic will be expanded to include all designated and non-designated environmental assets.</p>
	<p>Table 4.4: Proposed RTS SEA Framework</p> <p>We recommend that you omit the qualification ‘important’ from the guide questions and criteria for cultural heritage, as the term is not defined. Consideration of the cultural significance of designated and non-designated historic environment assets should form part of the assessment process.</p>	<p>Recommendation agreed.</p>
	<p>Appendix A Baseline Review</p> <p>We note that for reasons of proportionality, you intend to use the environmental baseline in the LDP2 SEA Scoping Report, and that Appendix A is intended to provide a summary and transport specific aspects. Whilst we are content with this approach in theory, we note that references to the historic environment are very brief and partial, and that historic environment designations are not included in <i>Table A.1 Summary of Shetland Environmental Designations</i>. You should ensure that the historic</p>	<p>The historic environment baseline used to assess the RTS will encompass both designated and non-designated historic environment assets. Historic transport infrastructure will also be accounted for.</p>

SEA Consultation Body	Comment	Response
	<p>environment baseline used to assess the RTS encompasses both designated and non-designated historic environment assets. Your baseline review should recognise that a proportion of the transport infrastructure is also historic, and that decisions relating to the transport infrastructure should be informed by this, and the requirement to protect and promote the historic environment.</p>	
	<p>Appendix B Review of Plans and Programmes</p> <p>This section should include the following PPS:</p> <ul style="list-style-type: none"> ▪ Historic Environment Policy for Scotland (2019) (HEPS). The preparation of all plans, programmes and strategies in Scotland should be considered through the policies and principles within the Historic Environment Policy for Scotland (HEPS). HEPS replaced the Historic Scotland Policy Statement (2016). 	<p>Suggested policy documents listed will be added to the relevant section of the document.</p>
	<p>Consultation period for the Environmental Reports</p> <p>You have proposed a consultation period of 6 weeks for the Initial Appraisal: Case for Change Report and 12 weeks for the Draft RTS. We are content with the proposed timescales. Please note that, for administrative purposes, we consider that the consultation period commences on receipt of the relevant documents by the SEA Gateway.</p>	<p>None required</p>

Table E-1: Summary of SEA Case for Change Consultation Responses

SEA Consultation Body	Comment	Response
NatureScot	<p>We note that the Case for Change (CfC) report is an initial stage in progressing the Shetland Regional Transport Strategy (RTS) and identifies six Strategy Objectives which will inform the development of the final RTS. The SEA report acknowledges that coverage of biodiversity, geodiversity and landscape objectives in the CfC report is light and Table 3.4 of the SEA report records the effects of the Strategy Objectives on the relevant SEA Objectives as “uncertain” at this stage. We anticipate that a more detailed assessment of these effects will follow as part of the environmental appraisal of options during the next stage of RTS development. Subject to this we agree with the assessment set out in the SEA report.</p>	Noted
Historic Environment Scotland	<p>Part 1: ZetTrans Regional Transport Strategy – Case for Change</p> <p>We have noted the content of the case for change, including the proposed objectives and the list of options. We have no specific comments to offer at this stage, but would be happy to engage on significant historic environment issues that may arise as the Strategy evolves beyond this stage.</p> <p>Part 2: Environmental Report</p> <p>We are content to agree with the findings of the Environmental Report at this stage, and note that this forms the first part of a multi-stage process which will include continuing environmental assessment, a detailed options appraisal process and future consultation on a full Draft RTS and Environmental Report.</p>	Noted
SEPA	No comments submitted at this stage.	Noted