SPT REGIONAL TRANSPORT STRATEGY

SEA Environmental Report

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1 Introduction

1.1 Background

1.1.1 SPT, the Regional Transport Partnership (RTP) for the Strathclyde area, has a statutory duty to produce and deliver a long term Regional Transport Strategy (RTS) covering the 12 constituent local authority areas which make up the SPT region. A new RTS is being prepared to set out an updated vision, priorities and direction for transport in the region for the next 10-15 years. The area of the SPT region which includes the islands of Arran and Great Cumbrae, is shown in Figure 1.1.

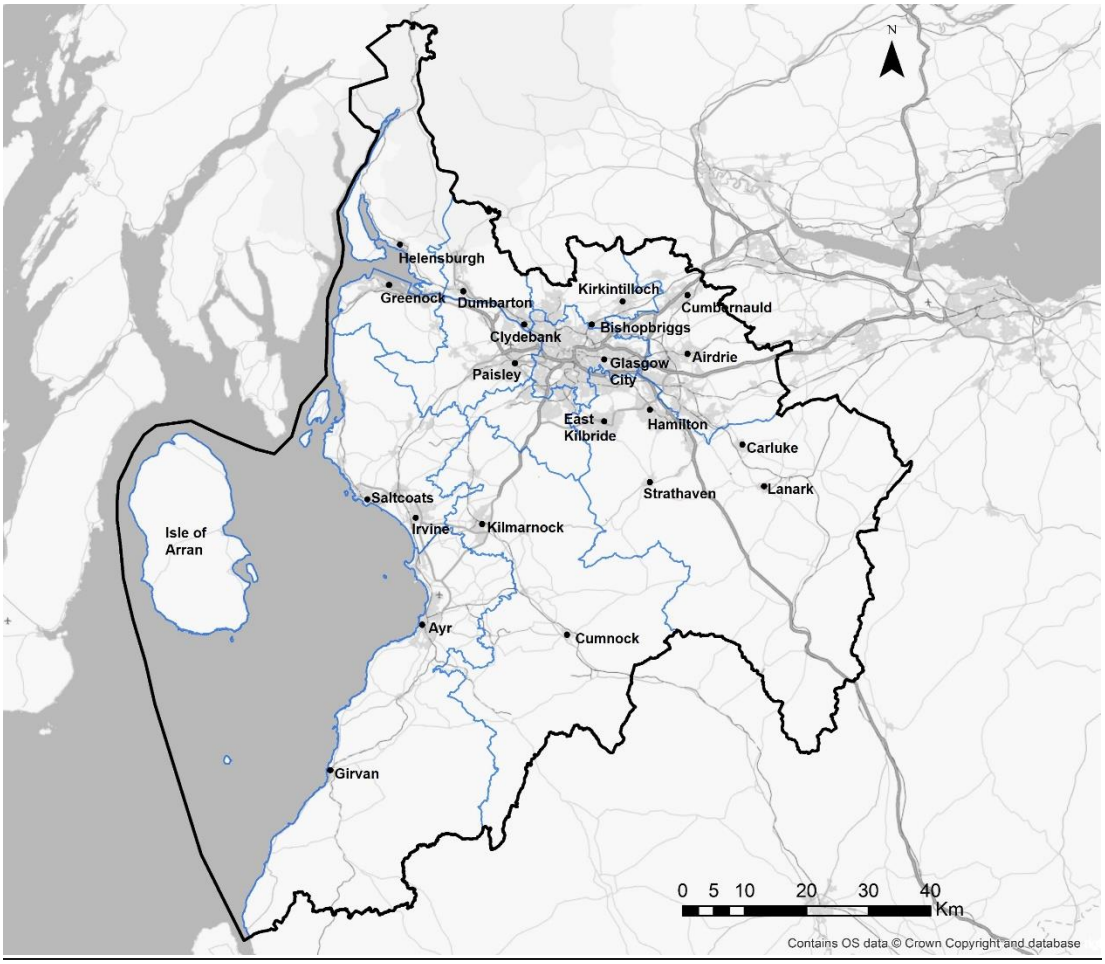

Figure 1.1 The SPT Region

1.1.2 This Environmental Report (ER) has been prepared to accompany the Draft SPT RTS (hereafter 'the Draft RTS') for public consultation. In accordance with statutory requirements, the 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.

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 7.1 of this report and, in accordance with statutory requirements, will be published in a local newspaper.

1.3 Statutory Requirements

Requirement for SEA

1.3.1 The Environmental Assessment (Scotland) Act 2005 requires responsible authorities, including RTPs, to assess the likely significant effects on the environment of implementing relevant plans, programmes and strategies (hereafter 'the 2005 Act'). This assessment must also examine the likely significant effects of implementing reasonable alternatives to the plan or strategy under consideration (i.e. the emerging RTS). The assessment is carried out by following a staged process known as Strategic Environmental Assessment (SEA).

1.3.2 The emerging RTS is considered to constitute a *relevant and qualifying* plan under Section 5(3) of the 2005 Act. It is a 'relevant' plan for the purposes of this legislation as it is required in response to administrative and legislative provisions and has the potential to influence the development and consenting of future policies and projects. The emerging RTS also satisfies the test of being a 'qualifying' plan as it is being prepared for transport purposes, has the potential to set the framework for future development consent of projects (transport and other development) potentially requiring an Environmental Impact Assessment (EIA) and will apply to the whole SPT region, rather than only to a small area.

1.3.3 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 in October 2018, with responses received in November 2018. 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 should 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, SPT 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.

Addressing Statutory Requirements

1.3.4 To satisfy statutory requirements it is necessary for this ER to provide certain information. The approach to addressing relevant requirements is shown in Table 1.1 below.

Table 1.1 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 A
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 B
f) The likely significant effects of the plan or programme on the environment	▪ Section 5 ▪ Appendix D & 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 ▪ Appendix E
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

Other Related Appraisals

1.3.5 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) are presented in a series of reports which will be published with the Draft RTS and this ER for consultation.

1.4 Report Structure

1.4.1 This Environmental Report is structured as follows:

- **Section 2** explains the key stages in the development of the Draft RTS and provides a summary of its proposed content and purpose;

- **Section 3** outlines the environmental baseline which has informed this SEA. This section is supported by a further baseline details and a review of relevant plans, programmes and strategies which are provided in Appendices A and B;

- **Section 4** provides an overview of the SEA process undertaken to date including consultations and it describes how the SEA of the Draft RTS has been carried out;

- **Section 5** presents the key findings of the SEA undertaken for the Draft RTS. Detailed results from the environmental assessment of Draft RTS policies are also provided in Appendix E;

- **Section 6** discusses environmental mitigation and the proposed framework for monitoring the environmental effects of implementing the RTS; and

- **Section 7** sets out the next steps in the RTS and SEA process.

1.4.2 The report is supported by the following Appendices:

- Appendix A: Environmental Baseline Review

- Appendix B: Review of Plans and Programmes

- Appendix C: Responses to Comments on SEA Scoping Report

- Appendix D: Environmental Appraisal of RTS Transport Options

- Appendix E: Environmental Assessment of RTS Policies

2 Overview of the SPT Regional Transport Strategy

2.1 Introduction

2.1.1 This section describes the context in which a new RTS is being prepared for the SPT region, the principal stages of the Strategy development and outlines its proposed form and content, all of which require to be assessed through this SEA. The context of the emerging RTS with other key policies and strategies is also briefly outlined.

2.2 Stages of RTS Development

2.2.1 The RTS has been developed through an extensive process of transport planning in combination with policy development, environmental and equalities appraisal and input. The Strategy development has also drawn on extensive baseline analysis and from consultation feedback as the Strategy has developed. The draft RTS which is now being consulted on (Strathclyde Partnership for Transport (SPT), 2022) together with this SEA ER can be accessed separately from this report. The key stages of the RTS development 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 followed initial identification of a detailed baseline of relevant transport, land use, socio-economic and environmental data, much of which was presented in early deliverables for the Strategy development (Stantec, 2019). Extensive public and stakeholder engagement including public surveys were undertaken by SPT in 2019 to inform this process.

- Problems analysis was then undertaken, drawing on detailed analysis of the SPT region's transport characteristics and trends (Stantec, 2021). The analysis of issues, problems and opportunities was then reported in the Case for Change document (Strathclyde Partnership for Transport, 2021). An initial long list of transport options, which were developed to help address the transport problems and issues identified, was generated and captured in the Case for Change.

- Public and stakeholder consultation was undertaken on the Case for Change document in 2021 (see Section 2.3). The feedback from this exercise was reviewed and taken into account in the subsequent work on the preparation of the RTS (in particular the Strategy's detailed policies) and its associated environmental and equalities assessments.

- Appraisal of the options generated at the Case for Change stage was undertaken following Scottish Transport Appraisal Guidance (STAG) to determine those options which best meet the RTS Objectives and the various technical STAG criteria. The findings of this appraisal work have been reported separately from the Draft RTS (Stantec UK, 2022) and will be made available during the public consultation on the draft Strategy.

- A set of detailed RTS policies was developed, building on the work set out in the Case for Change and drawing on the options appraisal and an understanding of their likely effectiveness in addressing transport problems and issues. The policies set out how the RTS aim to tackle the identified transport problems and they are intended to set a framework for action to drive change as the Strategy is implemented. The policies are linked with transport options that underpin each relevant policy theme.

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. The RTS baseline data sets include a range of socio-economic information of relevance to the equalities assessments and some key information has also supported the baseline for the SEA in relation to the objectives which have a wider social and economic theme.

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.	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. Development of an initial SEA framework to provide the basis for environmental assessment of the key emerging components of the RTS. *Key SEA output*: SEA Scoping Report (Peter Brett Associates, 2018)
Development and drafting of the strategic framework for the Draft RTS including setting out a draft Vision, Priorities, Targets, Issues and Strategy Objectives.	Input to the policy development process including initial testing of the compatibility of the RTS strategic framework with the developing SEA framework and objectives.
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.
Case for Change public and stakeholder Consultation.	The public and stakeholder consultation process included consultation on the interim findings of the SEA at the Case for Change stage. *Key SEA output*: Case for Change SEA Environmental Report (Stantec UK, 2021)
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.	Completion of the detailed environmental assessment of the RTS polices on each the SEA objectives and preparation of the SEA Environmental Report. *Key SEA output*: Draft RTS SEA Environmental Report (July 2022) (This document)

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 include an introduction to the Strategy and its contents, including an explanation of the Strategy Vision (Chapter 3) and a background to the draft Strategy. (Chapter 4).

2.3.2 The key transport issues for the Strategy are summarised in Chapter 5 of the Draft RTS. These challenges were examined and presented in detail in the Case for Change document published for consultation in April 2021 and are fitted around five key themes. These thematic groups of specific transport problems and challenges were identified during the initial analysis, engagement, and statutory assessment activities in the development of the RTS. The key issue thematic groups are summarised in Table 2.2 below.

Table 2.2 Key Transport Issues for the RTS

Key Issue	Summary
Access for All	The new RTS should address the inequalities across the region relating to accessing transport including the coverage of public transport services and access to jobs, employment support services, healthcare, education, town centres and retail opportunities and the transport issues faced by those living in rural, remote or island communities, such as higher costs and longer journey times should be considered. The new RTS should also address the key barriers to accessing transport including cost of travel, physical accessibility on vehicles, at interchanges and facilities, and safety and security issues with the transport network.
Transport Emissions	The new RTS should seek to help achieve a reduction in emissions from the regional transport system that have adverse impacts on the environment and public health. With road transport being the largest emitter within the transport sector in Scotland, road-based traffic is a key issue, with the number of cars licensed to residents of the SPT region increasing at a faster rate than population growth. Additionally, 15 of Scotland's Air Quality Management Areas are located within the SPT region. To achieve a reduction in emissions, the new RTS should seek to remove identified existing key barriers to the uptake of Ultra Low Emission Vehicles including lack of information, supporting infrastructure and purchase cost.
Active Living	The new RTS should make walking, wheeling, and cycling the natural choice for shorter everyday journeys to support both a better quality of life and modal shift to more sustainable travel. A key barrier to active travel includes lack of high quality, safe and accessible infrastructure which facilitates walking, wheeling and cycling. In addition to lack of infrastructure, there is limited integration of active travel with green networks and public transport, and the design of streets / places often prioritises movement of traffic over people.
Public Transport Quality and Integration	The new RTS should improve the quality and integration of public transport to make it more desirable to use and support a modal shift to more sustainable travel. Given public transport passenger satisfaction has been falling, the RTS should seek to address some of the key issues including the cost of bus and rail fares, journey times, journey time reliability, service frequency and rail service reliability. Additionally, the lack of flexible, integrated ticketing options and joined up timetables to allow multi-operator and multi-modal journeys was noted to be an issue.
Regional Connectivity	The RTS should support regional spatial and economic development objectives and priorities including regional spatial strategies, and city / growth deals. Key regional connectivity issues include increasing vehicle-kilometres travelled on all road types which is contributing to congestion, long bus journey times and lack of bus priority infrastructure, surface connectivity problems to ports and limited public transport options to Glasgow Airport. The RTS should also address the issue of several strategic roads and railways in the region being at risk of climate change impacts and surface flooding.

2.3.3 The RTS Priorities and Targets are explained in chapter 6 of the document. The Priorities and Targets which are intended to drive forward the change required to respond to the wider policy context and challenges to achieve a more sustainable, equitable and healthier transport system for all.

2.3.4 The RTS **Vision** describes the role of a higher quality and more sustainable and equitable transport system as an important facilitator of a more economically successful, greener, healthier, fairer and inclusive region. The Visions states:

"The west of Scotland will be an attractive, resilient and well-connected place with active, liveable communities and accessible, vibrant centres facilitated by high quality, sustainable and low carbon transport shaped by the needs of all"

To implement this Vision, three thematic **Priorities** are identified:

- *A healthier environment*, supported by a transport system that helps our region become a low carbon place with healthier natural and built environments for the benefit of all;
- *Inclusive economic growt*h, underpinned by a transport system that supports regional economic development and growth, with better opportunities and fairer outcomes for all; and
- *Improved quality of life*, supported by a transport system that helps everyone to have better health and wellbeing and lead active, fulfilling lives.

2.3.5 At the same time, the report proposes three **Targets** to help drive forward change to meet the Vision: a 20% reduction in car kilometres by 2030, a 56% reduction in roads transport emissions by 2030 (on a 1990 baseline), and 'modal shift' so that 45% of passenger journeys will be made by means other than private cars as the main mode by 2030.

2.3.6 The RTS Objectives focus on what the RTS more specifically needs to accomplish to achieve the proposed Targets and the Vision. Five objectives were developed in response to the specific 'Key Issues' and will help deliver the Vision, Priorities and Targets. The objectives are set out in Table **2.3**.

Table 2.3 Draft RTS Objectives

Key Issue	Objective
Access for All	1. To improve accessibility, affordability, availability and safety of the transport system, ensuring everyone can get to town centres, jobs, education, healthcare and other everyday needs
Transport Emissions	2. To reduce carbon emissions and other harmful pollutants from transport in the region
Active Living	3. To enable everyone to walk, cycle or wheel and for these to be the most popular choices for short, everyday journeys
Public Transport Quality and Integration	4. To make public transport a desirable and convenient travel choice for everyone
Regional Connectivity	5. To improve regional and inter-regional connections to key economic centres and strategic transport hubs for passengers and freight

2.3.1 The Draft RTS document then presents a series of policies structured under ten policy themes in Chapter 7. The policies are presented as principles for investment and action to help achieve the RTS objectives and targets and realise the RTS Priorities and Vision. The policies, which will be used to guide detailed decision making and investment as the Strategy is implemented, have also been mapped against the themes of the National Transport Strategy (NTS2) to demonstrate their consistency with national priorities for sustainable transport.

2.3.2 The development of the RTS options followed identification of the key issues and has been integrated with the drafting of the proposed RTS policies. The transport options comprised all of the policies, actions and investments that were considered to have potential to help to tackle the specific problems identified in the Case for Change analysis and which could support achievement of the RTS Objectives and Targets and realise the Vision. A total of 121 options in 29 categories were identified in the long list of interventions and these are set out in Appendix D with their supporting environmental appraisals. The options development and appraisal work was undertaken in parallel with development of the Draft RTS and informed subsequent development of RTS policies. Whilst the options are not presented in the Draft RTS document they are referred to in this environmental reporting since environmental assessment was undertaken as an integrated part of the (STAG based) options appraisal (see Section 2.2) and has therefore contributed to the analysis of options which were subsequently linked to polices. Further information on the options development process and STAG appraisal is set out in a report accompanying the Draft RTS and this ER (Stantec UK, 2022).

2.3.3 The policies are structured within a series of ten key policy themes in the Draft RTS with a narrative provided on the over-arching context and intention of each theme and further description of the individual policies within each theme. The policies are intended to form principles for investment and action in order to achieve the RTS objectives and targets and which will guide detailed decision-making and investment on specific transport plans and projects as the RTS is implemented.

2.3.4 The final section of the RTS (Chapter 8) sets out how the Strategy is intended to be delivered by SPT including through the development of an RTS Delivery Plan. Proposals for future monitoring and evaluation of the implementation of the RTS are presented in Chapter 9.

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 B 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 B, 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:

- alignment 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;

- ensuring the avoidance of likely significant adverse effects from the implementation of the plan 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;

- minimising 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;

- reducing congestion and improving air quality, including but not limited to implementing existing Air Quality Action Plans for Air Quality Management Areas (AQMAs) within the SPT region which recognises the importance of road traffic emissions in particular on human (and ecological) health particularly in the larger settlements, towns and cities in the region;

- minimising the amenity impact of transport, including in terms of reducing noise and vibration and taking opportunities to enhance amenity through development of new and upgraded active travel routes and better integration of transport with place-making;

- ensuring the avoidance of unacceptable health impacts from transport, in particular impacts arising from poor air quality and road safety; and

- seeking to protect and enhance the health and wellbeing of the resident and working population, including through facilitating access to healthcare, safeguarding physical health and providing opportunities to enhance mental health and social wellbeing.

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, 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 SPT 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 developed the baseline taken from the SEA Scoping Report and both updated the environmental baseline, in light of recent publications, and synthesised the baseline to focus on existing problems and issues in the SPT region. This section presents an overview of the environmental designations, constraints and key issues for the SPT region and which have underpinned the environmental assessment of the Draft RTS. A detailed review of environmental designations in the SPT area and environmental baseline information is set out in Appendix A.

3.2 Environmental Baseline

Constraints and Designations

3.2.1 The SPT region covers a very large area in west central Scotland, extending to approximately 7,000 square kilometres and with a great variation in topography and character. With a population of over 2.2 million people, a large part of the region is heavily urbanised with the wider built area of the Glasgow conurbation extending west along the banks of the River Clyde and east into the populous areas of parts of North and South Lanarkshire.

3.2.2 The northern and southern parts of the region are more rural in character with the area around Loch Lomond in the north forming a high quality mountainous landscape, part of the Loch Lomond and Trossachs National Park, which is important for a range of national and international conservation objectives. The coastal area in the west of the region is also extensive and provides a varied landscape setting including for the islands and peninsulas in the lower Firth of Clyde. Amongst these the Isle of Arran is notable for its geology, topography and extensive range of terrestrial and marine designations. The River Clyde and its catchment forms the largest watercourse in the region, although there is a series of other river systems in the south and north of the region which rise from upland areas particularly those which characterise much of South and East Ayrshire.

3.2.3 An overview of the designations in the SPT area is shown in Figure 3.1 Region Wide Environmental Constraints and Designations. Figure 3.1 and further details of the designations in the region classified by SEA topic, is presented in Appendix A.

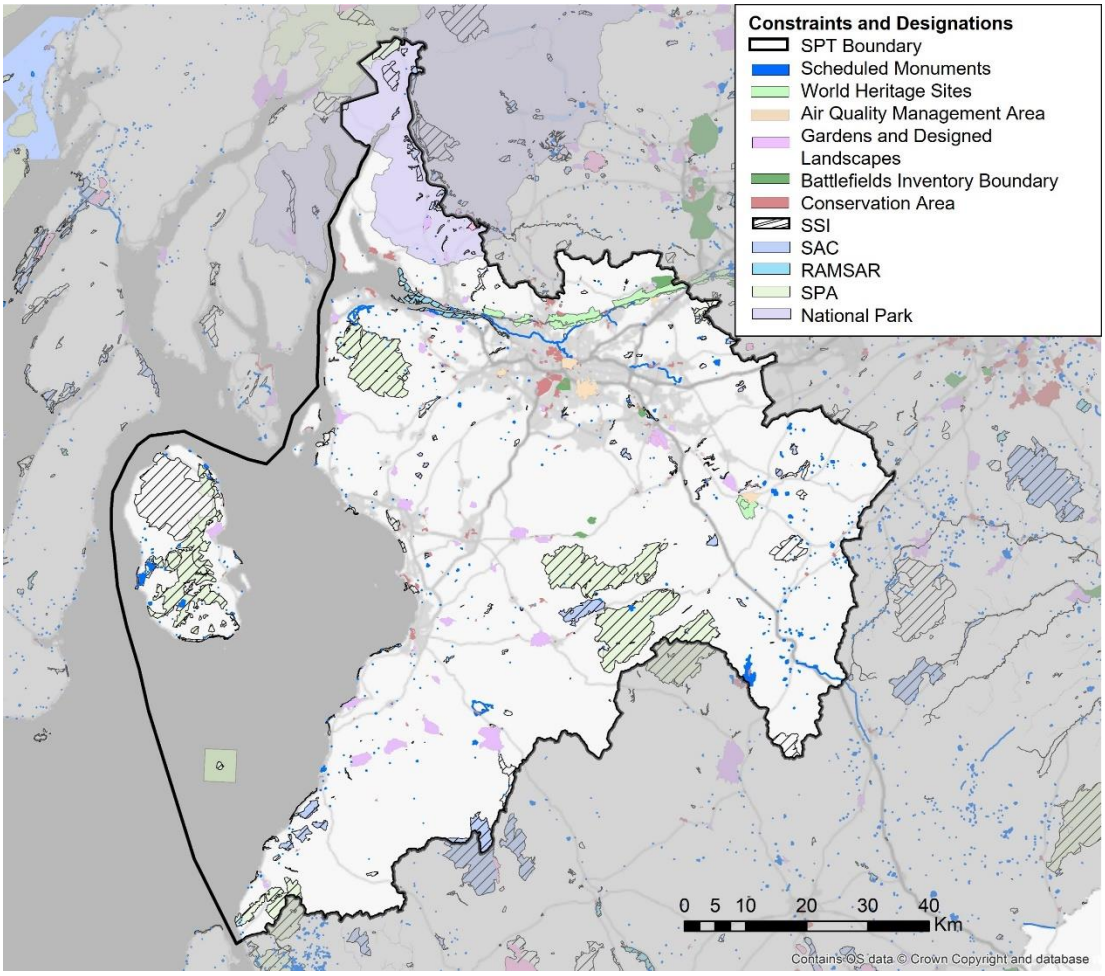

Figure 3.1 Region Wide Environmental Constraints and Designations

Environmental Baseline Summary

3.2.4 A high level summary of key environmental baseline characteristics and issues for the region is presented in Table 3.1. 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.

3.2.5 The information in this table draws from the analysis of environmental baseline information which is captured in the detailed baseline tables in Appendix A and identifies key environmental issues from analysis of the baseline and synthesises them with relevant information from the review of relevant policies and plans presented in Section 2.4.

3.2.6 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 (and their linked options) 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 proposals will emerge through the proposed RTS Delivery Plan (see Section 6.2). It is proposed that the environmental effects of future programmes would be considered in relation to baseline environmental information collated at a transport corridor level (see Section 6.2).

Table 3.1 Key Environmental Baseline Features and Issues

SEA Topic	Environmental Baseline Features	Key Environmental Issues
Biodiversity, Flora & Fauna	There is a range of significant biodiversity, flora and fauna constraints and designations in the SPT area. This includes: ▪ Special Protection Areas and Sites of Special Scientific Interest 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 which serve significant contribution in conserving habitat types and species. ▪ National Nature Reserves 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. ▪ A wide diversity and distribution of lowland, upland and coastal habitats.	▪ Conserve and enhance biodiversity interests including sites designated for their ecological importance on land and in the marine environment. ▪ Seek to address and where possible, reverse impacts and damage to habitats as a result of transport developments and emissions and disturbance from traffic. ▪ Maintain, restore and expand valued habitats and to safeguard protected species. ▪ Protect and enhance green infrastructure assets. ▪ Seek opportunities through development of the Strategy to build in green / blue infrastructure to transport networks using nature-based solutions which enhance biodiversity.
	Relevant SEA Objective: 7. Biodiversity, Geodiversity and Soils: *Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure*	
Population (including relevant socio-economic issues)	▪ The SPT Region includes 12 local authorities, each with local planning and transport planning (and some transport delivery) responsibilities. ▪ The majority of the population is located in an urban belt stretching along the River Clyde from Hamilton in the east to Greenock in the west. ▪ The SPT region represents over 40% of Scotland's population (numbering over 2.2 million people) however the rate of growth of the region's population has decreased and some constituent areas of the region are predicted to experience population declines in the next 15 years. ▪ The SPT region is also expected to experience significant population ageing and at a faster rate than for Scotland overall. ▪ All of the local authority areas have deciles ranked within the most deprived 5% of areas in the Sottish Index of Multiple Deprivation (SIMD) with the exception of East Dunbartonshire.	▪ Conform with and support the implementation of current and emerging relevant national policies, in particular NTS2 and the Strategic Transport Projects Review (STPR2). ▪ Align with and support the implementation of current and emerging statutory Development Plans and other relevant regional and local policies applicable to the SPT region. ▪ Develop an integrated and efficient transport system which meets identified needs and supports projected population growth whilst effectively managing travel demand. ▪ Support the development of key economic sectors and to deliver sustainable and inclusive economic growth. ▪ Tackle deprivation and severance and improve access to key amenities and economic opportunities for all demographic groups and communities. This includes a specific need to improve access for disabled people.

SEA Topic	Environmental Baseline Features	Key Environmental Issues
	Relevant SEA Objectives: 2. Accessibility: *Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities* 4. Productivity, Competitiveness and Innovation: *Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment*	
Human Health	▪ Life expectancy at birth for the SPT region is 77 years old[1]. This is slightly below the national life expectancy of 79. ▪ Health outcomes in the region are generally lower than for Scotland as a whole, and significantly lower in some areas of greater deprivation. ▪ Over one third of the population of the region falls within the most deprived SIMD quintile for health domain. ▪ The NHS Scotland Health Boards which serve the SPT region are Ayrshire & Arran, Greater Glasgow & Clyde, Lanarkshire and Highland[2] with a network of approximately 80 hospitals across the region.	▪ Protect the health and wellbeing of resident and workplace populations. ▪ Promote healthy and active lifestyles to help reduce obesity levels and improve other health and wellbeing outcomes. ▪ 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 upgrade of transport facilities and services.
	Relevant SEA Objective: 1. Health: *Improve the health of the resident and workplace population, including with respect to physical and mental health and wellbeing*	
Soil	▪ The SPT region is made up of a mix of urban, peri-urban and rural landscapes therefore incorporating a variety of geological types resulting in varying ground conditions[3]. ▪ Extensive areas of carbon-rich peat soils and areas of deep peat are present in much of the upland areas of the region. ▪ The Glasgow City area, alongside suburbs and other regional urban settlements, is predominantly formed of impermeable urban surfaces with some intermittent areas of green space. ▪ Where land is available for agricultural production within the SPT region, agricultural land quality is predominantly classified within categories 4 to 5 (land capable of producing a narrow range of crops to land capable of use as improved grassland).	▪ Prioritise the redevelopment of previously developed (brownfield) land over new greenfield sites to minimise land take and damage to undisturbed soils and habitats. ▪ Protect sites designated for their geological interest from the adverse effects of transport infrastructure development. ▪ Protect prime / best and most versatile agricultural land across the SPT region. ▪ Recognise the multi-functional role of soils in natural capital and protect soil resources including from loss and damage as a result of new development.

[1] Scottish Health Public Observatory

[2] NHS Health Boards Map https://data.gov.uk/data/map-preview?e=-0.71&n=60.87&s=54.63&url=http%3A%2F%2Fsedsh127.sedsh.gov.uk%2Farcgis%2Fservices%2FScotGov%2FHumanHealthSafety%2FMapServer%2FWMSServer%3F&w=-8.8

[3] British Geological Survey Interactive Map. Available online at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html

SEA Topic	Environmental Baseline Features	Key Environmental Issues
	Relevant SEA Objective: 7. Biodiversity, Geodiversity and Soil: *Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure*	
Water	▪ The largest waterbodies within the SPT region include Loch Lomond, the River Clyde and the Forth & Clyde Canal. ▪ There is a network of lochs and reservoirs forming important drinking water supplies in the Campsie Fells north of Glasgow and the upland areas of Renfrewshire and East Renfrewshire south west and south of Glasgow. ▪ Additionally, there is a range of smaller lochs, rivers and burns. ▪ Key pressures on the water environment prevalent across the region include point source and diffuse pollution (including from transport e.g., road run-off), modification of watercourses and man-made barriers to fish migration. ▪ SEPA Flood Risk Mapping indicates that the extent of the western coastline and mouth of the River Clyde of the SPT region is at high to medium risk of coastal flooding and the River Clyde and Loch Lomond are at a high risk of river flooding. ▪ Settlements at greatest risk of flooding include Greenock, Port Glasgow, Dumbarton and Clydebank.	▪ Protect and enhance the quality of surface and ground water resources and the water environment including the availability and quality of water for human consumption, ecological quality and economic uses. ▪ Locate new development including transport infrastructure away from areas of flood risk, and for such infrastructure to be resilient to flooding (and adverse weather more widely). ▪ 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.
	Relevant SEA Objective: 8. 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*	
Air Quality and Noise	▪ There are 15 Air Quality Management Areas (AQMAs) designated in the SPT region for transport-related air pollutants indicating that poor air quality remains a risk to human health across the region. ▪ A Low Emission Zone (LEZ) has been designated in Glasgow City Centre with increasingly stringent controls on vehicle entry to this area to be implemented. ▪ In these locations, and generally within busier road corridors, measures to reduce concentrations of nitrous oxides (particularly NO_2) and particulate matter (principally $PM_{2.5}$ and PM_{10}) are a priority. ▪ Within the SPT area, noise levels along the M77, M74 and M8 have been recorded as exceeding 80dB along multiple points (at roadside) indicating that noise nuisance is prevalent for many communities located close to the busier roads of the region. ▪ Noise generated by Glasgow Airport ranges from <55dB to >80dB.	▪ Tackle poor air quality, particularly within existing AQMAs, and to improve air quality for the benefit of human health and the natural and built environment. ▪ Support measures in existing local authority Air Quality Action Plans across the region to reduce emissions of local air pollutants. ▪ Ensure that new development, including transport infrastructure, facilities and services, are developed with emissions reductions as a priority to jointly support efforts to improve air quality and achieve climate related targets. ▪ Support measures in national and regional noise management action plans to enhance amenity of communities located close to major transport corridors.
	Relevant SEA Objective:	

SEA Topic	Environmental Baseline Features	Key Environmental Issues
	5. Air Quality and Amenity: *Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration*	
Climatic Change	▪ Greenhouse Gas (GHG) emissions vary between local authorities across the SPT region, with Glasgow City having among the highest emissions in the SPT region[4]. ▪ 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. ▪ The Clydeplan SDP (2017) and the LDP's recognise the need to address risks associated with the impacts of climate change and SPT is working as a member of Climate Ready Clyde to address climate adaptation and resilience issues.	▪ Reducing GHG emissions, particularly carbon dioxide (CO_2) 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. ▪ Mitigate climate change including through promoting sustainable land use patterns and the decarbonisation of the transport sector. ▪ 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.
	Relevant SEA Objectives: 6. Climate Change Mitigation: *Decarbonise the transport sector and support wider efforts to mitigate climate change* 8. 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*	
Material Assets	▪ The Clydeplan SDP (2017), the iRSSs and LDP's identify a network of strategic centres across the SPT area, whilst other smaller town centres also play an important role as focus points for public services, economic activities, transport and community activity. ▪ There are approximately 189 railway stations and 15 Subway stations serving the SPT area. Of the five busiest stations[5] in Scotland, the SPT area includes three; Glasgow Central, Glasgow Queen Street and Paisley Gilmour Street ▪ There is a well developed network of strategic roads in the region including the M8, M77 and M74 motorways and over 500km of A-class trunk roads. ▪ Glasgow Airport (Renfrewshire) and Glasgow Prestwick Airport (Ayrshire) are located within the SPT region allowing access to both National and International destinations.	▪ 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. ▪ 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.

[4] Department for Business, Energy and Industrial Strategy (2018). Emissions of Carbon Dioxide for Local Authority Areas. Available online at: https://data.gov.uk/dataset/723c243d-2f1a-4d27-8b61-cdb93e5b10ff/emissions-of-carbon-dioxide-for-local-authority-areas

[5] Top 5 stations in Scotland http://orr.gov.uk/__data/assets/pdf_file/0019/26137/station-usage-2016-17-top-5-stations-scotland.pdf

SEA Topic	Environmental Baseline Features	Key Environmental Issues
	▪ The main ports within the SPT region are located at Greenock, Largs, Ardrossan, Brodick and Troon and there are nine key ferry routes in operation. ▪ The main freight hubs within the SPT region are located at the Clyde Ports (King George V Dock, Greenock Ocean Terminal, Hunterston Port and Recreation Centre (PARC), and Ardrossan), Burnbrae, Glasgow International Airport, Hillington Park, Deanside, Gartsherrie and Eurocentral/Mossend. ▪ The main railheads in the SPT region are Air BP, Coatbridge, Crowbandsgate, Dalzell, Elderslie, Greenburn, Hillington, Irvine, Mossend Eurocentral, Port of Ayr, Port of Hunterston, Riccarton, Shieldmuir, Uddingston (Traffic Scotland[6])	▪ Maintain and enhance the security and safety of transport infrastructure.
	Relevant SEA Objective. 3. Material Assets: *Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs*	
Cultural Heritage	▪ The SPT region contains two sites of international cultural importance. These are the World Heritage Sites of the Antonine Wall and New Lanark. ▪ There is a network of nationally important archaeology through the region's 588 Scheduled Monuments. ▪ There is a range of other nationally important sites including Gardens and Designed Landscapes (GDLs) of Inventory standard, Category A Listed Buildings and Battlefield Sites. ▪ Many of the region's built settlements also have designated Conservation Areas that are often centred upon clusters of Listed Buildings or other structures of historical and architectural importance. ▪ There is also an extensive network of undesignated archaeological and built heritage sites which need to be considered in taking forward any specific physical transport proposals as part of the Strategy's implementation.	▪ Preserve, protect and enhance (as appropriate) cultural heritage assets (including 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.
	Relevant SEA Objective: 9. Cultural Heritage: *Conserve, protect and enhance the historic environment and cultural assets*	
Landscape	Given the large geographic area of the SPT region, there are several designated landscape features, including: ▪ The Loch Lomond and the Trossachs National Park, which is situated in the north-west of the region. ▪ Two National Scenic Areas which are of national importance given their scenic quality; North Arran NSA and Loch Lomond NSA.	▪ Conserve and enhance landscape character and to protect visual amenity. ▪ 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.

[6] https://trafficscotland.org/freight/railheads/index.aspx

SEA Topic	Environmental Baseline Features	Key Environmental Issues
	There are also various landscapes important at regional and local levels including Areas of Great Landscape Value (AGLVs) identified in Local Development Plans.	▪ 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.
	Relevant SEA Objective: 10. Landscape: *Protect and enhance the landscape character, townscape character and visual amenity*	

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

3.3.1 In the absence of the emerging RTS, it is predicted that transport infrastructure and provision in the SPT region would struggle to cope with changing transport demands including the need to support emissions reductions, accessible public transport and the delivery of inclusive economic growth. In the absence of a new Strategy, after the expiration of the current RTS, SPT would be in breach of the requirements under the Transport (Scotland) Act 2005 to prepare and maintain a RTS for the west of Scotland area, 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 SPT from having an up to date strategy aligned with current regional strategies and national policies including the emerging National Planning Framework (NPF4).

3.3.2 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 locational, design and operational characteristics, as would be assessed through the consenting of each project rather than through the emerging RTS. However, in the absence of the new RTS and if the resident and workplace populations of the SPT region increase in line with projections, the following changes to the environmental / SEA baseline might be predicted:

- **Population**: Assuming a return to pre-covid travel patterns, demand for transport would outstrip supply, leading to overcrowding of transport infrastructure, increased congestion and delays on the transport network. This could impede the delivery of inclusive growth and stifle economic productivity, as well as resulting in physical environmental and health impacts (see below). It could also lead to a requirement for new major transport infrastructure to cope with increased demand, which if not co-ordinated could itself have a range of environmental impacts. If working from home was to continue indefinitely, some of the above would be mitigated to an extent, however, we are already seeing hybrid working and more businesses and organisations urging employees to return to offices.

- **Health**: Demand for, and use of, road transport would potentially increase in line with population growth, whilst opportunities to encourage transport modal shift to active and public transport would be lost. Additionally, if a significant switch to active modes of transport is not achieved, physical and mental health issues including obesity, inactivity, poor air quality and social exclusion would continue to adversely affect the population of the SPT region. Ill-health is therefore likely to deteriorate and could result in a range of adverse health and wellbeing outcomes.

- **Biodiversity, Flora & Fauna**: If not carefully co-ordinated (i.e., through the emerging RTS), the need for new major transport infrastructure to cope with increased mobility demands could put pressure on biodiversity, including the loss and fragmentation of habitats and effects from increased traffic including disturbance from noise and habitat degradation from deposition of air pollutants.

- **Soil**: If not carefully co-ordinated, the need for new major transport infrastructure to cope with increased demands could lead to the loss of important soil resources, soil erosion and land contamination.

- **Water**: If not carefully co-ordinated, the need for new major transport infrastructure to cope with increased demands could result in increased flood risks, changes to local hydrological and groundwater patterns, and potential for pollution of the water environment.

- **Air Quality & Climatic Factors**: In the absence of a major shift towards the use of electric vehicles and modal shifts towards active travel and public transport (both of which would be supported by the RTS), an increase in road traffic associated with projected population growth would increase fossil fuel combustion, carbon emissions and local atmospheric pollution, in particular greater release of particulate matter. This would lead to worsening air quality and act against wider policy efforts to decarbonise key economic sectors,

including transport, to mitigate climate change. The failure to tackle existing areas of poor air quality and more generally to improve air quality could result in the need for local authorities within the SPT region to designate further Air Quality Management Areas (AQMAs) and implement associated Air Quality Action Plans (AQAP), which could adversely impact on the functioning of the transport network.

- **Material Assets**: Transport infrastructure and provision would be mis-aligned with changing transport patterns and demands whilst opportunities to encourage modal shift to active and public transport would be lost. The absence of the RTS could result in the failure of SPT and constituent local authorities to attract the substantial public and private sector funding needed to adequately maintain existing public transport infrastructure, better integrate transport modes and to deliver the new or upgraded infrastructure required to meet the needs of a rising population. This might adversely affect the ability of SPT, as the statutory RTP for the west of Scotland area, to support the delivery of sustainable and inclusive economic growth.

- **Cultural Heritage**: If not carefully co-ordinated, the need for new major transport infrastructure to cope with increased demands could increase development pressures in areas of historical or archaeological interest and could undermine the integrity and setting of sensitive heritage assets.

- **Landscape and townscape**: If not carefully co-ordinated, the need for new major transport infrastructure to cope with increased demands could adversely impact on the landscape character of and key landscape features within the SPT region, as well as adversely affecting visual amenity in some key transport corridors.

4 The 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 environmental effects of the emerging Draft RTS. The overall purpose of the assessment and the framework of SEA objectives is set out in Section 4.2, with further details of the SEA methodology including consultation explained in Section 4.3. The approach to consideration of alternatives to the RTS is presented in Section 4.4 and the final section (4.5) provides an overview of how the SEA process has informed the development of the RTS.

4.2 SEA Purpose and Objectives

4.2.1 In accordance with the 2005 Act, the purpose of SEA is to identify, assess and evaluate the likely significant environmental effects of a qualifying plan, programme or strategy. A key objective of SEA is to enhance the environmental and wider sustainability performance of a plan or programme. This is achieved through identifying any likely significant effects from implementation of the plan or programme as drafted, proposing mitigation measures to address any identified significant adverse environmental effects, and identifying enhancement measures to improve the overall performance of the plan or programme. As such, SEA is an integral part of good policy development and not a separate or retrospective activity.

4.2.2 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 4.1.

Table 4.1 SEA Objectives

SEA Objective	Objective Wording
Health	Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.
Accessibility	Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.
Material Assets	Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.
Productivity, Competitiveness and Innovation	Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.
Air Quality and Amenity	Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.
Climate Change Mitigation	Decarbonise the transport sector and support wider efforts to mitigate climate change.
Biodiversity, Geodiversity and Soil	Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.
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.
Cultural Heritage	Conserve, protect and enhance the historic environment and cultural assets.
Landscape	Protect and enhance the landscape character, townscape character and visual amenity.

4.3 Approach to SEA

4.3.1 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.

Key Stages of the SEA

4.3.2 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 Section 2.2. The approach to environmental assessment of the 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, Priorities, Targets and Objectives;
- environmental appraisal of the long list of transport options generated in the transport planning analysis of problems and opportunities (which were presented initially in the RTS Case for Change report); and
- environmental assessment of the subsequent draft RTS policy themes and supporting detailed policies (as presented in the draft Strategy).

4.3.3 At the scoping stage, a SEA framework was prepared to provide the basis for comprehensive environmental assessment of the RTS components and a consistency of approach. The framework includes the SEA objectives and a series of guiding questions and criteria for each objective/theme to prompt consideration of all potential environmental effects during its application.

4.3.4 The SEA framework is presented in Table 4.2. This has been updated slightly from the version originally presented in the SEA Scoping Report to accommodate feedback from the SEA Consultation Authorities (see the sub-section below on 'consultation') and as the RTS drafting and assessment process has developed. The framework includes a series of guide questions and supporting criteria which have been used to inform the consideration of the potential effects of each RTS policy against the SEA objectives 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.

4.3.5 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.

Table 4.2 SEA Framework

SEA Objectives	Guide Questions – *Will the RTS…*	Supporting Criteria to Assess Transport Policies
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	▪ Facilitate and encourage use of public transport and active travel? ▪ Improve accessibility to public open spaces, sports facilities, path networks? ▪ 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? ▪ Improve access to healthcare facilities? ▪ Safeguard sensitive environmental receptors to maintain and enhance human health?	▪ Proximity to and impacts on access to healthcare facilities. ▪ Proximity to and impacts on active travel networks. ▪ Proximity to and impacts on open space provision and accessibility.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	▪ Reduce the need to travel? ▪ Increase the accessibility of public services, economic opportunities and markets? ▪ Improve the accessibility and integration of the transport network? ▪ Improve the accessibility of education infrastructure, in particular by active travel and public transport? ▪ Enhance access to active travel routes? ▪ Reduce congestion and allow for greater journey time reliability? ▪ Help reduce severance effects of the transport network? ▪ Address changing transport needs resulting from population growth and ageing?	▪ Proximity to and impacts on the public transport network. ▪ Proximity to the strategic road network (motorways and trunk roads). ▪ Proximity to and impacts on identified congestion 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.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	▪ Support the delivery of relevant spatial strategies within national policy and applicable Development Plans? ▪ Improve the integration of land use and transport? ▪ Unlock the delivery of housing to meet identified needs? ▪ Facilitate the re-development of previously developed land? ▪ Support the provision of adequate infrastructure, services and facilities to meet identified needs? ▪ Enhance the resilience of infrastructure to adverse weather and the effects of climate change?	▪ Proximity to and impacts on the delivery of key housing sites. ▪ Proximity to and impacts on the re-development of previously developed land. ▪ Impacts on natural resources, including the extraction of mineral resources.
4. **Productivity, Competitiveness and Innovation:** Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of	▪ Support the sustainable management of infrastructure assets? ▪ Promote the co-location of synergistic economic activities, industries and land uses? ▪ Support the efficient movement of freight?	▪ Economic development and employment benefits unlocked by the policies/measures. ▪ Impacts on transport efficiency. ▪ Impacts on the movement of freight.

SEA Objectives	Guide Questions – *Will the RTS…*	Supporting Criteria to Assess Transport Policies
key economic sectors and deliver increased and more inclusive employment.	▪ Improve physical access to employment for all? ▪ Support increased and diversified employment opportunities?	▪ Proximity to and impacts on existing and planned key employment locations.
5. **Air Quality and Amenity:** Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	▪ Maintain or enhance air quality? ▪ Reduce exposure to poor air quality? ▪ Support the implementation of existing local authority Air Quality Action Plans (AQAPs) and Low Emissions Zones (LEZs)? ▪ Decrease noise and vibration levels at sensitive locations? ▪ Prevent and reduce emissions of harmful pollutants?	▪ Proximity to and impacts on existing Air Quality Management Areas (AQMA). ▪ Likely impacts on the implementation of existing AQAPs and/or Glasgow's Low Emission Zone. ▪ Proximity to congestion pinch points. ▪ Likely operational emissions.
6. **Climate Change Mitigation:** Decarbonise the transport sector and support wider efforts to mitigate climate change.	▪ Support a sustainable pattern of development which minimises energy consumption and GHG emissions? ▪ Reduce reliance on car travel? ▪ Contribute to or challenge the decarbonisation of the transport sector? ▪ Promote modal shift towards sustainable and active travel? ▪ Promote the use of clean fuels and technologies?	▪ Impacts on climate change mitigation: modal shifts and GHG emissions or saving (construction and operational phases). ▪ Penetration of zero emissions vehicles in transport fleets.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	▪ Ensure appropriate safeguards for the integrity and conservation objectives 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? ▪ Support the protection and enhancement of protected trees and important woodland areas? ▪ Improve access to nature? ▪ Protect and enhance important soil resources?	▪ Proximity to and impacts on sites designated at international, national and local levels for reasons of biodiversity conservation, ecological importance or geological importance. ▪ Proximity to and impacts on designated woodlands, important trees or hedgerows and other valued habitats. ▪ Potential impacts on protected species.
8. **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.	▪ Support improvement in the quality of waterbodies in accordance with the Water Framework Directive? ▪ Maintain or enhance the ecological and chemical status of 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?	▪ Proximity to Flood Risk Zones. ▪ Proximity to and impacts on the environmental and hydrological status of waterbodies and aquifers. ▪ Measures to enhance resilience to adverse weather and adapt to the effects of climate change. ▪ Adoption of sustainable drainage and blue/green infrastructure.

SEA Objectives	Guide Questions – *Will the RTS…*	Supporting Criteria to Assess Transport Policies
	▪ Seek to minimise new development in areas prone to flood risk or mitigate the potential for such risk? ▪ Promote the resilience of the transport system to the effects of climate change and adverse weather?	
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	▪ Conserve, protect and enhance (as appropriate) the integrity, character and setting of heritage places, spaces and assets (designated and undesignated)? ▪ Preserve important archaeological sites and protect potential unknown archaeological resources from adverse effects of transport development? ▪ Support improved access (by active and public transport) to, and understanding of, cultural heritage sites?	▪ Proximity to and potential effects on heritage assets, important archaeological places, spaces, sites and their settings. ▪ Opportunities to enhance access and understanding of archaeology and built heritage.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	▪ Protect and enhance landscape character? ▪ Safeguard important landscape and townscape features? ▪ Protect visual amenity and valued views? ▪ Prevent urban sprawl? ▪ Maintain and enhance the attractiveness of the public realm?	▪ Proximity to and impacts on designated landscapes. ▪ Impacts on visual amenity and key views. ▪ Impacts on settlement integration or coalescence.

Assessment Methods

4.3.6 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) which was then used to inform consideration of the compatibility between the SEA and RTS objectives.

4.3.7 The compatibility appraisals followed a qualitative assessment method where the potential for environmental effects from the key emerging RTS elements at that stage (the Vision and Objectives) was considered by the SEA team with respect to each SEA objective, and with reference to the guide questions in the SEA Framework, to provide a consistent and objective approach. 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 2021. The updated appraisals based on the finalised wording of the Vision and Objectives are presented in Section 5.2.

4.3.8 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 at a strategic level. The SEA team inputted to this process providing an appraisal of the environmental and climate change criteria required by STAG based on a seven-point scale[7] 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 transport planning objectives and the STAG criteria. The findings of the environmental appraisal of the transport options are captured in the option appraisal tables set out in Appendix D and a summary of the key environmental effects is presented in Section 5.3 of this report.

4.3.9 Following the options appraisal, the RTS process involved the development of 10 transport policy themes, each containing a varying number of individual policies with an accompanying narrative describing the intent of the policy in further detail. The final key stage of the SEA environmental assessment involved the application of the SEA framework to assess the predicted environmental effects of the individual policies. These assessments were undertaken in a workshop format by the SEA team and also drew on the findings of the appraisals of the relevant options (as linked to each policy theme) from the STAG-based work.

4.3.10 For each policy, 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 the assessment team. The predicted environmental effects of the policies 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	-

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

Score	Description	Symbol
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	~

4.3.11 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 action plans are developed at later stages of the RTS implementation. These frameworks are presented in Appendix E and the key findings of this environmental assessment are presented in Section 5.4 of this report.

4.3.12 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

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

4.3.14 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:

- Scottish Natural Heritage (now NatureScot[8]);
- Scottish Environment Protection Agency (SEPA); and
- Historic Environment Scotland (HES).

4.3.15 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. SEPA and HES provided a number of comments and suggestions on data sources and other relevant plans and strategies (including information available from their SEA reports) which could be usefully reviewed to contribute to the SEA baseline and key issues for the assessment. Some feedback was also provided to ensure clarity of assessment findings in the SEA Environmental Report and in particular on clear presentation of proposals for mitigation (including enhancement) and monitoring of the RTS's impact on the environment. All the consultees were content with the proposals for public and stakeholder consultation on the draft RTS and SEA ER.

4.3.16 An online survey was carried out at the Case for Change stage. This was issued to both members of the public and stakeholders. The SEA consultation authorities were invited to complete the survey, which had a specific SEA section, although no further feedback was

[8] Scottish Natural Heritage changed its name to NatureScot in August 2020

received. Some environment-related comments were received from a small number of other organisations.

4.3.17 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 D.

Assumptions and Limitations

4.3.18 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.

4.3.19 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 10 to 15 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 associated with each policy through consideration of indicative (if generic) measures.

4.3.20 This has reduced the uncertainties inherent in the assessment of a plan 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 SPT 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.

4.3.21 The SEA assessment and reporting matrices (see Appendix E) 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. Relevant assumptions have therefore been incorporated in relation to the assessment of each RTS policy theme in this appendix.

4.3.22 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.

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

4.4 Consideration of Reasonable Alternatives

4.4.1 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.

4.4.2 The principal and most strategic alternative considered at the outset of the RTS process by SPT related to whether or not a new Strategy was required. The previous RTS for Strathclyde was published in 2008 and the possibility of 'refreshing' this document was considered as an alternative course of action. However, there has been rapid development of legislation and policy in the transport sector in Scotland in recent years and an increasing prominence and urgency of addressing issues such as climate change and a range of socio-economic and equalities priorities in the region. These and other developments, coupled with the need for an update of the transport and economic trends and data underpinning the Strategy, meant that SPT considered that a complete review and plan replacement was necessary and appropriate. This decision also triggered the requirement for the SEA process to commence which was undertaken from early stages of the plan development and allowed for environmental and sustainability issues to be addressed comprehensively as part of a new Strategy.

4.4.3 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 SPT 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.

4.4.4 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 themed categories.

4.4.5 By considering a very long list (over 120) of potential options to address transport challenges in the region, a broad view of the alternatives available for the new transport strategy was adopted. 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).

4.4.6 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 measures as specific details about transport policies and proposals emerge and the SEA provides a framework to underpin and support required further environmental design and assessment input to the future RTS Delivery Plan.

4.5 How the SEA informed the RTS

4.5.1 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 Vision and Objectives, also made recommendations on how RTS priorities should be further developed to set out clearer outcomes, more explicit coverage of some environmental issues (including enhancement of environmental quality as an overarching key issue) and hence improve the environmental performance of the proposed RTS. The Draft RTS for consultation now incorporates three priorities responding directly to over-arching policy priorities around climate, poverty and inequality, and health. The priorities include one (*healthier environment*) specifically addressing environment, health and climate change imperatives with a supporting narrative. The third priority (*improved quality of life*) is also inherently related to human health and wellbeing. The Strategy has therefore been developed following the Case for Change with very clear and explicit integration of environment related issues.

- The SEA at the Case for Change stage also identified a series of emerging environmental issues from synthesis of baseline information including the key policies and plans reviewed at that stage which was fed back to be taken into account in the development of the RTS. It was recommended that the RTS should clearly explain the role of the SEA process in supporting development of the policy. 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 options long list as part of the Case for Change. 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 a supporting document to the RTS (Stantec UK, 2022) which will be made available during the public consultation period on the Draft RTS. Further environmental input and as appropriate mitigation of the options will be integrated into the process of RTS implementation including through the proposed RTS Delivery Plan (see Section 6.2).

- 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.

4.5.2 Through this approach it is considered that the development of the draft RTS at each key stage 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.

4.5.3 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.

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 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 Vision and Objectives was undertaken at the Case for Change stage. The Vision and Objectives were appraised against the draft 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 both objective sets and are set out in Table 5.1.

5.2.2 The RTS Vision states that:

> *"The west of Scotland will be an attractive, resilient and well-connected place with active, liveable communities and accessible, vibrant centres facilitated by high quality, sustainable and low carbon transport shaped by the needs of all"*

5.2.3 Five 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:

1. To improve accessibility, affordability, availability and safety of the transport system, ensuring everyone can get to town centres, jobs, education, healthcare and other everyday needs.

2. To reduce carbon emissions and other harmful pollutants from transport in the region.

3. To enable everyone to walk, cycle or wheel and for these to be the most popular choices for short, everyday journeys.

4. To make public transport a desirable and convenient travel choice for everyone.

5. To improve regional and inter-regional connections to key economic centres and strategic transport hubs for passengers and freight.

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 RTS Objectives have evolved in response to previous SEA critical 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.

Table 5.1 Compatibility of RTS Vision and Objectives with SEA Framework

SEA Objectives	RTS Vision	Proposed RTS Objectives					Commentary
		Objective 1	*Objective 2*	*Objective 3*	*Objective 4*	*Objective 5*	
Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	+	?	+	The RTS Vision refers to improved accessibility and connectivity facilitated through sustainability and a low carbon transport system, which will contribute to reduced adverse impacts of transport on human health. RTS Objectives 1, 2, 3 and 5 align with this SEA Objective through setting an ambition to make the transport system affordable, accessible and inclusive and by reducing emissions and encouraging people to choose active travel options. RTS Objective 3 contributes to this SEA objective as it is recognised that the health and wellbeing of public transport staff, passengers and people who are walking, cycling and wheeling needs to be considered, especially as climate change will require infrastructure to be planned or adapted to help people travel safely and comfortably in future. RTS Objective 4 has an uncertain relationship with this SEA Objective as it could support enhanced and improved physical and mental health outcomes, although as worded this is not clearly established.
Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	+	+	+	+	+	+	The RTS Vision explicitly promotes accessibility between communities and key services/facilities and calls for the transport system to be shaped by the needs of all. RTS Objective 1 clearly links to the Accessibility SEA Objective. RTS Objectives 3, 4 and 5 all aim to improve accessibility across different modes, for both passengers and freight.

SEA Objectives	RTS Vision	Proposed RTS Objectives					Commentary
		Objective 1	*Objective 2*	*Objective 3*	*Objective 4*	*Objective 5*	
							RTS Objective 2 indirectly aligns with the SEA objective as there is an implicit relationship between reduced emissions and reducing the need to travel.
Material Assets: Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	+	?	+	+	+	?	The proposed RTS Vision focuses on the importance of improving the transport system (i.e., including infrastructure) to deliver positive spatial and socio-economic outcomes. It provides a supportive platform from which to deliver transport infrastructure improvements and enhanced resilience. RTS Objectives 2, 3 and 4 are consistent with the principle of the SEA Objective through seeking to promote more resource efficient transportation. RTS Objective 1 and 5 have an uncertain relationship with this SEA Objective as the implementation of the Objectives could enhance the efficiency and use of material assets or integration of land use and transport, however at present this is not clearly stated within the Objective.
Productivity, Competitiveness and Innovation: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	+	+	+	+	+	+	The proposed RTS Vision explicitly promotes connectivity and integration in order to generate positive socio-economic outcomes. No specific reference to employment is included, but in overall terms the Vision provides a supportive platform from which to deliver inclusive economic growth. All the Draft RTS Objectives align with this SEA Objective through seeking to enhance the efficiency and performance of the transport system whilst increase accessibility enabling economic growth/prosperity.
Air Quality and Amenity: Tackle poor	+	+	+	+	+	?	The proposed RTS Vision seeks to create active, liveable communities through delivering a sustainable transport

SEA Objectives	RTS Vision	Proposed RTS Objectives					Commentary
		Objective 1	*Objective 2*	*Objective 3*	*Objective 4*	*Objective 5*	
air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.							and low carbon transport system. Whilst not engaging specifically with air quality issues, this provides a suitable platform to address environmental issues such as air pollution. RTS Objective 1 covers this SEA Objective as it could result in beneficial impacts on air quality and amenity, provided improved access measures did not increase local air pollutant emissions. RTS Objective 2 clearly aligns with the SEA objective by seeking to reduce emissions and other harmful pollutants from transport. RTS Objective 3 indirectly aligns with the SEA objective as by encouraging active travel journeys, fewer journeys by vehicle will be made. RTS Objective 4 has the potential to align with this SEA Objective provided public transport is increasingly decarbonised. It is not clear how RTS Objective 5 aligns with the SEA Objective. There is opportunity for the improved connections to either positively or negatively impact on air quality and amenity, with the impact dependent on the type of improved connections proposed.

SEA Objectives	RTS Vision	Proposed RTS Objectives					Commentary
		Objective 1	*Objective 2*	*Objective 3*	*Objective 4*	*Objective 5*	
Climate Change Mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	?	++	+	+	?	The proposed RTS Vision directly references climate by recognising the need to deliver a low carbon transport system. RTS Objective 2 clearly aligns with this SEA Objective through reducing transport emissions and other harmful pollutants. RTS Objective 3 indirectly aligns with the SEA objective as by encouraging active travel journeys, fewer journeys by vehicle will be made which will contribute to mitigating climate change. RTS Objective 4 is indirectly aligned with this SEA Objective as making public transport an attractive and conventions options would support modal shift. RTS Objectives 1 and 5 have an uncertain relationship with this SEA Objective as they could contribute to climate change mitigation, however this is not currently clearly established in the wording of the RTS objectives.
Biodiversity, Geodiversity and Soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	+	?	+	?	?	?	The proposed RTS Vision seeks to create active, liveable communities through delivering a sustainable transport system. Whilst not explicitly engaging specifically with biodiversity issues, this provides a suitable platform to address physical environmental issues. RTS Objective 2 would support the protection and enhancement of biodiversity and geodiversity through reduced atmospheric emissions. RTS Objectives 1 and 3 to 5 have an uncertain relationship with this SEA Objective as potential impacts

SEA Objectives	RTS Vision	Proposed RTS Objectives					Commentary
		Objective 1	*Objective 2*	*Objective 3*	*Objective 4*	*Objective 5*	
							(beneficial or adverse) would depend on their implementation.
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.	+	?	+	?	?	?	The proposed RTS Vision seeks to create active, liveable communities through delivering a sustainable transport system. Whilst not explicitly engaging specifically with water environment issues, this provides a suitable platform to address physical environmental issues. RTS Objective 2 is compatible with the SEA Objective as reducing transport emissions indirectly has the potential to improve water quality. RTS Objectives 1, 3, 4 and 5 have an uncertain relationship with this SEA Objective as potential impacts (beneficial or adverse) would depend on their implementation. Policies and proposals to implement these Objectives should include appropriate safeguards in respect of flood risks and the water environment.
Cultural Heritage: Conserve, protect and enhance the historic environment and cultural assets.	+	?	+	+	?	?	The proposed RTS Vision seeks to create active, liveable communities through delivering a sustainable transport system. Whilst not explicitly engaging specifically with cultural heritage issues, this provides a suitable platform to protect the historic environment. RTS Objective 2 is compatible with the SEA Objective as reducing transport emissions indirectly has the potential to enhance the historic environment. Enhanced walking, wheeling and cycling through RTS Objectives 3 may promote opportunities to access/enjoy cultural heritage.

SEA Objectives	RTS Vision	Proposed RTS Objectives					Commentary
		Objective 1	*Objective 2*	*Objective 3*	*Objective 4*	*Objective 5*	
							RTS Objective 1, 4 and 5 have an uncertain relationship with this SEA Objective as potential impacts would depend on their implementation. Policies and proposals to implement these Objectives should include appropriate safeguards in respect of cultural heritage to conserve, protect and enhance the historic environment and cultural assets.
Landscape: Protect and enhance the landscape character, townscape character and visual amenity.	+	?	+	+	+	?	The proposed RTS Vision seeks to create active, liveable communities through delivering a sustainable transport system. Whilst not explicitly engaging specifically with landscape issues, this provides a suitable platform to address physical environmental issues. RTS Objective 2 aligns with the SEA Objective indirectly as a reduction in transport emissions should result in beneficial effects on landscape and townscape. RTS Objectives 3 and 4 align with the SEA Objective indirectly as enabling walking, cycling and wheeling, and encouraging public transport, should reduce the volume of road vehicles and as such, have a positive effect on townscape. RTS Objective 1, 4 and 5 have an uncertain relationship with this SEA Objective as potential impacts would depend on their implementation. Policies and proposals to implement these objectives should include appropriate safeguards in respect of landscape character and visual amenity.

	Compatible	+	Incompatible	-

KEY:	Neutral	0	No Clear Relationship	~
	Uncertain	?		

5.2.6 The assessment has identified a number of uncertainties in the relationship between RTS Objectives and the SEA framework. In most cases this is a precautionary finding and it is likely that the objectives would be mutually supportive rather than inconsistent. These relationships will be monitored with further detailed elaboration of the RTS and as policies are implemented in practice.

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 SPT region. The findings of the environmental and climate appraisals of each individual option are set out in the options assessment table in Appendix D.

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. Further information on the process of transport option development and STAG appraisal is set out in a stand-alone appraisal report (Stantec UK, 2022) which will be made available during consultation on the Draft RTS and this SEA ER.

Table 5.2 Summary of Environmental Appraisal of Transport Options

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
1. Decarbonisation and road transport vehicles A group of nine options promoting *ultra-low and zero emissions road-based vehicles (buses, freight sector and taxis), electric vehicle charging infrastructure and development of alternatives to battery electric vehicles.*	▪ The options perform well in relation to environmental issues. The transition to ultra-low emission and zero emission vehicles would have the potential for significant beneficial environmental impacts through reduced greenhouse gas emissions and lower emissions of local air pollutants. ▪ The options would support potentially significant beneficial outcomes for the SEA objectives on Health and Accessibility.	▪ 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.
	Overall, negligible to moderate beneficial impacts are predicted:	
	Scoring: 0 - ✓✓	
2. Decarbonisation and other modes *A group of three options supporting the decarbonisation of rail, ferry and aviation services in the SPT region.*	▪ The implementation of decarbonisation plans would have the potential for significant beneficial environmental impacts through reduced greenhouse gas emissions and lower emissions of local air pollutants. ▪ The options would also support potentially significant beneficial outcomes for the SEA objectives on Health.	▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation and adoption of measures. ▪ Implementation of decarbonisation plans must be applied consistently throughout the SPT region and across all modes to maximize benefits.
	Overall, minor to major beneficial impacts are predicted:	
	Scoring: ✓ - ✓✓✓	
3. Freight and logistics *A group of seven options including cyclelogistics, last mile innovations, freight consolidation centres, rail freight development including intermodal freight transfer, HGV rest stops and low emissions road freight*	▪ Measures improving the integration and co-ordination of moving goods by sustainable transport would potentially have beneficial environmental impacts through reduced greenhouse gas emissions, emissions of local air pollutants and roadside noise from traffic. ▪ Option which promote rail freight development and rail enhancements would support freight modal shift, with potential for adverse environmental impacts from some options dependent on the locations and local sensitivities of any rail infrastructure works. ▪ The options would support beneficial outcomes for the SEA objective on Productivity, Competitiveness and Innovation.	▪ Success of these measures and their contribution to the environment and health would depend on the location and scale of implementation. Any adverse impacts on environmental criteria due to new or upgraded rail infrastructure would need to be assessed and managed/mitigated appropriately. ▪ There is potential for co-delivery of benefits such as cycle infrastructure upgrades with some of the options which would encourage active travel. ▪ Environmental impact assessment of development proposals would be required with appropriate mitigation and enhancement measures, dependent on local sensitivities and receptors.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	Overall, minor adverse to minor beneficial impacts are predicted:	
	Scoring: ✖-✓	
4. Demand management pricing and supply *A group of two options comprising a regional demand management framework and measures including road space reallocation, parking and pricing options*	▪ The implementation of demand management measures has scope to reduce the level of greenhouse gas and local air quality emissions from road vehicles, specifically in urban areas, where mode shift and/or road traffic reduction is achieved. ▪ The options would support beneficial outcomes for the SEA objectives on Health, Accessibility and on Productivity, Competitiveness and Innovation. ▪ Where measures are implemented as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Health and Accessibility.	▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation of measures and their cross-service policy integration. Where implemented at scale there is potential for significant environmental impacts in some corridors. ▪ Additionally, where implementation of measures generates revenue, this may be used to reinvest in sustainable transport infrastructure which could also help to reduce emissions and improve local air quality further.
	Overall, minor to moderate beneficial impacts are predicted:	
	Scoring: ✓-✓✓	
5. Demand management behaviour change *A group of two options on travel planning improvements and promoting behaviour change particularly for sustainable travel to school*	▪ Improved travel planning information may encourage car sharing and / or modal shift leading to beneficial environmental impacts through reduced greenhouse gas emissions and local air pollutants. Not predicted to lead to substantial modal shift without supporting measures. ▪ The options would support beneficial outcomes for the SEA objectives on Health and Accessibility.	▪ Success of the measures and their contribution to the environment would depend on the scale of implementation of measures. Journey planning itself is unlikely to have an impact without additional measures, such as improvement to active travel infrastructure. ▪ Measures to support sustainable travel to schools should be complemented with appropriate measures to ensure road safety for children and young people.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
6. Integration with planning policy and land use measures *A group of six options around transit-oriented development, city and town centre living strategies, sustainable transport for new development, 20 minute*	▪ The integration of transport and land-use development encourages public transport use and active travel for those living, working or visiting the target areas. This could deter people from depending on private cars as their main mode of transport, increase uptake of active travel and reduce overall vehicle kilometres. ▪ This would potentially have beneficial environmental impacts through reduced greenhouse gas emissions,	▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation (broad adoption in planning and development would be required to achieve significant changes). ▪ 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.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
neighbourhoods and no/low car development	emissions of local air pollutants and roadside noise from road traffic in corridors where modal shift occurs. ▪ The options would support beneficial outcomes for the SEA objectives on Health, Accessibility and on Material Assets.	▪ All new infrastructure would need to be located in suitable areas 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 local sensitivities and receptors.
	Overall, minor beneficial impacts are predicted:	
	Scoring: ✓	
7. LEZ and AQMA *A group of two options promoting the implementation of low emissions zones and air quality mitigation measures*	▪ The implementation of air quality management and mitigation measures, including Low Emission Zones would also reduce greenhouse gas emissions and, emissions of local pollutants, with the potential to reduce noise from road traffic in some urban areas. ▪ The options would also support potentially significant beneficial outcomes for the SEA objective on Health.	▪ Success of the measures and their contribution to the environment and health would depend on their scale and geographical extent of implementation. ▪ There is potential to reinvest generated revenue from Low Emission Zones to invest in sustainable transport infrastructure which could lead to further environmental and health benefits.
	Overall, minor to moderate beneficial impacts are predicted (significant where implemented at scale):	
	Scoring: ✓- ✓✓	
8. Affordability of public transport *A group of seven options addressing affordable fares (policy), changes to scope of concessionary fares, free/very low fares, improved integration of ticketing, more flexible fares and ticketing for shift and part time working and review subway fares.*	▪ Reduced, or free, public transport fares would encourage public transport use through improved accessibility and lower cost. ▪ Depending on the nature and scale of the measures introduced this would have beneficial impacts through reduced greenhouse gas emissions, lower emissions of local air pollutants and reduced roadside noise from traffic in some corridors. ▪ Integrated ticketing also encourages public transport use with beneficial impacts for health and accessibility. ▪ The options would also support beneficial outcomes for the SEA objectives on Health and Accessibility.	▪ Success of these measures and their contribution to the environment and health would depend on the location and scale of implementation. The options have potential for significant beneficial impacts where fares are set very low and sufficient public transport services/capacity is provided to meet increased demand. ▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Health and Accessibility.
	Overall, negligible to moderate beneficial impacts are predicted:	
	Scoring: 0 - ✓✓	
9. Accessibility of public transport	▪ The options could encourage public transport use through improved accessibility. In some cases, this would potentially have beneficial environmental impacts through	▪ Success of the measures and their contribution to improved environmental and health outcomes would depend on the scale of implementation of the measures.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
A group of eight options including accessibility strategies, journey assistance, travel information, access to DRT, staff training and more accessible infrastructure and vehicles.	reduced greenhouse gas emissions and lower emissions of local air pollutants from road transport. However, it is not predicted that the options would lead to a substantial modal shift or a subsequent material significant impact on traffic levels and emissions. ▪ The options would support beneficial outcomes for the three SEA objectives on Health, Accessibility and Productivity, Competitiveness and Innovation.	▪ Improved accessibility to transport would need to be integrated and consistent across the region to offer a realistic alternative the private vehicle. ▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Health and Accessibility.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
10. Availability of public transport *A group of seven options including "Level of Service" policies, job access schemes, health & transport action plan, enhanced public transport service frequencies, improved integration of services and enhanced public transport networks and service frequencies.*	▪ The options could encourage public transport use through increased availability and integration of public transport. This could reduce dependence on private vehicles and promote modal shift. ▪ The options are predicted to have beneficial environmental impacts through overall reduced greenhouse gas emissions, lower emissions of local air pollutants and reduced roadside noise from traffic. ▪ The options would support beneficial outcomes for the three SEA objectives on Health, Accessibility and Productivity, Competitiveness and Innovation.	▪ Success of the measures and their contribution to improved environmental and health outcomes would depend on the scale of their implementation and the delivery of improvements through key corridors. ▪ Any new vehicles should comply with best practice on emissions and accessibility and infrastructure / facilities such as bus stations/stops would need to be located sensitively.
	Overall, negligible to moderate beneficial impacts are predicted:	
	Scoring: 0 - ✓✓	
11. Attractiveness of public transport *A group of six options including service quality policy, improved public transport journey times, reliability and punctuality, and enhanced promotion and branding.*	▪ While the options all improve the public transport network in some way, some of the options were noted to have negligible environmental impact as they were not predicted to result in substantial modal shift. ▪ However, enhancing the local public transport network, improving journey times, reliability and frequency would encourage increased public transport use. This would potentially have beneficial environmental impacts through reduced greenhouse gas emissions and emissions of local air pollutants. ▪ The options would support beneficial outcomes for the SEA objectives on Health and Accessibility.	▪ Success of these measures and their contribution to the environment and health would depend on the location and scale of implementation. 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. ▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Health and Accessibility.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
12. Public transport ticketing and information, including MaaS *A group of four options including the development and implementation of Mobility-as-a-Services (MaaS), enhancing real time passenger information and integrating ticketing across the region.*	▪ The options may encourage public transport use with potentially beneficial environmental impacts through reduced greenhouse gas emissions and emissions of local air pollutants. However, it is not predicted that the options would lead to a substantial modal shift or a subsequent material significant impact on traffic levels and emissions. ▪ The options would support beneficial outcomes for the SEA objectives on Health and Accessibility.	▪ Ticketing and information measures would be most effective when combined with other complementary groups of public transport service interventions. ▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Health and Accessibility.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
13. Bus governance – models *One measure to consider local bus franchising, introduce municipal bus companies and bus service improvement plans*	▪ This option would encourage bus use which would potentially lead to a reduction in transport sector greenhouse gas emissions where modal shift is achieved. ▪ Minor beneficial impacts on local air quality and roadside traffic noise may be predicted in some locations. ▪ The option would also support beneficial outcomes for the SEA objectives on Health and Accessibility.	▪ Success of any governance measures and their contribution to improved environmental outcomes would depend on their scale and ambition of implementation including delivery of improvements throughout key public transport corridors. ▪ Any new buses should be in line with best practice with regards to emissions and user accessibility.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
14. Demand responsive transport, community transport and total transport *A group of six options including a 'total transport' approach, supporting community transport and demand responsive transport and improving the integration between these services.*	▪ While the options encourage sustainable travel, they are unlikely to have a significant material impact on the environment. ▪ Developing / enhancing the capacity of the community transport sector would improve access and may reduce the use of private vehicles for some specific journey purposes. ▪ DRT can provide efficient public transport which meets local demand and limits unnecessary running of vehicles with spare capacity. As this encourages the use of bespoke public transport, there is some scope to reduce private vehicle use and thereby emissions. ▪ The options would support beneficial outcomes for the SEA objectives on Health and Accessibility.	▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation of measures. The impact would be dependent on the efficiency and density of the services. ▪ Where new vehicles are introduced, it would be beneficial for them to be ultra-low emission and fully accessible for all users. ▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Health and Accessibility.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
15. Public transport safety and security *A group of four options including safety and security measures on public transport, at public transport hubs and the implementation of Hate Crime Charter.*	▪ While the options improve the public transport network through improved safety and security, the options are unlikely to have significant environmental impact as they would not be predicted to result in substantial modal shift. ▪ However, safety and security measures would support beneficial outcomes for the SEA objectives on Health.	▪ Success of these measures and their contribution to the environment and health would depend on the scale of implementation. It is likely that the potential benefits of the options in this group would be more effective when delivered in combination with other complementary public transport measures.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
16. Active travel network *A group of nine options relating to improvements to active travel infrastructure, safety and security, enhancing the role of electric bikes and integrating active travel networks and green networks.*	▪ The options perform relatively well in relation to environmental issues. Measures which improve access to, and engagement in, active travel could deter people from depending on private vehicles and achieve modal shift. This would potentially have beneficial environmental impacts through reduced greenhouse gas emissions and lower emissions of local air pollutants through increased levels of active travel. ▪ The options would support beneficial outcomes for the three SEA objectives on Health, Accessibility and Productivity, Competitiveness and Innovation.	▪ Success of the measures and their contribution to the environment and health would depend on their scale of implementation. Beneficial impacts are not predicted to be significant unless implemented on a substantial scale and designed to relevant standards. ▪ New active travel facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity and have been assumed at this stage to be delivered in accordance with relevant good environmental practice.
	Overall, minor adverse to moderate beneficial impacts are predicted:	
	Scoring: ✖- ✓✓	
17. Active travel information and promotion *A group of two options relating to information and awareness raising for active travel.*	▪ While the options are expected to raise awareness of the active travel network, they are unlikely to have a significant material impact on the environment. ▪ Promoting active travel may encourage modal shift, especially for short journeys. This could potentially reduce greenhouse gas emissions and emissions of local air pollutants. However, it is not predicted that the options would lead to a substantial modal shift or a subsequent significant impact on traffic levels and emissions.	▪ Success of the measures and their contribution to the environment and health would depend on their scale of implementation. ▪ Journey planning information would need to be delivered in formats accessible to all in order to reach relevant groups.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
18. Bike sharing and ownership *A group of four options relating to supporting and investing in electric bikes and related infrastructure, and developing bike hire and sharing schemes.*	▪ The options perform relatively well in relation to environmental issues. Proposed options to increase bike sharing and ownership opportunities may encourage modal shift leading to beneficial environmental impacts through reduced greenhouse gas emissions and local air pollutants. ▪ The measures would also contribute to increased levels of active travel supporting the SEA objective on Health.	▪ Success of the measures and their contribution to the environment and health would depend on their scale of implementation. Beneficial impacts are not predicted to be significant unless implemented on a substantial scale and designed to relevant best practice and standards. ▪ Rapid uptake of electric bikes may require measures to ensure safety of other active travel users due to potentially higher speeds of new cycles.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
19. Road safety *A group of two options including a road safety framework and 20mph speed limits.*	▪ While implementing a road safety framework is unlikely to have a material effect on environment, restricting speeds may ease congestion with potential for beneficial environmental impacts on emissions due to vehicles making fewer sharp accelerations and decelerations. ▪ 20 mph zones can also encourage active travel which would also help reduce emissions where walking and cycling trips replaced car journeys. ▪ The options would support beneficial outcomes for the SEA objective on Health	▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Health and Accessibility through promotion of safer roads and enhanced amenity which would encourage active travel.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
20. Placemaking *One measure to implement place-making schemes to improve the quality of the built environment for active travel.*	▪ The option will facilitate and encourage active travel, especially for short journeys. This could potentially reduce greenhouse gas emissions and emissions of local air pollutants. However, it is not predicted that the option would lead to a significant impact on traffic levels and emissions. ▪ The options would support beneficial outcomes for the SEA objective on Health and Accessibility.	▪ Success of the measure and its contribution to the environment and health would depend on the scale of implementation. ▪ New infrastructure should be designed to avoid adverse impacts on areas of local environmental sensitivity and have been assumed at this stage to be delivered in accordance with relevant good environmental practice.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
21. Shared mobility *A group of three options including packaged shared mobility options, increased sustainable transport options on islands and rural communities and enhanced accessibility of shared mobility options such as car share schemes.*	▪ Shared mobility options would contribute to reducing personal car ownership and single occupancy car trips. This would potentially reduce greenhouse gas emissions and lower emissions of local air pollutants. ▪ However, these options are not predicted to lead to a substantial modal shift or a subsequent material impact on traffic levels and emissions. ▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Accessibility.	▪ Success of these measures and their contribution to the environment would depend on the location and scale of implementation. ▪ Measures may be more effective in achieving environmental and health benefits where delivered as part of wider packages of demand management and public transport measures.
	Overall, negligible to minor beneficial impacts are predicted:	
	Scoring: 0 - ✓	
22. Interchanges and hubs *A group of four options to enhance integration between sustainable transport modes including transport hubs in small towns and at hospitals, campuses and town centres and enhanced stop/station infrastructure.*	▪ The implementation of integrated mobility hubs and integrated sustainable transport options across the region would encourage the increased use of public transport. ▪ This would be predicted to have beneficial environmental impacts through reduced greenhouse gas emissions, emissions of local air pollutants and roadside noise from road traffic in key corridors where modal shift occurs. Impacts have the potential to be significant where delivered at scale. ▪ The options would support beneficial outcomes for the SEA objectives on Health, Accessibility and on Productivity, Competitiveness and Innovation.	▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation and cross-service integration including for policy-based measures which require pan-regional adoption in order to be fully effective. ▪ Any new vehicles should be in line with best practice with regards to emissions and user accessibility. ▪ Infrastructure / facilities such as mobility hubs would need to be located in suitable areas to avoid significant environmental effects on locally sensitive areas and communities.
	Overall, negligible to moderate beneficial impacts are predicted:	
	Scoring: 0 - ✓✓	
23. Bus priority *A group of four options to implement and enhance bus lanes/segregation, priority/signal control and enforcement.*	▪ While traffic management measures supporting bus priority may encourage public transport, it is not predicted that there would be substantial modal shift or a material impact on traffic levels and emissions. ▪ The options would support beneficial outcomes for the SEA objective on Accessibility and on Productivity, Competitiveness and Innovation.	▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation of measures including the delivery of improvements through key corridors for the relevant bus routes.
	Overall, negligible to minor beneficial impacts are predicted:	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
	Scoring: 0 - ✓	
24. Ferry *A group of three options including an islands connectivity plan, ferry terminal improvements and increased capacity on Clyde ferry routes*	▪ Supporting policy goals related to connectivity has scope to reduce emissions assuming increased ferry operations are offset by fuel-efficient vessels. ▪ Enhancing capacity would potentially require additional vessels and/or sailings which may increase emissions and encourage more car travel to/from the islands which could have some detrimental environmental impacts. ▪ There is uncertainty in the environmental impact in relation to any impacts of port infrastructure works dependent on the specific nature and location of the measures. ▪ The options would support beneficial outcomes for the SEA objectives on Health, Accessibility and on Productivity, Competitiveness and Innovation.	▪ Success of the measures and their contribution to the environment and health would depend on the scale of implementation and sustained delivery of interventions. ▪ Enhanced infrastructure is unlikely to have a significant adverse impact on the environment provided any new works are constructed and operated sensitively in line with suitable environmental management plans to avoid impacts to coastal habitats and water quality. This would need to be considered in relation to specific proposals and locations. ▪ Introducing newer and more fuel-efficient vessels would help support decarbonisation of the ferry fleet and minimise the negative adverse environmental impacts of emissions. ▪ Introduction of new vessels should incorporate other measures to facilitate uptake of public transport use and incorporate fully accessible designs for all user groups.
	Overall, minor adverse to minor beneficial impacts are predicted:	
	Scoring: ×- ✓	
25. Metro-MaaS transit – subway *One option for Glasgow Metro system including modal interventions and integration*	▪ Depending on the location and nature of this option, there is potential for adverse impacts on the environment e.g. from permanent loss of areas of importance for biodiversity, landscape and the historic environment. ▪ It would require the use of new material assets. ▪ Noise, vibration and emission of some pollutants would be predicted during construction. ▪ However, this option has good potential to induce modal shift, reducing car kms, greenhouse gas emissions and local air pollutants from road traffic. ▪ The option would support beneficial outcomes for the SEA objectives on Health, Accessibility and on Productivity, Competitiveness and Innovation	▪ Success of this measures and its contribution to the environment and health would depend on the location and scale of implementation of the metro system and cross-service integration. ▪ All new infrastructure would need to be located in suitable areas to avoid significant environmental effects on locally sensitive areas and communities and has been assumed at this stage to be delivered in accordance with relevant good environmental practice. ▪ Environmental impact assessment of development proposals would be required with appropriate mitigation and enhancement measures, dependent on local sensitivities and receptors.
	Overall, moderate adverse to moderate beneficial impacts are predicted:	
	Scoring: ××-✓✓	

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
26. Rail and high speed rail *A group of five options including for new rail stations, capacity enhancement, re-opening of disused lines, enhancing capacity in central Glasgow and supporting delivery of high speed rail.*	▪ The enhancement of rail capacity and options in the region would encourage public transport use which could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through reduced greenhouse gas emissions and lower emissions of local air pollutants. ▪ However, the construction of major new infrastructure could have significant adverse environmental impacts (and require material assets) depending on the location and sensitivity and nature of proposed works. ▪ Where measures are implemented at scale and as part of combined packages of interventions there would be potential for significant beneficial effects for SEA objectives relating to Accessibility and on Productivity, Competitiveness and Innovation.	▪ Success of these measures and their contribution to environment and health would depend on the location and scale of implementation, including delivery of improvements throughout key rail transport corridors. ▪ Depending on the location of infrastructure, there is potential for local impacts to local biodiversity, landscape/townscape, cultural heritage and other receptors which would need to be carefully managed and mitigated to avoid significant environmental effects. ▪ Environmental impact assessment of development proposals may be required with appropriate mitigation and enhancement measures, dependent on local sensitivities.
	Overall, moderate adverse to minor moderate beneficial impacts are predicted:	
	Scoring: ××-✓✓	
27. Road *A group of three options including capacity enhancements and constraint resolution on roads, implementation of smart/managed motorways and enhanced Urban Traffic Controls.*	▪ Several of the options may facilitate travel via the private car which has the potential to induce additional road traffic, further contributing to greenhouse gas emissions and local air pollutants, in addition to intensifying noise and vibration from upgraded sections in the road. ▪ The construction of fixed links would require resource use and depending on location may have adverse impacts on environmental receptors including biodiversity, soils, water resources and the historic environment. ▪ However, some measures, especially for efficiency improvements, could reduce overall vehicles kilometres, reduce congestion and encourage public transport use which would contribute to modal shift and have beneficial impacts on the environment.	▪ Options to address local road capacity constraints should be delivered together with complementary measures to ensure overall increases in road traffic are not encouraged. ▪ All new 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. ▪ Environmental impact assessment of development proposals may be required with appropriate mitigation and enhancement measures, dependent on local sensitivities and receptors. ▪ The carbon implications of interventions would need to be considered in the context of emissions reductions/net zero targets in Scotland.
	Overall, moderate adverse to minor beneficial impacts are predicted:	
	Scoring: ××-✓	
28. Park and ride	▪ New/enhanced park and ride encourages the use of public transport for at least part of some people's journeys. It will	▪ The beneficial impacts of this option will depend on the number and location of park and ride sites.

Option Group & Summary of Options	Key Environmental Impacts	Mitigation & Recommendations
Two options relating to new / enhanced park and ride facilities.	support modal shift from car to public transport and as such, there would potentially be beneficial environmental impacts through reduced greenhouse gas emissions, lower emissions of local air pollutants and potentially roadside noise from traffic. ▪ There is potential for some adverse environmental impacts from development of new sites, dependent on their scale, location and sensitivity of the environment.	▪ Any new park and ride sites would need to be located in suitable areas to avoid significant environmental effects on locally sensitive areas and communities and have been assumed at this stage to be delivered in accordance with relevant good environmental practice. Development on brown field land and with local biodiversity enhancement should be targeted.
	Overall, minor adverse to minor beneficial impacts are predicted:	
	Scoring: ×-✓	
29. Adaption and resilience *A group of four options relating to enhancing the resilience of ferry services, rail services and the local road network, and adapting the public transport network to the effects of climate change.*	▪ Improving the resilience and efficiency of the road network has potential to reduce congestion, especially during peak-hours, which may benefit public transport services. This might reduce emissions for car-based travel on the network. However, improving network efficient and reducing journey times may encourage more people to travel by car which would have an adverse impact on the environment. ▪ There is uncertainty in the environmental impact of enhancing the resilience of ferry and rail services, especially for infrastructure which is location-specific. ▪ Adapting the transport network to the effects of climate change inherently supports the SEA objective for Water Resources.	▪ Success of the measures and their contribution to the environment would depend on the scale of implementation of measures and the sustained delivery of the interventions. ▪ All new 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.
	Overall, minor adverse to minor beneficial impacts are predicted:	
	Scoring: ×-✓	

Key

Major beneficial effect	✓✓✓	Major adverse effect	×××
Moderate beneficial effect	✓✓	Moderate adverse effect	××
	✓	Minor adverse effect	-

Minor beneficial effect			
Neutral / negligible effect	0	Uncertain effect	?
No clear relationship	~		

5.4 Assessment of Policies

5.4.1 To implement the proposed RTS Objectives, a suite of policies has been developed, grouped into 10 overarching policy themes and forming the basis of future implementation of the Strategy. This section summarises the findings of the environmental assessment of the policy themes. The detailed findings of the assessment, including the scoring of each individual policy are set out in the tables in Appendix E.

5.4.2 The assessment shown within this section is two-fold. An overall summary of the environmental assessment of each RTS policy theme is presented in Table 5.3 drawing on the consideration of the predicted environmental effects of the policies (and where relevant linked options) 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 at both policy-specific and SEA thematic levels.

Table 5.3 Summary of Environmental Assessment by Policy Theme

Policy Theme	Overall Score	Commentary
Accessing and Using Transport	+	These policies are generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for health and accessibility. The policies on accessing and using transport are also predicted to have some beneficial effects for SEA topics of productivity, air quality and climate change. Enhanced public transport networks and services may also give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment.
Reducing the need to travel and managing demand for car travel	+	The policies on demand management are either supportive or generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for accessibility, material assets, productivity, air quality and climate change mitigation. The policies are also predicted to have some beneficial effects for SEA topics of health and biodiversity where they result in reduced road traffic flows on key transport corridors. Improving 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 car travel.
Enabling walking, wheeling and cycling	+	These policies are generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for health, accessibility, productivity, air quality and climate change. The policies on facilitating and encouraging active travel are also predicted to have some beneficial effects for SEA objective on biodiversity. Improving active travel infrastructure may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment, while reducing emissions through reduced vehicle-based travel.
Enhancing quality and integration of public transport	+	These public transport enhancement policies are generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for health and accessibility. The policies on enhancing and integrating public transport are also predicted to have some beneficial effects for SEA topics of material assets, productivity, air quality and climate change. Enhanced public transport networks and services may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment. The development of new transport infrastructure such as the Metro and Park and Ride sites has some potential for adverse effects on a number of SEA objectives. With mitigation it is predicted, at this stage, that any adverse residual effects on environmental receptors would not be significant. Opportunities for

Policy Theme	Overall Score	Commentary
		environmental enhancement should be sought in all new transport infrastructure proposals.
Improving road safety	0	These policies are generally not predicted to have significant overall environmental effects based on consideration of the SEA objectives. However, improving road safety would have significant beneficial effects for health through improved (safer) conditions on the region's roads and some minor beneficial effects are predicted for the SEA topics of accessibility, productivity, air quality and climate change.
Decarbonising vehicles and improving air quality	+	Decarbonising vehicles and improving air quality would have significant beneficial effects on air quality and climate change mitigation and some beneficial effects for SEA topics of health, accessibility, productivity and biodiversity are also predicted. The policies are generally not predicted to have a significant effect on the other SEA objectives.
Moving goods sustainably	+	These policies are generally not predicted to have a significant effect on the SEA objectives. However, facilitating the efficient and sustainable movement of freight would be predicted to have some beneficial effects for the SEA objectives relating to health, material assets and productivity, air quality and climate change. 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.
Increasing resilience and adapting to climate change	+	These policies are generally predicted to have a minor beneficial effect on the SEA objectives. Increasing resilience and adapting to climate change would have potential for some significant beneficial effects for health and productivity and some minor beneficial effects for SEA topics of accessibility, material assets, climate change, water resources and air quality. Delivery of schemes to support transport infrastructure resilience should be sensitive to the natural and built environment and take opportunities to integrate with nature based solutions.
Protecting and enhancing natural and built environments	+	These policies are generally predicted to have a minor beneficial effect on most of the SEA objectives. Protecting and enhancing natural and built environments would have significant potentially beneficial effects for biodiversity and some beneficial effects for SEA topics of health, material assets, productivity, air quality, climate change, water resources and landscape/townscape. Delivery of attractive green networks using nature based solutions would also complement other policies to promote active travel and therefore potentially reinforce cumulative health and environmental benefits for people using active travel networks.
Connecting Places	+ / ?	These policies are generally predicted to have a minor beneficial or neutral effect on most of the SEA objectives. Policies to better connect places would have potentially significant beneficial effects for the objectives relating to health, accessibility, material assets and productivity and some beneficial effects for SEA topics on air quality/amenity and climate change would be realised where the policies achieved reductions in overall levels of road traffic. Dependent on policy implementation there is some potential for adverse effects on natural and cultural heritage receptors from improved transport infrastructure. 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.

5.4.3 Overall, the assessment has identified that no significant adverse environmental effects would be predicted from implementation of the draft RTS policies. All of the policy 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 from road transport in particular.

5.4.4 A number of policies are predicted to have significant beneficial effects where implementation of supporting measures would deliver positive impacts and in particular for the policy themes which have the potential to achieve a step change in active travel and public transport. These include:

- Policy themes 2 (reducing the need to travel and managing demand for car travel), 3 (enabling walking, cycling and wheeling) and 10 (connecting places) which incorporate multiple sets of transport policies which are predicted to have significant beneficial effects on the SEA objectives for health, accessibility, productivity, air quality / amenity and climate.

- Policy themes 1 (accessing and using transport) and 4 (enhancing quality and integration of public transport) which are predicted to have significant beneficial effects on health and accessibility.

- Policy theme 6 (decarbonising vehicles and improving air quality) which is predicted to have significant beneficial effects on air quality / amenity and climate mitigation through its potential to deliver material emissions reductions from road traffic.

5.4.5 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 (policy theme 3), climate resilience of transport infrastructure (policy theme 8) and for policy theme 9 which specifically relates to protecting and enhancing natural and built environments.

5.4.6 There is some uncertainty associated with the effects of the delivery of policy theme 10 (connecting places). The high level nature of the Draft RTS does not allow for specific prediction of effects of measures to enhance connectivity on SEA topics of biodiversity, geodiversity and soil, cultural heritage and landscape, where there is some potential for adverse environmental effects from new or enhanced transport infrastructure. With a clear commitment to mitigation and enhancement where appropriate in the delivery of measures at future stages of RTS implementation it is not predicted that significant adverse effects would result however this will need to be closely considered during development of the RTS delivery plan and subsequent design, assessment and promotion of any key transport improvement schemes.

SEA Objective 1 – Health

5.4.7 The majority of policy themes assessed are predicted to have a beneficial effect on this objective. A large proportion of the polices 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 polices 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.

5.4.8 The proposed actions and policies to decarbonise public transport and private vehicles are predicted to improve air quality through reductions in traffic emissions which in turn is predicted to have potential for significant 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.

5.4.9 The policies predicted to have significant beneficial health effects are summarised below:

Policy Theme	Policy
Accessing and Using Transport	▪ P.A1 - Accessible transport ▪ P.A4 - Safety and security of transport
Enabling walking, wheeling and cycling	▪ P.AT1 – Regional Active Travel Network ▪ P.AT2 – Accelerated delivery of walking, wheeling and cycling infrastructure and facilities
Enhancing quality and integration of public transport	▪ P.PT1 - Integrated public transport system ▪ P.PT9 – Integration of public transport with Community Transport, Demand Responsive Transport and last mile connections
Improving road safety	▪ P.PS1 – Road safety and vulnerable road users ▪ P.PS2 – Regional road network safety measures
Increasing resilience and adapting to climate change	▪ P.RA1 – Climate Change Adaptation
Connecting Places	▪ P.CP6 – Regional Hospitals and Tertiary Education

5.4.10 When considered collectively, the policies of the Draft RTS are predicted to have the potential for significant beneficial effects on human health.

SEA Objective 2 – Accessibility

5.4.11 The Accessibility Objective receives good coverage across all policy themes which are largely predicted to have a beneficial effect on accessibility for all groups. The policies seek to improve accessibility in terms of physical access to the network and infrastructure including access to public services, hospitals, education facilities and economic opportunities. They also seek to improve the integration of the transport network including improved information and ticketing and to ensure transport services and facilities are accessible and affordable for all people.

5.4.12 There is some predicted uncertainty around the implementation of demand management policies (e.g., on parking and pricing measures) and low emissions zones since delivery of supporting measures would need to take full account of the accessibility needs of all people including groups with protected characteristics such as disabled people. Provided these are designed in accordance with appropriate standards and equitably in terms of affordability, significant adverse effects would not be predicted.

5.4.13 The policies predicted to have significant beneficial effects on accessibility are summarised below:

Policy Theme	Policy
Accessing and Using Transport	▪ P.A1 – Accessible transport ▪ P.A2 – Affordable transport ▪ P.A3 – Availability of transport
Reducing the need to travel and managing demand for car travel	▪ P.R1 – Integration of transport and land use ▪ P.R2 – 20-minute neighbourhoods ▪ P.R3 – Flexible working and remote access to services
Enabling walking, wheeling and cycling	▪ P.AT1 – Regional Active Travel Network
Enhancing quality and integration of public transport	▪ P.PT1 - Integrated public transport system ▪ P.PT4 – Bus quality and integration ▪ P.PT5 – Rail quality and integration ▪ P.PT6 – Ferry quality and integration

	▪ P.PT7 – Subway quality and integration ▪ P.PT9 – Integration of public transport with Community Transport, Demand Responsive Transport and last mile connections ▪ P.PT11 – Sustainable mobility hubs
Connecting Places	▪ P.CP4 - Town Centres connectivity and 20-minute neighbourhoods ▪ P.CP5 - Island, Rural and Remote Area Connectivity ▪ P.CP6 – Regional Hospitals and Tertiary Education

5.4.14 When considered collectively, the policies of the Draft RTS are predicted to have the potential for significant beneficial effects on accessibility.

SEA Objective 3 – Material Assets

5.4.15 The majority of policy themes assessed are predicted to have some beneficial effects on the Material Assets SEA objective through encouraging more efficient forms of transport and its land uses and protecting and enhancing critical infrastructure. Where the policies are implemented at scale across all key transport corridors in the region, the effects have the potential to be significant. Policies that aim to increase the adaptability and resilience of transport infrastructure to adverse weather effects and effects of climate change would also have beneficial effects.

5.4.16 Policies which deliver improvements to public transport to make it more accessible are likely to result in greater uptake of public transport and contribute to reduced car use which would reduce congestion and allow transport infrastructure to operate more efficiently. Similarly, measures which achieve modal shift and reduce the demand for travel and those delivering vehicle efficiencies have the potential to lower overall use of energy, particularly fossil fuels in the region.

5.4.17 There is some predicted uncertainly around the effects of implementation of policies which could promote new or upgraded infrastructure from the resultant demand on new materials. Promotion of a circular economy in the SPT region would be key to efficient materials management and reducing the indirect environmental effects associated with resource extraction, processing and end of life / waste management. Development of 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.

5.4.18 The policies predicted to have significant beneficial effects on material assets are summarised below:

Policy Theme	Policy
Reducing the need to travel and managing demand for car travel	▪ P.R1 – Integration of transport and land use ▪ P.R2 – 20 minute neighbourhoods
Increasing resilience and adapting to climate change	▪ P.RA1 – Climate Change Adaptation ▪ P.RA2 - Resilience

5.4.19 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.

SEA Objective 4 – Productivity, Competitiveness and Innovation

5.4.20 Overall, the Productivity, Competitiveness and Innovation SEA Objective is covered well by the Strategy's policy themes and their associated policies. Several of the policies support improved access to services, including employment opportunities, and enhanced regional connectivity. Where it is delivered, a step change in accessibility and regional transport quality would also be beneficial to the regional economy and businesses efficiencies. For example, improved opportunity for businesses to access the best talent, who may previously have been restricted by their transport options to employment locations. Improved transport options can also increase productivity for businesses through improving the health of employees, for example, reducing fatigue on employees who may previously have experienced long and tiring commutes.

5.4.21 It is considered that the policies and actions will allow industry to improve efficiency in transporting goods, with more direct routes to market and improved freight hubs and other facilities. Additionally, the productivity of freight drivers will increase with policies that seek to improve rest facilities.

5.4.22 There are some predicted minor beneficial effects to the economy from reducing transport-related road accidents and improving the resilience of the road network. This is particularly relevant to policy theme 5: *Improving road safety.*

5.4.23 Policy theme 6 which promotes the decarbonisation of the transport system may also promote investment and demand in low carbon industries and energy generation which may have minor beneficial effects on productivity.

5.4.24 The policies predicted to have significant beneficial on productivity are summarised below:

Policy Theme	Policy
Reducing the need to travel and managing demand for car travel	▪ P.R1 – Integration of transport and land use ▪ P.R2 – 20 minute neighbourhoods ▪ P.R3 – Flexible working and remote access to services
Enabling walking, wheeling and cycling	▪ P.AT1 – Regional Active Travel Network
Moving goods sustainably	▪ P.MG1 – Strategic freight transport
Increasing resilience and adapting to climate change	▪ P.RA1 – Climate change adaptation ▪ P.RA2 - Resilience
Connecting Places	▪ P.CP1 – International connectivity ▪ P.CP2 – Inter-regional connectivity ▪ P.CP3 – Intra-regional connectivity ▪ P.CP4 – Town Centre connectivity and 20-minute neighbourhoods

5.4.25 When considered collectively, the policies of the Draft RTS are predicted to have the potential for significant beneficial effects on productivity, competitiveness and innovation.

SEA Objective 5 – Air Quality and Amenity

5.4.26 The Draft RTS policies are predicted to have an overall beneficial effect on the Air Quality and Amenity SEA Objective. Facilitating and encouraging the uptake of public transport, managing demand for travel, and promoting active travel is predicted to support the delivery of modal shift for a broad range of journeys away from road based transport, which would be predicted to

reduce transport emissions and other harmful pollutants in key corridors where a full suite of complementary measures was implemented.

5.4.27 Integration of transport and land use and facilitating remote access to services and facilities is also predicted to reduce the overall need to travel. In turn, this is predicted to improve air quality through modal shift, or removing the need to travel altogether for some journeys particularly in the medium to longer term as land use changes became effective. Car demand management measures may also deliver modal shift, which would be predicted to have some beneficial impacts on air quality.

5.4.28 The implementation of policies centred on improving air quality, such as the implementation and delivery of transport improvements in air quality management areas, are predicted to have beneficial effects dependent on their nature and scale. Measures to decarbonise all forms of transport including through update of electric vehicles would also clearly support efforts to reduce the impacts of emissions from fossil-fuel powered transport, particularly from cars and commercial vehicles and in urban centres and more heavily trafficked routes.

5.4.29 There is some predicted uncertainty around the implementation of measures such as the Clyde Metro and park and ride sites. These would require further appraisal as design options were developed to understand their potential effects on local traffic patterns and associated emissions. Provided that new transport facilities were suitably appraised and mitigation measures implemented through design and management of traffic, it is not considered that there would be significant adverse effects on local air quality and amenity from these proposals.

5.4.30 The policies predicted to have significant beneficial effects on air quality are summarised below:

Policy Theme	Policy
Reducing the need to travel and managing demand for car travel	▪ P.R1 – Integration of transport and land use ▪ P.R2 – 20-minute neighbourhoods ▪ P.R3 – Flexible working and remote access to services
Enabling walking, wheeling and cycling	▪ P.AT1 – Regional Active Travel Network
Decarbonising vehicles and improving air quality	▪ P.GF1 – Road transport vehicle decarbonisation ▪ P.AQ1 – Low Emission Zones ▪ P.AQ2 – Air Quality Management Areas
Moving goods sustainably	▪ P.MG1 – Strategic freight transport

5.4.31 When considered collectively, the policies of the Draft RTS are predicted to have the potential for significant beneficial effects on air quality and amenity.

SEA Objective 6 – Climate Change Mitigation

5.4.32 The policies assessed are predicted to have a range of beneficial effects on the Climate Change Mitigation SEA Objective. Policies which support enhanced public transport and active travel would be predicted to contribute to modal shift where they were delivered and sustained at scale across the key transport corridors in the region. This would contribute to reducing regional carbon emissions from transport through reductions in road-based travel. It is also predicted that improved integration between transport and land-use and other demand management measures would encourage modal shift or reduce the need to travel altogether, both of which would contribute to reducing carbon emissions.

5.4.33 Of particular note, policy theme E.6 *Decarbonising vehicles and improving air quality* is predicted to have significant beneficial effects on climate change mitigation. Where implemented effectively, the deployment of measures in Low Emission Zones and Air Quality Management Areas is predicted to reduce emissions through encouraging the transition to zero-emission vehicles, in concert with proposals to promote a rapid transition to electric cars and light commercial vehicles in particular.

5.4.34 In addition, policies supporting the sustainable movement of freight in the region are also predicted to have beneficial effects on climate change mitigation through their potential to contribute to modal shift and reduced emissions from more efficient freight management and the adoption of zero-carbon and active modes for last mile deliveries in larger settlements.

5.4.35 There is some predicted uncertainty around the implementation of policies improving connectivity (and measures such as the new Metro and park and ride sites) as the net impact on emissions would depend on the potential changes in traffic flows and patterns.

5.4.36 The policies predicted to have significant beneficial effects on climate change mitigation are summarised below:

Policy Theme	Policy
Reducing the need to travel and managing demand for car travel	▪ P.R1 – Integration of transport and land use ▪ P.R2 – 20-minute neighbourhoods ▪ P.R3 – Flexible working and remote access to services
Enabling walking, wheeling and cycling	▪ P.AT1 – Regional Active Travel Network ▪ P.AT2 – Accelerated delivery of walking, wheeling and cycling infrastructure and facilities
Decarbonising vehicles and improving air quality	▪ P.GF1 – Road transport vehicle decarbonisation ▪ P.GF2 – Rail decarbonisation ▪ P.GF3 – Subway decarbonisation ▪ P.GF4 – Ferry decarbonisation ▪ P.GF5 – Aviation decarbonisation ▪ P.GF6 – Clyde Metro

5.4.37 When considered collectively, the policies of the Draft RTS are predicted to have the potential for significant beneficial effects on climate change mitigation.

SEA Objective 7 – Biodiversity, Geodiversity and Soil

5.4.38 The predicted effects of the RTS on the Biodiversity, Geodiversity and Soil SEA Objective is mixed with some predicted beneficial effects, some potential for adverse effects and some uncertainties due to the absence of location-specific detail at this stage of the plan.

5.4.39 The predicted beneficial effects have been identified for a number of the policies which would work to deliver a transport network that is less reliant on private car journeys and, instead, support an uptake of active travel and public transport resulting in a reduction in air pollutant emissions which can be harmful to biodiversity, geodiversity and soils. These effects are not predicted to be significant at the regional scale.

5.4.40 There is some predicted uncertainty around the implementation of new or upgraded transport infrastructure which has the potential for adverse effects on natural heritage dependent on the location of the schemes and the baseline sensitivity of the areas affected. 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 and avoided significant adverse effects. Upgrading of transport and particularly active travel networks also

provides opportunities to enhance local biodiversity through the creation of new linear habitats and designing schemes with nature-based solutions which have the potential to offer biodiversity net gain in the longer term. These also provide enhanced transport facilities for people to benefit from accessing greenspaces and natural areas as part of active travel journeys.

5.4.41 The policy predicted to have significant beneficial effects on biodiversity, geodiversity and soil is shown below:

Policy Theme	Policy
Protecting and enhancing natural and built environments	▪ P.EV1 – Biodiversity and green infrastructure

5.4.42 When considered collectively, the policies of the Draft RTS are not predicted to have significant effects on biodiversity, geodiversity and soil. The Strategy is predicted to have some beneficial and some adverse non-significant effects dependent on the detail of future implementing measures. The uncertainty in predicting environmental effects on natural heritage 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 8 – Water, Flood Risk and Resilience

5.4.43 Generally, the policies in the draft Strategy are predicted to have minor (and non-significant) effects on the SEA Objective for Water, Flood Risk and Resilience. The enhanced use of nature based solutions for transport networks, including sustainable drainage systems, has some potential to support beneficial outcomes for the management of local drainage and water quality particularly where new works were delivered in combination with enhancement to the water environment (such a re-naturalisation of watercourses and establishment of wetlands).

5.4.44 Policies that may involve significant new transport infrastructure, such as the Clyde Metro and park and ride sites, have some potential for adverse effects on the water environment particularly during their construction. However, assuming the appropriate level of environmental assessment is undertaken, and key mitigation measures implemented, these effects are not predicted to be significant adverse at this stage.

5.4.45 When considered collectively, the policies of the Draft RTS are not predicted to have significant effects on water resources and flooding. Overall 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 sustainable management of water resources by integrating delivery with other strategies and agencies including through taking catchment-based approaches to water and flooding issues.

SEA Objective 9 – Cultural Heritage

5.4.46 Overall, it is predicted that there would be potential for some minor beneficial effects on the Cultural Heritage SEA Objective. It is considered that the policies to reduce emissions generated by road transport in urban areas in particular would help to conserve historic buildings which are vulnerable to the corrosive effects of some air pollutants.

5.4.47 Providing an enhanced public transport service with better bus and rail connections and substantially 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 implementation of RTS measures which support enhancement to the built environment and civic spaces of architectural importance would have some minor beneficial effects.

5.4.48 Where new infrastructure was developed on greenfield or previously undeveloped land, the potential for impacts on archaeological resources would need to be considered further as proposals were designed and assessed. 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 Strategy delivery.

5.4.49 None of the policies in the RTS has 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 10 – Landscape

5.4.50 Overall, the policies in the Draft RTS are not predicted to have significant effects on the Landscape SEA Objective. Policies encouraging public 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 for all people.

5.4.51 Implementation of policies to substantially enhance active travel networks would have potential to increase the accessibility of green spaces, open areas and new landscapes to people who may not currently be able to do so, particularly in deprived urban communities. Similarly the delivery of improved public transport (access, availability and affordability) would increase opportunities for all people to access areas of high quality landscape which are located throughout the region but which may remain inaccessible for many at present.

5.4.52 Any new infrastructure to enhance transport connections and improve connectivity has the potential for adverse effects if not designed sympathetically with the local landscape or townscape character. Specific transport schemes 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 RTS delivery then significant adverse landscape and visual effects of the Strategy would not be predicted.

5.4.53 None of the policies in the RTS has been predicted to have significant effects on landscape and when considered collectively, the policies of the Draft RTS 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, Strategy policies for land use changes and transport integration such as 20 minute neighbourhoods also provide new opportunities for the development of attractive and healthy communities.

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 the SPT region is also briefly addressed (and referred to as cumulative effects).

In-Combination Effects of the RTS

5.5.3 At the scale of the SPT region, receptors sensitive to in-combination effects can be considered in terms of all the main 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 part of the Loch Lomond and the Trossachs National Park and other designated landscapes), important habitats including those supporting internationally important assemblages of birds and other species, lochs, rivers and their catchments, the coastal and inter-tidal zone, country parks and green spaces important to people and nature and the region's rich and varied cultural heritage. It is also recognised that people and local communities value a wide range of other places and sites for a range of attributes that they provide which can contribute to quality of life, health, education and supporting local businesses and the economy.

5.5.4 At the strategic level of the RTS only broad consideration of in-combination effects and receptors is possible. The SEA has not predicted any significant adverse environmental effects in relation to the ten topic-based themes and objectives which lowers the potential for impacts to combine and have additive or synergistic effects on key receptors which may be significant. With the mitigation principles outlined in this report and a commitment to their ongoing development and application through RTS delivery stages, no significant adverse effects on sensitive receptors at the regional level from in-combination effects are predicted.

5.5.5 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 type approach. This would characterise the range and scale of natural (and man-made) assets and services associated with a region from which a more informed understanding of the impacts of sub-programmes and key transport interventions could be identified.

5.5.6 The main potential for the RTS to have in-combination effects is on human receptors, primarily people in communities across the region who would benefit from the potential for multiple effects on health, accessibility and socio-economic outcomes. The region includes many areas where people live in deprived communities and where life prospects and lived experiences may be materially influenced for the better by the availability, accessibility and affordability of public transport and active travel. 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 (and other) communities.

5.5.7 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 (productivity).

Cumulative Effects of the RTS

5.5.8 There are many policies, plans and programmes relating to land use and transport development in the SPT region, including some of those identified in Appendix B. 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.

5.5.9 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 Infrastructure Investment Plan (IIP), 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 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, material assets and productivity).

5.5.10 Taken together with these strategies, and with other complementary regional level programmes and interventions such as Glasgow's Low Emission Zone (LEZ), 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 SPT and its partner organisations.

5.5.11 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 (and none of which is likely to be significant, see Section 5.4). The principal policies of the RTS where potentially adverse environmental effects are predicted (or are uncertain) relate to those whose implementation may involve development of new or upgraded transport infrastructure including for example the Clyde Metro, new park and ride sites, passenger and freight hubs/interchanges and proposals to enhance connectivity within and outwith the SPT region.

5.5.12 There are no specific locations or designs for any of these policy interventions at this stage of the RTS. To ensure that significant adverse cumulative effects with other similar or linked transport plans and programmes was avoided in future, the implementation of future projects should be taken forward in collaboration with other key delivery agencies including the relevant SPT local authorities, transport operators, Sustrans, Transport Scotland, Scotland's Railway and Network Rail. 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 Strategic Transport Projects Review (STPR2), the Infrastructure Investment Plan (IIP) and 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.

5.5.13 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 constrains 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 Introduction

6.1.1 The 2005 Act requires SEA Environmental Reports to provide a "description of the measures envisaged concerning monitoring" after the adoption of a plan or programme which is subject to SEA. To comply with these, a SEA Monitoring Framework has been developed. This will be used as the main tool to monitor and review the implementation of the RTS and associated environmental effects.

6.1.2 In addition to monitoring RTS delivery, to comply with statutory SEA requirements the SPT RTS Monitoring Framework will also need to specifically include mechanisms to monitor the likely significant effects on the environment of the RTS as predicted through this SEA process. In addition, the Monitoring Framework should include mechanisms to assess whether all RTS policies are being implemented as intended and with no unforeseen adverse consequences. To inform future RTS reviews it would also be prudent to monitor whether the policies remain in conformity with any updates to national transport policy and regional land use planning policies.

6.2 SEA Mitigation

6.2.1 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	
▪ 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 policy implementation 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 projects will be taken forward in collaboration with other key delivery agencies including the relevant SPT local authorities, bus operators, Sustrans, Transport Scotland, Scotland's Railway and Network Rail. ▪ 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	
Vehicles and Decarbonisation	▪ Increased provision of public transport capacity and services should deploy zero or ultra-low emission vehicles. ▪ Public transport operators should be supported to achieve rapid decarbonisation of existing vehicle fleets. ▪ 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. ▪ Freight transport operators and facilities should be supported to achieve rapid decarbonisation of existing vehicle fleets.

Group	Mitigation Commitment
	▪ 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.
Relevant policies: ▪ *1. Accessing and Using Transport* ▪ *2. Reducing the need to travel and managing demand for car travel* ▪ *4. Enhancing quality and integration of public transport* ▪ *6. Decarbonising vehicles and improving air quality* ▪ *7. Moving goods sustainably*	
Transport Infrastructure	▪ 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 Hierarchy[9]) 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, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided. ▪ 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.
Relevant policies: ▪ *3. Enabling walking, wheeling and cycling* ▪ *4. Enhancing quality and integration of public transport* ▪ *5. Improving road safety* ▪ *6. Decarbonising vehicles and improving air quality* ▪ *7. Moving goods sustainably* ▪ *8. Increasing resilience and adapting to climate change* ▪ *9. Protecting and enhancing natural and built environments* ▪ *10. Connecting places*	
Transport Networks and Enhancement	▪ 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

[9] 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
	prevention activities, wherever possible working at a watercourse catchment scale.
Relevant policies: ▪ *2. Reducing the need to travel and managing demand for car travel* ▪ *3. Enabling walking, wheeling and cycling* ▪ *8. Increasing resilience and adapting to climate change* ▪ *9. Protecting and enhancing natural and built environments*	
Access and Fairness	▪ 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. ▪ 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, rail, subway and ferry services and facilities should be designed and operated to ensure that the needs of all users and disabilities groups are accommodated. ▪ Enhancement to bus, rail, subway and ferry services and facilities should be designed and operated to ensure that the needs of all users and disabilities groups are accommodated.
Relevant policies: ▪ *2. Reducing the need to travel and managing demand for car travel* ▪ *3. Enabling walking, wheeling and cycling* ▪ *4. Enhancing quality and integration of public transport* ▪ *6. Decarbonising vehicles and improving air quality*	

6.2.2 These mitigation commitments provide a framework for the development of specific measures in more detail alongside the articulation of the RTS Delivery Plan. Future elaboration of this framework will include identification of specific lead responsibilities for SPT and other partners and associated timeframes. At this stage it is important to note that the principles are committed to by SPT 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.

6.3 Monitoring Framework

6.3.1 A new RTS Delivery Plan, including a spatial plan, will be developed following approval of the final RTS. The new Delivery Plan will set out the key actions, initiatives and projects for SPT and partners over the first 5 years of the new RTS. Progress of the RTS will tracked through a monitoring and evaluation framework as set out in the draft RTS document. This includes an initial schedule of proposed indicators. Many of these indicators are considered to be suitable to help track progress in the delivery of the Strategy with respect to environmental outcomes. They will also be used to check that the beneficial effects of the RTS predicted in this SEA are being realised and to monitor any adverse effects so that corrective actions may be introduced.

6.3.2 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 the assessment tables in Appendix E in relation to each policy theme. A collated summary of the indicators proposed for monitoring progress against the RTS objectives (and those for tracking against RTS Priorities[10]) is presented in Table 6.2 which identifies those considered to be relevant for monitoring against SEA objectives.

[10] These are shown separately in chapter 7 of the Draft RTS from the monitoring indicators but have been collated here. The tracking indicators proposed in the RTS draw predominantly from the indicator set used in the Scottish Government's National Performance Framework (NPF)

Table 6.2 Indicators for Monitoring RTS Environmental Effects

SEA Objective	Monitoring & Tracking Indicators	Relevant RTS Objectives & Priorities
1. Health	Monitoring Indicators: ▪ Proportions of adults who feel personally safe and secure on the bus ▪ Proportion of households with at least one bike available for use ▪ Proportion of adults who walk as a means of transport at least 1 day a week ▪ Proportion of journeys 5km or less in distance that are made by walking or cycling ▪ Number and severity of pedestrian casualties Tracking Indicators: ▪ Proportion of adults who live within a 5-minute walk of their local green or blue space ▪ Healthy Life Expectancy ▪ Mental Wellbeing (Mean WEMWBS score)	**Objectives**: 1, 3 **Priorities**: Healthier environment, Improved quality of life
2. Accessibility	Monitoring Indicators: ▪ Level of service framework – accessibility & availability indicators ▪ MyBus Usage ▪ Bus network coverage and service frequency ▪ Proportion of adults who are satisfied with local public transport ▪ Proportion of adults who use local bus services at least 2 times per week Tracking Indicators: ▪ Proportion of adults who live within a 5-minute walk of their local green or blue space	**Objectives**: 1 **Priorities**: Healthier environment
3. Material Assets	Monitoring Indicators: ▪ Number of EV charge points on ChargePlace Scotland network Tracking Indicators: ▪ Percentage of adults who rate their neighbourhood as a very good place to live	**Objectives**: 2 **Priorities**: Healthier environment
4. Productivity, Competitiveness and Innovation	Monitoring Indicators: ▪ Affordability of public transport fares Tracking Indicators: ▪ Employment rate ▪ Child Poverty / Relative Poverty ▪ Percentage of young adults participating in education, training or employment	**Objectives**: 1 **Priorities**: Inclusive economic growth
5. Air Quality and Amenity	Monitoring Indicators: ▪ Proportion of licensed cars and vans that are ULEZ ▪ Number of AQMAs	**Objectives**: 2
6. Climate Change Mitigation	Monitoring Indicators: ▪ CO_2 emissions estimates from road transport ▪ Grammes CO_2 per passenger-kilometre by mode/vehicle type Tracking Indicators: ▪ Greenhouse gas emissions	**Objectives**: 2 **Priorities**: Healthier environment

SEA Objective	Monitoring & Tracking Indicators	Relevant RTS Objectives & Priorities
7. Biodiversity, Geodiversity and Soil	Tracking Indicators: ▪ Natural Capital Asset Index ▪ Proportion of adults who live within a 5-minute walk of their local green or blue space	**Priorities**: Healthier environment
8. Water, Flood Risk and Resilience	Tracking Indicators: ▪ Number of properties at risk of flooding ▪ Number of roads affected by flooding ▪ Number and type of annual flood incidences affecting bus and rail services	**Priorities**: Healthier environment
9. Cultural Heritage	Tracking Indicators: ▪ Percentage of adults who have attended or visited a cultural event or place in the last 12 months	**Priorities**: Improved quality of life
10. Landscape	Tracking Indicators: ▪ Natural Capital Asset Index ▪ Proportion of adults who live within a 5-minute walk of their local green or blue space	**Priorities**: Healthier environment

6.3.3 Analysis of the distribution of RTS indicators in the table suggests that there is a good level of consistency with monitoring for the SEA objectives. For some environmental themes, there are fewer indicators relevant from the RTS suite of indicators and the SEA process has identified a suggested set of additional environment-focused indictors for consideration by SPT in completing the monitoring and tracking proposals. These proposed indicators are presented in Table 6.3 and draw from existing indicator and data sets wherever possible.

Table 6.3 Proposed Environment Focused Monitoring Indicators

SEA Objective	Proposed Indicators and Potential Data Sources
1. Health	▪ A health-based indicator such as reported incidences of respiratory disease or asthma (*data source: regional level data from NHS health boards / Scottish Public Health Observatory data*)
2. Accessibility	▪ No further indicators proposed
3. Material Assets	▪ Circular economy indicator(s) for materials used in transport infrastructure and for vehicle/battery recovery and re-use (*data source: indicator to be developed – link with relevant national or regional circular economy strategies/targets*)
4. Productivity, Competitiveness and Innovation	▪ No further indicators proposed
5. Air Quality and Amenity	▪ Concentrations of roadside local air pollutants at key monitoring locations (*data source: local authority air quality monitoring data and review reports*)
6. Climate Change Mitigation	▪ No further indicators proposed
7. Biodiversity, Geodiversity and Soil	▪ Condition of protected nature sites (*data source*: NPF indicator) ▪ Area / length of new habitat creation for new active travel links (*data source*: *measured habitat creation post implementation*)

	▪ Area of habitat delivered which provides biodiversity net gain (*data source*: *BNG metric to be developed*)
8. Water, Flood Risk and Resilience	▪ Number and type of annual flood incidences affecting bus and rail services (*data source: relevant data on incidences and associated service delays/cancellations etc. from Network Rail and transport operators*) ▪ Number and type of sustainable drainage measures implemented as part of new or upgraded transport schemes (*data source: measured blue/green/SuDS infrastructure post implementation*)
9. Cultural Heritage	▪ State of historic sites (*data source*: NPF indicator) ▪ Visitor numbers recorded at the region's key cultural heritage sites (*data source*: *visitor records from HES and relevant local authorities*)
10. Landscape	▪ Length of upgraded or new active travel routes through designated or locally valued landscapes and townscapes (*data source*: measured lengths of schemes delivered) ▪ Indicator on quality of public realm / built heritage (*data source*: indicator to be developed)

6.3.4 The indicators set out in Tables 6.2 and 6.3 will be developed and refined following feedback from consultation on the Draft RTS. This will include completing a sub-set of environmental focused indicators to support monitoring against the objectives set out in this SEA. A suitable baseline will be derived for each indicator, wherever possible drawing from existing monitoring programmes at the national, regional and sub-regional levels to draw from recognised data sources and to ensure a resource efficient approach. A detailed consistency review will also be made with other key strategy SEA reports produced in the last three years (e.g., for the STPR2, NTS2, NPF4 and other key regional development plans) to align monitoring and reporting for consistency of presentation and economy of data gathering and analysis.

6.3.5 The Draft RTS states that SPT will report annually on progress towards achieving the RTS objectives through a set of monitoring indicators, report on progress of transport projects, initiative and workstreams and track a set of socio-economic, environmental and health indicators from wider policy environment. There is also a commitment to undertaking a 5 yearly evaluation process against RTS Priorities.

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 SPT (with support from Stantec UK) 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 SPT's website (www.spt.co.uk). The documents will also be made available in hard copy for inspection, should this be requested, at the principal offices of SPT.

7.1.3 Details of how to participate in the consultation will be published by SPT 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 on-line feedback forms available at https://www.spt.co.uk/spt-across-the-region/what-we-are-doing/regional-transport-strategy/

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 SPT 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, SPT will formally adopt and publicise the Strategy. At this time, a 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.

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Appendix A Environmental Baseline Review

A.1 Introduction

A.1.1 This appendix supports Section 3 of the Environmental Report by providing a review of current environmental and relevant socio-economic conditions within the area likely to be affected by the emerging Draft RTS, in particular (but not exclusively) the SPT regional administrative area. In doing so, this review identifies relevant aspects and characteristics of the environment, including those likely to be significantly affected by interventions in the RTS. This includes:

- Identifying 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
- Identifying relevant socio-economic trends and baseline conditions, again focusing on matters likely to be significantly affected by the outcome of the emerging RTS
- Identifying key environmental and socio-economic characteristics, baseline conditions and issues to be addressed within the RTS and considered within this SEA.

A.1.2 Table A.1 identifies sites designated at international, national or local level for reasons of biodiversity conservation, geological importance, heritage or landscape value which may have the potential to be affected by implementation of proposals from the emerging RTS. Table A.2 presents a characterisation of the environmental baseline position and identifies the relevance of existing issues and problems to the emerging RTS and this SEA.

A.1.3 Both tables present information relevant to the SPT region and provide a context for the environmental baseline and issues underpinning the environmental assessment.

Table A.1: Designated Sites of Relevance to the Emerging RTS

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
Biodiversity			
International/ European			
The SPT region hosts 10 SPAs: ▪ Glen Etive and Glen Fyne ▪ Loch Lomond ▪ Ailsa Craig ▪ Inner Clyde ▪ Black Cart ▪ Renfrewshire Heights ▪ Arran Moors ▪ Glen App and Galloway Moors ▪ Muirkirk and North Lowther Uplands ▪ Slamannan Plateau	Special Protection Area (SPA)	The identified SPAs have been designated as they support rare and vulnerable birds (as listed on Annex I of Directive 2009/147/EC on the conservation of wild birds – 'the Birds Directive') and for regularly occurring migratory species.	The SPAs identified are typically located in upland and remote rural locations distant from most of the major transport corridors in the SPT region. The Muirkirk and North Lowther Uplands situated on the border between East Ayrshire and South Lanarkshire is the largest SPA in the area. The other large sites include the Arran Moors on the island of Arran and Renfrewshire Heights in the Clyde Muirshiel Regional Park. The Inner Clyde designation is located in the north west of the region. The nearby Black Cart Water site is north of Glasgow Airport and may also represent a constraint. The other sites including Loch Lomond, Slamannan Plateau, Glen App and Galloway Moors, Ailsa Craig and Glen Etive and Glen Fyne are all situated on the border of the SPT area and therefore are unlikely to be a major constraint.
The SPT region area hosts 18 SACs: ▪ Craigengar ▪ Cranley Moss ▪ Dykeneuk Moss ▪ Loch Lomond Woods ▪ Clyde Valley Woods ▪ Lendalfoot Hills Complex ▪ Merrick Kells ▪ West Fannyside Moss ▪ Airds Moss	Special Area of Conservation (SAC)	The identified SACs have been designated owing to their significant contribution in conserving the 189 habitat types and 788 species identified in Annexes I and II of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ('the Habitats Directive').	In South Lanarkshire, and along the M74, there are a cluster of SACs including the Clyde Valley Woods, Coalburn Moss and Red Moss. None of the sites are of significant scale. The Airds Moss SAC, near Cumnock, is the largest single SAC in the region but is unlikely to be a key constraint for the RTS due to its remote location.

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
▪ Coalburn Moss ▪ Cockinhead Moss ▪ Bankhead Moss, Beith ▪ Black Loch Moss ▪ Braehead Moss ▪ North Shotts Moss ▪ Red Moss ▪ Endrick Water ▪ Waukenwae Moss			The Loch Lomond Woods site is on the border of the region and is unlikely to represent a significant constraint for the RTS.
Two of the SPAs within the SPT region are also designated as Ramsar Sites: ▪ Inner Clyde ▪ Loch Lomond	Ramsar Site	Ramsar Sites are wetlands that are considered to be of international importance under the Ramsar Convention.	The Inner Clyde designation stretches from Clydebank to Colgrain on the north bank, and from Erskine to Port Glasgow in the south. Loch Lomond, is situated on the edge of the SPT region but is still considered a constraint relevant to Argyll / West Dunbartonshire.
National			
The SPT region area includes 190 SSSIs designated for reasons of biodiversity conservation or important ecological features: ▪ Whinnerston ▪ Southannan Sands ▪ Portencross Woods ▪ Auchenreoch Glen ▪ Longriggend Moss ▪ Avondale ▪ Millburn ▪ Miller's Wood ▪ Milton-Lockhart Wood ▪ Merrick Kells ▪ Endrick Mouth and Islands ▪ Nethan Gorge ▪ North Bellstane Plantation ▪ Ness Glen	Site of Special Scientific Interest (SSSI)	The identified SSSIs have been designated owing to the presence of nationally important or rare habitat types and the species they support.	There are several SSSIs along the west coast, especially in South Ayrshire, however, these are unlikely to be a key constraint for most interventions likely from the RTS. A significant proportion of the island of Arran is designated as SSSI. This must be taken into consideration with regards to any island specific transport proposals in the Strategy. There are several sites situated on the SPT region border between East Ayrshire and South Lanarkshire. While they are significant in scale, they are unlikely to be key constraints for the RTS.

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
▪ Balglass Corries ▪ Ballantrae Shingle Beach ▪ Possil Marsh ▪ Ballochmartin Bay ▪ Pinbain Burn to Cairn Hill ▪ Pollochro Woods ▪ River Ayr Gorge ▪ Ross Park ▪ Ross Park - Lochshore Woodland ▪ South Coast of Arran ▪ Sculliongour Limestone Quarry ▪ Shiel Dod ▪ Shovelboard ▪ Shielhill Glen ▪ Skelmorlie Glen ▪ South Braes ▪ Barlosh Moss ▪ Barmufflock Dam ▪ Troon Golf Links and Foreshore ▪ Tinto Hills ▪ Red Moss ▪ Hassockrigg and North Shotts Mosses ▪ Townhead Burn ▪ Slamannan Plateau ▪ Turnberry Dunes ▪ West Loch Lomondside Woodlands ▪ Western Gailes ▪ Beinn an Lochain ▪ Woodend Loch ▪ Dykeneuk Moss ▪ Waukenwae Moss ▪ Ailsa Craig ▪ Loch Libo ▪ Ben Vorlich ▪ Benlister Glen ▪ Glen App and Galloway Moors ▪ North Lowther Uplands ▪ Bennane Head Grasslands			The Inner Clyde designation stretches from Clydebank to Colgrain on the north bank, and from Erskine to Port Glasgow in the south. There are also several sites along the SPT region border at Local Lomond, but these are unlikely to be key constraints. There are some smaller designations in South Lanarkshire that may be an issue for the SEA given their proximity to the transport network. There are also several sites along the west coast in North Ayrshire, Inverclyde and Renfrewshire that may form a constraint, including the large scale Renfrewshire Heights.

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
▪ Black Cart ▪ Blantyre Muir ▪ Bankhead Moss, Beith ▪ Black Loch Moss ▪ Auchalton ▪ Bishop Loch ▪ Loch Doon ▪ Lang Craigs ▪ Littleton and Balhamie Hills ▪ Haw Craig - Glenarbuck ▪ Glen Moss ▪ Glen Loin ▪ Lady Bell's Moss ▪ Knocknairs Hill ▪ Ashgrove Loch ▪ Arran Northern Mountains ▪ Knockdolian Hill ▪ Knockdaw Hill ▪ Inchtavannach and Inchconnachan ▪ Inchmurrin ▪ Inchmoan ▪ Inchlonaig ▪ Renfrewshire Heights ▪ West Fannyside Moss ▪ Kames Bay ▪ Jock's Gill Wood ▪ Feoch Meadows ▪ Ard Bheinn ▪ Falls of Clyde ▪ Gleann Dubh ▪ Hamilton Low Parks ▪ Hamilton High Parks ▪ Dalmellington Moss ▪ Dumbarton Muir ▪ Dullatur Marsh ▪ Gills Burn and Mare Gill ▪ Geal and Dubh Lochs ▪ Garrion Gill			

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
▪ Dargavel Burn ▪ Fiddler Gill ▪ Caldarvan Loch ▪ Cleghorn Glen ▪ Clauchlands Point - Corrygills ▪ Mugdock Wood ▪ Blairbeich Bog ▪ Dundonald Wood ▪ Dolphinton - West Linton Fens and Grassland ▪ Inner Clyde ▪ Craigengar ▪ Craigallian Marshes ▪ Craig Wood ▪ Cranley Moss ▪ Cartland Craigs ▪ Cart and Kittoch Valleys ▪ Castle Semple and Barr Lochs ▪ Cockinhead Moss ▪ Cobbinshaw Reservoir ▪ Cobbinshaw Moss ▪ Coalburn Moss ▪ Cadder Wilderness ▪ Carnwath Moss ▪ Aldons Hill ▪ Upper Nethan Valley Woods ▪ Martnaham Loch and Wood ▪ Maidens to Doonfoot ▪ Bogton Loch ▪ Bogside Flats ▪ Brother and Little Lochs ▪ Arran Moors ▪ Braehead Moss ▪ Boturich Woodlands ▪ Bothwell Castle Grounds ▪ Blood Moss and Slot Burn ▪ Cander Moss ▪ Muirkirk Uplands			

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
▪ Endrick Water ▪ Formakin			
The SPT region hosts 2 NNRs: ▪ Clyde Valley Woods ▪ Loch Lomond	National Nature Reserve (NNR)	NNRs are designated to further the conservation and study of wildlife, habitats or geological features of special interest.	Loch Lomond is on the boundary of the SPT region and is unlikely to be a key constraint for the RTS and SEA. The Clyde Valley Woods are not significant in scale but this site may be relevant to consideration of transport movements in South Lanarkshire.
Geological			
National			
The SPT region hosts approximately 190 SSSIs designated for reasons of geological importance: ▪ Auchensail Quarry ▪ Lugar Sill ▪ Lynn Spout ▪ Millenderdale ▪ Merrick Kells ▪ Mollinsburn Road Cutting ▪ Endrick Mouth and Islands ▪ Nith Bridge ▪ Balglass Corries ▪ North Newton Shore ▪ Rhu Point ▪ Pinbain Burn to Cairn Hill ▪ Raven Gill ▪ Penwhapple Burn ▪ Portnellan - Ross Priory - Claddochside ▪ River Clyde Meanders ▪ Ree Burn and Glenbuck Loch ▪ Roughneuk Quarry ▪ Rouken Glen ▪ South Coast of Arran ▪ Sgavoch	Site of Special Scientific Interest (SSSI)	Geological SSSIs are designated owing to the presence of nationally important or rare geological features.	There are several SSSIs along the west coast, especially in South Ayrshire, however, these are unlikely to be key constraint for the RTS. The north-end and coasts of the island of Arran have SSSIs which will have to be taken into consideration for any island specific transport proposals. There are several large-scale SSSIs situated on the border between East Ayrshire and South Lanarkshire. While they are significant in scale, they are unlikely to form a key constraint for the RTS and SEA. While there are several other designations across the region, they are not key constraints given their scale and location but relevant sites will be considered with implementation of the Strategy.

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
▪ Shiel Burn ▪ South Threave ▪ Stairhill ▪ Tinto Hills ▪ Turnberry Lighthouse to Port Murray ▪ Trearne Quarry ▪ Waulkmill Glen ▪ Ailsa Craig ▪ Benbeoch ▪ North Lowther Uplands ▪ Blair Farm ▪ Ardrossan to Saltcoats Coast ▪ Afton Lodge ▪ Birk Knowes ▪ Birkenhead Burn ▪ Loch Humphrey Burn ▪ Laggan Burn ▪ Kennox Water ▪ Laggan ▪ Knockormal ▪ Leadhills - Wanlockhead ▪ Arran Northern Mountains ▪ Largs Coast Section ▪ Knockgardner ▪ Howford Bridge ▪ Ard Bheinn ▪ Falls of Clyde ▪ Glenarbuck ▪ Girvan to Ballantrae Coast Section ▪ Garpel Water ▪ Garabal Hill ▪ Dumbarton Rock ▪ Drumadoon - Tormore ▪ Geilston Burn ▪ Fountainhead ▪ Fossil Grove ▪ Calder Glen ▪ Clauchlands Point - Corrygills			

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
▪ Dippin Head ▪ Dundonald Burn ▪ Dunaskin Glen ▪ Dunside ▪ Dunrod Hill ▪ Craighead Quarry ▪ Craighead Hill Quarry ▪ Corrie Foreshore and Limestone Mines ▪ Clochodrick Stone ▪ Byne Hill ▪ Corrie Burn ▪ Manse Burn ▪ Maidens to Doonfoot ▪ Boylestone Quarry ▪ Blood Moss and Slot Burn ▪ Muirkirk Uplands ▪ Carstairs Kames ▪ Endrick Water ▪ Greenock Mains			
Cultural Heritage			
International			
The SPT region hosts two UNESCO World Heritage Sites: the Antonine Wall and New Lanark.	World Heritage Sites	The Antonine Wall is the most substantial and important Roman monument in Scotland. In July 2008 the international cultural and archaeological importance of the Antonine Wall was recognised when the World Heritage Committee of UNESCO inscribed the site as Scotland's fifth World Heritage Site (WHS). The Antonine Wall became an extension of the trans-national Frontiers of the Roman Empire World Heritage Site which includes Hadrian's Wall in England. UNESCO considers the creation of New Lanark to be "a milestone in social and industrial history. The moral and social beliefs that	The Antonine Wall stretches from Bo'ness in the east to Old Kirkpatrick in the west and passes through the northern part of the SPT region. It may represent a constraint for implementation of transport measures in East Dunbartonshire and North Lanarkshire. The New Lanark site is situated in South Lanarkshire but is unlikely to be a key constraint for the RTS and SEA.

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
		underlay Robert Owen's work there provided the basis for seminal material and intangible developments that have had lasting influences on human society over the past two hundred years".	
National			
The SPT region area hosts approximately 600 Scheduled Monuments and approximately 12,400 Listed Buildings. There are also 46 Inventory Gardens and Designed Landscapes and 5 Inventory Battlefields in the study area.	Scheduled Monuments (SM)	A wide range of historic structures within the SPT region area have been designated as either Scheduled Monuments or Listed Buildings, including hill forts, chapels, standing stones, bridges, castles and cairns. Scheduled Monuments are designated owing to their historical significance whilst buildings are listed owing to their features of architectural importance.	The large number and distribution of Scheduled Monuments and Listed Buildings indicates the importance of cultural heritage in the SPT region. In taking forward the RTS the SEA has considered the potential for transport interventions in each key Strategy corridor to affect proximate designations. Whilst there are fewer Inventory standard GDLs and Battlefields, the proximity of these important sites would have to be considered where relevant in the implementation of the Strategy.
The SPT region area hosts 171 Conservation Areas, split as follows by local authority: ▪ East Ayrshire: 26 ▪ North Ayrshire: 13 ▪ South Ayrshire: 23 ▪ Inverclyde: 8 ▪ Glasgow City: 25 ▪ East Dunbartonshire: 14 ▪ Renfrewshire: 8 ▪ East Renfrewshire: 5 ▪ West Dunbartonshire: 5 ▪ Argyll and Bute: 7 ▪ North Lanarkshire: 7 ▪ South Lanarkshire: 30	Conservation Areas	The designated Conservation Areas are often centred upon clusters of Listed Buildings or other structures of historical and architectural importance and are typically designated within villages, towns and cities.	There is a concentration of large scale Conservation Areas within Glasgow City that are key issues for the SEA. North of Glasgow, into East Dunbartonshire, also contains a number of designated sites of scale. The proximity of designated areas to potential future RTS transport interventions would have to be taken into account where relevant in the implementation of the Strategy.
Regional / Local			
Locally designated assets and non-designated historic environment assets	Non-designated	A range of sites which are important at a local level and/or which are not designated such as	There are many thousands of such sites. At the level of the RTS and the necessarily strategic consideration of potential effects from its policies it

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
		those identified on local historic environment records.	has not been appropriate to collate this data. Future delivery of the RTS which may involve more specific transport proposals would take account of potential effects of interventions on the range of sites and (as appropriate) their settings.
Landscape			
National			
Loch Lomond and the Trossachs	National Park	Loch Lomond and The Trossachs National Park was the first of the two national parks established by the Scottish Parliament in 2002 and is the fourth largest in the British Isles, with a total area of 1,865 km^2 (720 sq mi) and a boundary of some 350 km (220 mi) in length. Section 1 of the National Parks (Scotland) Act 2000 as amended identifies the four aims of Scotland's National Parks including Loch Lomond and the Trossachs National Park (LLTNP), namely: *"(a) to conserve and enhance the natural and cultural heritage of the area;* *(b) to promote sustainable use of the natural resources of the area;* *(c) to promote understanding and enjoyment (including enjoyment in the form of recreation) of the special qualities of the area by the public; and,* *(d) to promote sustainable economic and social development of the area's communities".*	The Loch Lomond and the Trossachs National Park overlaps with the north west part of the SPT region in parts of Argyll & Bute and West Dunbartonshire. The designation adds to the sensitivity of the natural and cultural environment of this area.
North Arran NSA Loch Lomond NSA	National Scenic Areas	NSAs are nationally important for their scenic quality. There are 40 NSAs mainly in the more remote and mountainous areas of Scotland all of which were originally identified in 1978 by the Countryside Commission for Scotland (CCS) in its publication 'Scotland's Scenic Heritage'.	The North Arran National Scenic Area is unlikely to be a key constraint for the SEA. Loch Lomond NSA is located in the north west of the region. The special landscape qualities of these areas should be considered as part of the implementation of interventions through delivery of the Strategy.

Relevant Sites in the SPT Region	Designation Type	Qualifying Features / Interests	Key Issues for SEA
		They represent the best areas of the type of scenic beauty popularly associated with Scotland and for which it is renowned. In 2010 the Scottish Ministers issued directions to local authorities under provisions in section 263A of the Town and Country Planning (Scotland) Act 1997 (inserted by section 50 of the Planning etc. (Scotland) Act 2006) to designate the current suite of 40 NSAs, thereby affording statutory protection to their special qualities when making planning decisions.	

Table A.2: Review of Relevant Environmental Baseline Information, Issues and Problems

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
Biodiversity, Fauna and Flora Relevant SEA Objective: 7. Biodiversity, Geodiversity and Soils *Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure*	**Table A.1** above identifies the qualifying features (habitats and species) of relevant European sites (SPAs, SACs and Ramsar sites) and sites designated at the national level and benefiting from statutory protection within the SPT region for specific reasons of ecological important or biodiversity conservation. Other key habitats (including areas of ancient woodland), locations known to support important populations of protected species, and locally designated sites have been incorporated where relevant into the corridor specific baselines presented in Chapter 3 of the ER.	There is a need to safeguard these qualifying features from adverse effects, protect the integrity of designated sites and work towards the achievement of defined conservation objectives.	The key environmental constraints regarding biodiversity, fauna and flora from the network of designated sites have been incorporated with the environmental baseline. New transport infrastructure proposals could adversely impact ecology and biodiversity through direct and indirect effects due to permanent loss of habitat, disturbance and changes in transport emissions and pollution discharges to the water environment. Changes in transport operations and particularly road traffic may affect emissions in key corridors with indirect effects in adjacent sensitive habitats and may change disturbance levels for noise sensitive species.
Population (including relevant socio-economic conditions) Relevant SEA Objective: 4. Productivity, Competitiveness and Innovation *Deliver an integrated and efficient transport system to increase economic prosperity,*	**Governance and Statistical Geographical Units**: The SPT Region includes 12 local authorities within its strategic regional boundary, each with local planning and transport control; Argyll and Bute (Helensburgh and Lomond), Inverclyde, Renfrewshire, East Renfrewshire, North Ayrshire, South Ayrshire, East Ayrshire, South Lanarkshire, North Ayrshire, West Dunbartonshire, East Dunbartonshire and Glasgow City. Additionally, part of the SPT Region lies within the Loch Lomond and the Trossachs National Park, which is subject to separate planning control. Urban areas are located throughout the SPT region, with the principle settlements being; Glasgow City, Paisley, Greenock, Helensburgh, Irvine, Hamilton, Motherwell, Troon and Ayr. The	. It is important to note the geographical and therefore governance and statistical similarities between the SPT region and Clydeplan area – although Clydeplan does not include Ayrshire or Argyll and Bute. There is a need to consider Indicative Regional Spatial Strategies and LDP's and their role	The SEA has taken into account the different local authority areas across the SPT region in particular through the consideration of prevailing demographic issues. The baseline data sets highlight a range of issues in the SPT region for population including changes in demographics, educational and social factors and their clear linkages with socio-economic conditions and employment opportunity.

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
support the growth of key economic sectors and deliver increased and more inclusive employment 2. Accessibility *Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities*	key strategic economic development and investment priorities, taken from indicative Regional Spatial Strategies, are widespread across the region, categorised by sites in the Greater Glasgow Region, Ayrshire and Arran, Argyll and Bute, and Loch Lomond and Trossachs National Park. In addition to this, there is the Clyde Mission-Clyde Corridor and Helensburgh & Lomond Growth Area. The Clydeplan SDP (2017) also identifies a network of strategic centres for the Clydeplan area.	in terms of economic development and investment priorities.	The role of transport in supporting the population and in particular reducing socio-economic disadvantage is critical and development of future transport interventions will be assessed with respect to key data presented in this table during the implementation of the Strategy.
	Demographics: The latest available mid-year annual population estimates from National Records of Scotland (2020)[11] indicate that the SPT region has a resident population of 2,240,905 people, representing 41% of Scotland's total population. Within the region there are multiple densely populated urban areas, most significantly Glasgow with an estimated population of 635,640 within the City Council area and 1,847,200[12] within the wider metropolitan area. The Clydeplan Strategic Development Plan (SDP), which covers a large part of the SPT region excluding Ayrshire and Argyll and Bute, identifies a network of strategic centres containing high population densities and associated economic activity. Other settlements outwith the Clydeplan SDP area but within the SPT region, including Ayr and Kilmarnock, also have relatively high population densities and resident populations exceeding 45,000. In terms of overall population trends and projections, data from the National Records of Scotland indicates that the population of the SPT region increased by 2.5% between 2011 and 2020, although at a slightly slower rate of growth than for Scotland as a	Whilst the overall population of the SPT region is projected to increase, the rate of growth is expected to be slower than across Scotland overall and several constituent local authorities are expected to experience significant population declines. Depopulation may result in the reduction or removal of services, economic opportunities and amenities in affected areas, with consequential implications for public transport demand, cost effectiveness and provision. To deliver sustainable and inclusive economic growth within the SPT region there is a need to arrest projected depopulation in certain areas and to support more geographically widespread population growth.	

[11] National Records of Scotland, Mid-202 Small Area Population Estimates for 2011 Data Zoes

[12] The Glasgow metropolitan area is designated as the Glasgow City Region, comprising the local authorities East Dunbartonshire, East Renfrewshire, Glasgow City, Inverclyde, North Lanarkshire, Renfrewshire, South Lanarkshire, and West Dunbartonshire.

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	whole (3.1%). This disparity is predicted to accelerate: by 2033 the population of the SPT region is projected to grow 0.7%, compared to 3.4% growth nationwide and a 5.2% growth in areas of Scotland outside of the SPT region[13]. This is due to several of Scotland's fastest growing cities, including Inverness, Perth, and Edinburgh, all being located outwith the region. At the local authority level, several local authorities within the SPT region are projected to experience a decrease in population over the next fifteen years. The largest projected declines are in Inverclyde (-7.7%); North Ayrshire (-4.9%); and West Dunbartonshire (-4.1%), whereas in contrast the population of East Renfrewshire is projected to increase by 7.7% by 2033[14]. As with Scotland overall, the population of the SPT region is expected to experience significant ageing. The resident population above the age of 65 within the region is projected to grow by 32.6% over the next 15 years, consistent with the nationwide increase of 32.3% over the same period 15. In tandem, both the SPT region and Scotland as a whole are expected to experience a decline in the working age (16-64) population, although based on current projections the working age population of the SPT region will decline at a rate twice as fast as the Scottish average (7% and 3.5% respectively).	The SPT region is expected to experience significant population ageing, and at a faster rate than for Scotland overall. The changing age structure cannot easily be altered (without substantial in-migration of young working age people) and will have wide-ranging implications for public policy, demand and provision of public services, labour market characteristics and tax revenues. Population ageing will also have substantial transport impacts due to changes in connectivity and accessibility needs	
	Housing: Both the approved Clydeplan SDP (2017) and adopted Local Development Plans (LDPs) for each constituent local authority set housing land requirements (HLRs) (all tenure, private and affordable) in accordance with the Scottish Planning Policy (2014). New HLRs are also in development for emerging LDPs across the SPT region. Each HLR is evidence based and	Housing need will continue to increase in the SPT region owing to overall population growth and changes in household formation. Additional housing need and provision within the SPT area may	

[13] Experian Population Projections, 2018.

[14] Regional Planning Service, Experian, 2018.

[15] Regional Planning Service, Experian, 2018.

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	informed by a Housing Need and Demand Assessment (HNDAs) to ensure that a sufficient level of housing on effective sites is allocated within LDPs to meet identified needs.	put increased pressure upon local and regional transport infrastructure. Improvements should be made to transport infrastructure where necessary to ensure that new housing and/or population increases does not result in additional congestion or other disruption.	
	Educational Infrastructure and Attainment: Headline figures indicate that secondary education in the SPT region performs at a rate consistent with the national average. The percentage of school leavers with a positive destination (i.e. into employment, training, or further education) in the SPT region in 2019/20 was slightly higher than the national average (94.2% compared to 93.3% respectively)[16]. Qualification attainment by school leavers in the SPT region is equally reflective of national trends. However, the working age population of the SPT region holds proportionally fewer qualifications than the Scottish average. In the areas covered by the SPT, an average of 8.9% of the working age population hold no qualifications, compared to 7.7% of the total Scottish working age population. Primary and secondary schools are located throughout the SPT region to meet identified population needs where they occur. This means that the SPT region has schools within both urban and rural locations and of varying sizes and characteristics.	Transport provision for students who reside outwith specified distances from primary and secondary schools is the responsibility of the relevant local authority. To be successful at attracting and retaining staff, students and research funding, further and higher education institutions need to be easily accessible and located close to highly skilled labour supplies. Ease of access to healthcare, higher education institutions and community infrastructure varies throughout the SPT region due to its urban and rural settings.	

[16] Attainment and Leavers Destinations Data 2018

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	Within the SPT region there are five higher education institutions; University of Glasgow, University of Strathclyde, Glasgow Caledonian University, University of the West of Scotland and the Royal Conservatoire of Scotland. The SPT region also hosts multiple further education institutions and campuses, including Ayrshire College, City of Glasgow College, Glasgow Clyde College, Glasgow Kelvin College, Glasgow School of Art, New College Lanarkshire, Scotland's Rural College (SRUC), South Lanarkshire College and West College Scotland.		
	Community Infrastructure: Within the SPT region, public services and community facilities are available throughout each of the local authorities. The SPT region, as previously noted, encompasses urban and rural areas which require suitable transport networks to accommodate the local population. Healthcare provision is widespread throughout the SPT region with several hospitals and doctor's surgeries within both urban and rural areas of the region.	Whilst the SPT region has a qualified labour force and a relatively balanced economic base, there are some areas with particularly high unemployment and other areas with a spatial mismatch between the available local labour force and available employment.	
	Employment and Economic Activity: Across the SPT region, 71.9% of the working age (16-64) population are in employment.[17] This is 1.2% below the figure for Scotland as a whole. The rate of those over 16 who are self-employed in the SPT region (6.6%) is also less than the national rate (7.5%). This suggests a higher level of unemployment in the region, which is reinforced by the higher benefit claimant count rate[18] (4.4%) than the national average (3.9%)[19]. Over three-quarters (75.5%) of the working age population of the SPT region		

[17] Annual Population Survey, 2021.

[18] Benefit claimant counts are often used as a proxy for unemployment rates. They have a tendency to underestimate the true rate due to non-claimants.

[19] Office of National Statistics, Claimant Count, December 2021

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	are economically active[20]. Consistent with employment trends, this rate is below the national average (76.9%). The Clydeplan SDP (2017) identifies 22 strategic economic investment locations (SEILS). The SEILS have been selected as priority locations to promote the Scottish Government's key economic sectors and Scottish Enterprise's locational priorities. Given its scale and importance to the city region, Glasgow City Centre is the primary SEIL in the network in relation to its dominant roles and functions. Indicative Regional Spatial Strategies (2020) were developed to inform the National Planning Framework 4. These identify growth areas in each of the following regions within the SPT area: Argyll & Bute, Ayrshire & Arran, Clydeplan/Glasgow City Region and Loch Lomond & Trossachs NPA. The iRSS's set strategic outcomes, with targeted focus on carbon/climate change, people, work and place.		
	Inequality, Social Exclusion and Deprivation: The Scottish Index of Multiple Deprivation (SIMD) provides an overview of deprivation in Scotland. All of the local authority areas have deciles ranked within the most deprived 5%. Glasgow City has the largest number of deciles ranked as the most deprived 5%. 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. As a whole, the SPT region is disproportionately deprived, with 31%[21] of the region's population living within Scotland's 20% most deprived areas. However, there are considerable differences	The SPT region is disproportionately deprived and, whilst there are geographical variations within the region, a large component of the resident population lives within Scotland's most deprived areas. Furthermore, the rate of child poverty within the SPT region is higher than for Scotland as whole, with total income poverty also likely to be higher. To deliver sustainable and inclusive economic growth within the SPT region there is a need to reduce child and total poverty	

[20] Annual Population Survey, 2021.

[21] Scottish Index of Multiple Deprivation 2020

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	between the level of multiple deprivation found within local authorities in the SPT region. Data is not published on poverty at a subnational level on a regular basis. However, the End Child Poverty Campaign publishes annual estimates of the proportion of children living in poverty in individual local authorities. Based on this data, it is estimated that 24% of children within the SPT region live in poverty[22]. In comparison to surrounding local authorities, Glasgow has a higher proportion of children living in poverty, 32% compared to 16% of children in East Dunbartonshire and in East Renfrewshire respectively. As the child poverty rate for the SPT region is higher than the national rate of 23%, it can be assumed that the total poverty rate across the total resident population is also higher within the SPT region than across Scotland as a whole.	levels, enhance economic prosperity for all and to tackle all aspects of multiple deprivation.	
Human Health Relevant SEA Objective: 1. Health *Improve the health of the resident and workplace population, including with*	**Life expectancy:** Life expectancy at birth for the SPT region is 79 years old.[23] This is equivalent to the national life expectancy. Within the SPT region, life expectancy for both males and females was lowest in Glasgow City (73 years and 78 years respectively). Males in East Dunbartonshire can expect to live for 80.16 years, 7 years longer than in Glasgow City. Females in East Dunbartonshire can expect to live for 84 years, 6years longer than in West Dunbartonshire [24].	There are significant gaps in life expectancy between the most and least deprived deciles within the SPT region and between the region and Scotland as a whole. Measures should be put in place to ensure those living in more deprived areas have access to affordable public transport options.	The baseline data on human health indicate significant variations in health outcomes across the SPT region. Transport improvements can contribute to objectives to improve health through enhancing access to employment, services and specifically to health care facilities. .
	Census Health Indicators: Of the local authorities in the SPT area, the highest proportion of residents reported themselves to	Overall, there is a need to improve all aspects of the health and	

[22] End Child Poverty, 2020

[23] National Records of Scotland, Life Expectancy in Scotland, 2018-19: https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/life-expectancy/life-expectancy-in-scotland/2018-2020

[24] National Records of Scotland, Life Expectancy in Scotland, 2018-19: https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/life-expectancy/life-expectancy-in-scotland/2018-2020

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
respect to physical and mental health and wellbeing	be in very good health resided in East Renfrewshire (58.8%) and East Dunbartonshire (56.6%)[25] (2011 Census). Conversely, the highest proportion of residents who reported themselves to be in bad health were in Glasgow City (6.4%) and West Dunbartonshire (6.1%).	wellbeing of the resident population of the SPT area including physical heath, mental health and social wellbeing.	
	Health Indicators: Self-assessed general health is also slightly below the national level, with 69.7% of SPT residents reporting "good" or "very good" health, compared to 72% across Scotland[26]. The SPT region performs poorly relative to the rest of the country in the SIMD Health Domain. Over a third (33.5%)[27] of the SPT region is placed within the nationwide most deprived quintile. Of this quintile, the SPT region includes 68.9% of the affected data zones. Despite accounting for 41.2% 2867/69of all data zones measured by the SIMD, the SPT region accounts for only 25.4% of the least health deprived quintile of data zones. At the national level, 65% of adults aged 16 and over were overweight in 2019 including 28% who were obese[28]. In 2018, 19% of adults (Scotland) reported being smokers; down from 28% in 2003[29].		
	Health Infrastructure: The NHS Scotland Health Boards which serve the SPT region are Ayrshire & Arran, Greater Glasgow &	Adequate health infrastructure must be located in accessible locations to meet the needs of existing and future populations. A range of high quality physical and mental health facilities are required to address the	

[25] 2011 Census http://www.scotlandscensus.gov.uk/ods-web/standard-outputs.html

[26] Scottish Health Survey Dashboard, 2016-19

[27] 962 of the 2867 Data Zones within the SPT region were in the most deprived 20% using SIMD 2020.

[28] Obesity Indicators, Scottish Government, Obesity in Scotland: https://www.obesityactionscotland.org/media/1457/prevalence_causes__impact_f-2904.pdf

[29] The Scottish Health Survey 2018: https://www.gov.scot/publications/scottish-health-survey-2018-volume-1-main-report/pages/31/

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	Clyde, Lanarkshire and Highland[30].The Helensburgh and Lomond area covered by the NHS Highland Health board shall be part of a future assessment. Hospital provision within each NHS Health Board area are as follows; ▪ Ayrshire & Arran- 16 ▪ Greater Glasgow & Clyde- 45 ▪ Lanarkshire– 20 At the national level, the latest available data indicates that there are approximately 8 GPs per 10,000 patients with a WTE (whole time equivalent) of 6 GPs per 10,000. For health boards within the SPT area this varies as follows[31]; ▪ Ayrshire & Arran – WTE per 10,000 of 6.3 GPs ▪ Greater Glasgow & Clyde – WTE per 10,000 of 5.9 GPs ▪ Lanarkshire – WTE per 10,000 of 4.9 GPs	changing health needs of the population with associated improvements to infrastructure.	
Soil Relevant SEA Objective: 7. Biodiversity, Geodiversity and Soils *Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites,*	**Geological and Ground Conditions:** The SPT region is made up of a mix of urban, peri-urban and rural landscapes therefore incorporating a variety of geological types resulting in varying ground conditions[32]. Soil types within the SPT region are mainly mineral gley, peat, mineral podzol or brown soil and vary between local geographies. The Glasgow City area, alongside suburbs and other regional urban settlements, is predominantly impermeable urban surfaces with sparse green space. **Agricultural Land Quality:**	New transport infrastructure must be appropriately sited and designed to reflect the geological and soil characteristics and agricultural land classifications of the SPT region. The protection of peat soils and habitats which are an important carbon store is a high priority.	Soils is a non-renewable resource of fundamental importance in supporting a range of habitats, economic activity and ecosystems services. Undeveloped soils and particularly areas with peat content should be protected from development. The SEA has considered the potential for proposed transport to affect soils through permanent

[30] NHS Health Boards Map https://data.gov.uk/data/map-preview?e=-0.71&n=60.87&s=54.63&url=http%3A%2F%2Fsedsh127.sedsh.gov.uk%2Farcgis%2Fservices%2FScotGov%2FHumanHealthSafety%2FMapServer%2FWMSServer%3F&w=-8.8

[31] ISD Scotland Primary Care Out of Hours Workforce Survey 2019 (publichealthscotland.scot)

[32] British Geological Survey Interactive Map. Available online at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
species, soil resources and habitats and by protecting green infrastructure	Within the SPT region agricultural land quality is predominantly classified within categories 4 to 5 (land capable of producing a narrow range of crops to land capable of use as improved grassland). Some land, particularly in lowland river corridor areas, is however designated between categories 2 to 3 (land capable of producing a wide range of crops to land capable of producing consistently high yields of crops)[33].		changes in land take for new infrastructure and by considering (where relevant) indirect impacts from emissions and the potential for pollution and run-off of water from new development areas.
Water Relevant SEA Objective: 8. 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*	**Waterbodies**: Main waterbodies within the SPT region include; Loch Lomond, River Clyde, Forth & Clyde Canal, multiple minor lochs, reservoirs, rivers and burns. The principal watercourse in the region is the River Clyde which runs through much of the area and forms a large estuarial water in its lower reaches before outfalling to the Firth of Clyde.	Waterbodies across the SPT area vary in quality, ecological value and present condition. Maintenance and improvements to water-based transport networks within the SPT area such as ferry routes and Forth & Clyde Canal shall increase their efficiency.	The water environment of the region provides an important resource underpinning much of the environmental quality of the area and associated ecosystems services. Flood risk is an increasingly important issue for development management and climate change is projected to significantly change future conditions. The SEA has considered the potential for transport policies to impact on water resources and quality as a result of new development and indirect issues such as pollution. The influence of flood risk has also been strategically considered in assessing the effects of future climate change on new proposals for transport infrastructure.
	Flood risks: SEPA Flood Risk Mapping indicates that the extent of the western coastline and mouth of the River Clyde of the SPT region is at high to medium risk of coastal flooding. Rivers, canals and other minor lochs within the SPT region have varied flood risk from low to high. In particular, the River Clyde and Loch Lomond are at a high risk of river flooding.	Flood risk levels are varied within the SPT boundary due to the combined area of the 12 local authorities. New development and in particular infrastructure improvements should ensure flood risk levels are not increased across the SPT area.	
Air Quality and Noise Relevant SEA Objective:	**Air Quality Management Areas (AQMAs) and Poor Air Quality:** There are 15 AQMAs designated in the SPT region for transport-related air pollutants: Bearsden, Bishopbriggs, Byres Road/Dumbarton Road, Chapelhall, Coatbridge, Glasgow City	Continued monitoring of air quality within the SPT region will be required, in particular the main arterial roads in the centre of Glasgow. Additional traffic on	The presence of AQMAs in a number of the region's town centres / road links indicates ongoing problems for air pollutant concentrations in some areas as a

[33] Scotland's Soils. Available online at: http://map.environment.gov.scot/Soil_maps/?layer=1

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5. Air Quality and Amenity *Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.*	Centre, Johnstone, Lanark, Motherwell, Croy, Paisley Town Centre, Parkhead Cross, Renfrew Town Centre, Rutherglen and Whirlies Roundabout (East Kilbride)	these roads caused by new development should be monitored.	result of transport conditions. Similarly high noise levels and problem areas identified in CNMAs indicate ongoing environmental quality issues primarily from road (and air) transport operations. The SEA has assessed the potential for new transport policies to give rise to changes in environmental quality (local air quality and noise).
	Noise Levels: The Scottish Government has published Strategic Noise Action Plans (SNAP) as directed by the Environmental Noise (Scotland) Regulations 2006. The Glasgow SNAP identified a variety of Candidate Noise Management Areas (CNMAs) throughout Glasgow City, South Lanarkshire, North Lanarkshire and Renfrewshire. Generally, noise has decreased across the Glasgow Agglomerate with localized increases with the completion of the M74 extension in 2011. Within the SPT area, the M77, M74 and M8 have been recorded as exceeding 80dB along multiple points (at roadside). While there is no noise data recorded for Glasgow Prestwick Airport, noise generated by Glasgow Airport ranges from <55dB to >80dB and has been recorded from East Dunbartonshire to Renfrewshire Council areas[34]. Throughout Ayrshire, noise levels are mainly <55dB except road corridors which range from >55dB to >80dB. Generally, Inverclyde and Helensburgh/Lomond rarely exceed 60dB.	Continued monitoring of noise levels will be required. Infrastructure improvements must ensure they comply with relevant environmental noise regulations.	
Climatic Change Relevant SEA Objective:	**Greenhouse Gas Emissions:** Greenhouse Gas (GHG) emissions vary between local authorities across the SPT region, with Glasgow City, having among the highest emissions in the SPT region[35]. Low carbon energy generation varies between local authorities within the SPT region[36]. South Lanarkshire has the highest low carbon energy	Measures must be put in place to continually monitor and mitigate greenhouse gas emissions in the SPT region in relation to increased traffic arising from projected	Transport in the SPT region is a significant contributor to greenhouse gas emissions and a sector where significant reductions have been difficult to achieve. National targets for climate mitigation (including Net

[34] Scotland's Noise https://noise.environment.gov.scot/noisemap/

[35] Department for Business, Energy and Industrial Strategy (2018). Emissions of Carbon Dioxide for Local Authority Areas. Available online at: https://data.gov.uk/dataset/723c243d-2f1a-4d27-8b61-cdb93e5b10ff/emissions-of-carbon-dioxide-for-local-authority-areas

[36] Department for Business, Energy & Industrial Strategy (2017). Regional Renewable Statistics. Available online at: https://www.gov.uk/government/statistics/regional-renewable-statistics

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
6. Climate Change Mitigation *Decarbonise the transport sector and support wider efforts to mitigate climate change* 8. 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*	generation in the SPT region with 1,754,001 MWh. However, this can be improved through further generation of future renewable capacity throughout the SPT region. Transport accounts for 36% of Scotland's greenhouse gas emissions in 2018 with car travel accounting for 39% of total emissions.	population increases and works to transport infrastructure.	Zero by 2045) require concerted action to reduce emissions, and in parallel increasing efforts and investment is needed for climate adaptation of key infrastructure. The SEA has included an assessment of the likely greenhouse gas emissions of transport policies. Climate resilience and adaptation has also been taken into account in the appraisals of policies with respect to SEA Objective 8.
	Climate Change Impacts: The UK Climate Change Risk Assessment (2022) projects that climate change will lead to an increase in the severity and frequency of severe weather, sea level rise, flooding and climate events including higher precipitation events. This could adversely impact on the functioning and performance of transport infrastructure and the overall transport network. Each of the constituent local authorities have their own Climate targets and supplementary action plans. Annual reports, including emissions reports can be found on constituent authority websites. In addition to this, the Clydeplan SDP (2017) recognises the need to address risks associated with the impacts of climate change, in particular by; increasing the resilience of infrastructure networks to sustain and enhance the benefits and services provided; sustaining and enhancing the benefits, goods and services that the natural environment provides; and, increasing the resilience of the existing built environment and ensure that new development is climate resilient. Further key sources of information on climate resilience and adaptation are included in the work of Climate Ready Clyde and the Scottish Government's Climate Change Adaptation Programme (2019-2024)	Predicted impacts from climate change up to 2050 will place significant strain on infrastructure and available resources across the UK, including within the SPT region.	

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	Atmospheric Conditions: As with the rest of the UK, transport provision within the SPT region can be subject to weather related travel issues such as extreme heat and cold making services subject to delay and/or cancellations.	Poor weather conditions causing delays/or cancellations to public transport in addition to service provision issues can contribute to loss of productivity and economic output for the SPT region. Ferry services are particularly vulnerable to weather-related disruption.	
Material Assets Relevant SEA Objective: 3. Material Assets *Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs*	Land Use: The city of Glasgow is positioned at the top of the commercial and retail hierarchy within the SPT region and is the major regional centre. Greater Glasgow is the largest settlement in Scotland with an estimated population of 1,847,200, representing 34% of Scotland's total population. The settlement of Greater Glasgow is distributed across seven local authority areas[37]. The Clydeplan SDP (2017), the iRSSs and LDPs identify a network of strategic centres across the SPT area, whilst other smaller town centres also play an important role as focus points for public services, economic activities, transport and community activity.	There is an ongoing need to regenerate communities within the SPT area which have high levels of multiple deprivation. There is also a need to provide suitable land uses to meet identified needs, including increased housing and employment provision, whilst capitalising on SPTs strengths and protecting sensitive land uses such as agriculture.	The material assets and infrastructure of the SPT is diverse and complex and of substantial importance to the Scottish economy and to underpinning the efficient operation of transport services. Within the scope of an SEA it is not appropriate to consider all of these issues in depth. The SEA Objective 3 focuses on issues of land and resource efficiency including consideration of increasingly important aspects such as adoption of circular economy approaches to materials management and the value chain and to minimising the adverse impacts of resource extraction and processing on the natural environment. It has also considered effects of land take for new transport measures which should, wherever possible, seek to re-use brownfield land.
	Transport infrastructure: *Road Network* Motorways within the SPT region include; M8, M77 and M74. The main arterial roads are the; A77, A71, A78, A737, A76, A725 and A82. These main core roads connect local areas of population and major settlements, adjoining B-road networks and all other minor roads within the SPT region. Of the five local authorities with the highest traffic volumes in Scotland, two were found to be within the SPT area; Glasgow and North Lanarkshire. Journeys delayed by congestion in Scotland	At present, parts of the motorway network in the SPT area experience congestion especially at peak times (M8, M77 and M74). Both Glasgow and North Lanarkshire are among the 5 local authorities which have the highest traffic volumes in Scotland. Improvements to transport infrastructure within these areas has the potential to reduce journey times and increase	

[37] Population Estimates for Settlements and Localities (Mid 2020) https://news.gov.scot/news/population-estimates-for-settlements-and-localities-mid-2016. The Glasgow metropolitan area is designated as the Glasgow City Region, comprising the local authorities East Dunbartonshire, East Renfrewshire, Glasgow City, Inverclyde, North Lanarkshire, Renfrewshire, South Lanarkshire, and West Dunbartonshire.

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	were 12.6% in the period 2017-19 down from 14.3% in 2007[38]. Many of the motorways and arterial roads in the SPT area are subject to congestion at peak times. *Rail Network* There are approximately 189 railway stations serving the SPT area. The five stations with the highest entries/exits for 2019/20 within the SPT area are[39]; Glasgow Central (32,465,202) Glasgow Queen Street (16,685,760) Paisley Gilmour Street (3,903,776) Partick (2,935,104) Charing Cross (Glasgow) (2,149,716) Of the top 5 stations[40] in Scotland, the SPT area includes 3; Glasgow Central, Glasgow Queen Street and Paisley Gilmour Street. In 2020-21, 3.8 million tonnes of freight was lifted in Scotland by rail, 12% less than the previous year. The main railheads in the SPT region are Air BP, Coatbridge, Crowbandsgate, Dalzell, Elderslie, Greenburn, Hillington, Irvine, Mossend Eurocentral, Port of Ayr, Port of Hunterston, Riccarton, Shieldmuir, Uddingston (Traffic Scotland[41]). There are several railway stations throughout the SPT region, with the two main regional stations in Glasgow city being Glasgow Central Station and Glasgow Queen Street Station providing rail networks north and south of the region. Originating from these stations are the several regional railway lines connecting urban	efficiency of the transport network where possible in the SPT area. Improvements to infrastructure in rural areas can promote bring a step-change in public transport connectivity which should be used to catalyse economic growth and improve access to employment and public services within the SPT area. Promotion of active travel initiatives within the SPT area can help to reduce congestion while providing improvements to physical and mental health.	

[38] Scottish Transport Statistics https://www.transport.gov.scot/publication/scottish-transport-statistics-no-39-2020-edition/chapter-5-road-traffic/

[39] ORR http://orr.gov.uk/statistics/published-stats/station-usage-estimates

[40] Top 5 stations in Scotland http://orr.gov.uk/__data/assets/pdf_file/0019/26137/station-usage-2016-17-top-5-stations-scotland.pdf

[41] https://trafficscotland.org/freight/railheads/index.aspx

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	and rural settlements across the region including the Ayrshire Coastal Line and North Clyde Line. *Public Transport* The SPT region is served by multiple bus services connecting urban and rural settlements. Services are predominantly run and timetabled by private operators, although SPT also supports a number of bus routes where there is an assessed need for provision but patronage levels make it unviable for private sector operators to operate without subsidy. Within Glasgow city, the subway offers connectivity between multiple city centre routes for commuting or general travel. The subway is presently undergoing a substantial modernisation programme involving the delivery of upgraded stations, track improvements and new rolling stock. *Aviation* Glasgow Airport (Renfrewshire) and Glasgow Prestwick Airport (Ayrshire) are located within the SPT region allowing access to both National and International destinations for passengers and freight. Glasgow Airport served c.8,843,000 passengers in 2019. Currently, Drumchapel, Clydebank, Bearsden, Foxbar, Faifley and Linwood sit directly underneath the approach paths of Glasgow Airport. Glasgow Prestwick Airport served c.639,000 passengers in 2019 down from 1.7 million in 2010. In comparison, Glasgow Airport served c 8.8 million passengers in 2019 up from 6.5 million in 2010.[42] In terms of freight, in 2019 Glasgow Airport carried 12,822 tonnes (21.7% of Scottish total) and Glasgow Prestwick carried 13,003 tonnes (22.1% of Scottish total)[43].		

[42] Civil Aviation Authority, Scottish Transport Statistics 2021: https://www.transport.gov.scot/publication/scottish-transport-statistics-2021/chapter-08-air-transport/

[43] Civil Aviation Authority, Scottish Transport Statistics 2021: https://www.transport.gov.scot/publication/scottish-transport-statistics-2021/chapter-08-air-transport/

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	Maritime The main passenger ports within the SPT region are located at Greenock, Ardrossan Brodick and Troon providing a varietyservices operated by CalMac and other minor ferry services. The CalMac routes which operate within the SPT area are between; Ardrossan to Brodick and Campbelltown Lochranza to Claonaig Largs to Cumbrae Wemyss Bay to Rothesay Ferry services from Ardrossan and Wemyss Bay have a direct rail to ferry link. The main freight ports in the region are Ayr Harbour and the Clydeport network, which includes the King George V Dock. In 2019, the total foreign and domestic traffic at Ayr Port was 339,000 tonnes, which equated to under 1% of Scotland's overall water freight traffic. In comparison, the Clyde Ports transported 8.8 million tonnes in 2019, which was 13% of the Scottish total.[44] *Active Travel* There are a variety of walking and cycling active travel routes across the SPT region including Core Paths designated by each constituent local authority, public rights of way and nationally designate long-distance paths (e.g. John Muir Way Great Trail and West Highland Way). The National Cycle Network also traverses through urban and rural parts of the SPT region to provide cycle connectivity. In 2020, 13% of those travelling to work in Scotland walked and 2% cycled[45] Since 2000, the figure for walking has fluctuated between 13 to 16% (2014)[46]. 50% of school ages children cycle or		

[44] Scottish Transport Statistics 2021, https://www.transport.gov.scot/publication/scottish-transport-statistics-2021/chapter-09-water-transport/

[45] Scottish Household Survey https://www.transport.gov.scot/media/50980/transport-and-travel-in-scotland-2020-results-from-the-scottish-household-survey-pdf-version.pdf

[46] Adult Active travel to work https://www.gov.scot/Resource/0048/00489587.pdf

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	walk to school which has fluctuated between 50% and 56% since 2000[47].		
Cultural Heritage Relevant SEA Objective: 9. Cultural Heritage *Conserve, protect and enhance the historic environment and cultural assets*	**Table A.1** above identifies the internationally and nationally designated heritage assets located within the SPT region. The area is also characterised by a range of non-designated heritage assets of local and regional importance.	The SPT region hosts a range of designated heritage assets, each of which need to be appropriately protected from effects on their integrity and setting from development of new or improved transport infrastructure.	The SPT region's cultural heritage is significant and is an irreplaceable asset. The SEA has included an assessment of proposed transport policies and the potential impacts on heritage assets. This acknowledges that impacts from new measures (particularly those involving infrastructure development) have potential for other cultural heritage impacts which would need to be considered in more detail in future implementation plans.
Landscape Relevant SEA Objective: 10. Landscape *Protect and enhance the landscape character, townscape character and visual amenity*	**Designated areas: Table A.1** above identifies the internationally and nationally designated heritage assets located within the SPT region. **Landscape fabric, character and capacity:** Outside of the main urban and peri-urban settlements, the SPT area comprises a mixture of remote rural land encompassing the Scottish Lowlands with associated lochs, reservoirs, rivers, valleys and glens. A key part of the regional geography is the Loch Lomond and the Trossachs National Park and Isle of Arran, two recognized natural environment tourist attractions and areas with significant scenic (upland) importance. In addition, the SPT region has a vast coastline extending along the west of Scotland. **Visual amenity:** The natural landscape and historic heritage of the SPT region is maintained both throughout urban and rural areas (e.g. Loch Lomond and the Trossachs National Park, country parks and regional parks). However, visual amenity is adversely impacted in	There is a need to provide appropriate protection for designated landscapes, important landscape features, and sensitive landscape character areas within the SPT region. There is also a need to protect key views and safeguard visual amenity. The range of sensitivities and capacities of landscapes across the SPT region to accommodate new transport infrastructure should be taken account of within the emerging RTS.	The diverse topography, climate, soils and habitats of west Scotland have given rise to a varied and attractive range of landscape character types. Extensive urban development, particularly in large towns and cities along the River Clyde provide a contrasting townscape of varied quality. The SEA has assessed the high level potential for changes to landscape and to visual receptors from the proposed policies. This has taken account of particular landscape sensitivities conferred by key designations such as National Parks and NSAs.

[47] Child Active travel to school https://www.gov.scot/Resource/0048/00489587.pdf

SEA Topic	Baseline Key Characteristics	Existing Objectives, Issues and Problems	Key Issues for SEA
	some parts of the SPT region by unsympathetic developments and land uses which are inappropriately managed. This can include the visual impact of transport infrastructure particularly for example elevated sections of major roads close to residential areas.		
	Green Belt Corridors: The predominant green belt corridor is the Glasgow and the Clyde Valley Green Network which traverses through the urban environment of Glasgow and the surrounding local authorities. In addition to this corridor, across local authorities such as Ayrshire there are large rural areas of undeveloped and agricultural land. The Loch Lomond and the Trossachs National Park is a key site in the north of the SPT region, providing access to the natural environment.		

Appendix B Review of Plans and Programmes

B.1 Introduction

B.1.1 This Appendix supports Chapters 2 and 3 of the Environmental Report by setting out a review of relevant qualifying plans and programmes (including legislation and strategies) of relevance to the Draft RTS. The main purpose of this review is to identify relevant environmental protection objectives and policy requirements within the identified policy documents which have informed the emerging RTS and this associated SEA.

B.1.2 The findings of the review are presented in Table B.1.

Table B.1: Review of Policy Documents of Relevance

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
International			
Population (including relevant socio-economic issues)	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)	These documents provide an international framework for promoting sustainable development within all decision making. In particular: ▪ UN Habitat III Directive focuses on sustainable urban development across all communities around the world at a localised level in the aim of achieving collective sustainability; and, ▪ The Aarhus Convention establishes the right of individuals with regard to the environment including the right to receive environmental data held by public authorities, the right to participate in environmental decision making and the right to review procedures to challenge public decisions that have been made without respecting the aforementioned rights or environmental law in general.	In line with the identified documents, the RTS should set out policies and proposals which further the delivery of sustainable development across the region. Additionally, the development of the RTS should be objective, transparent, evidenced-based and conducted fairly.
Human Health	World Health Organisation (2004) Children's Environment and Health Action Plan for Europe	This document provides an international framework which recognises the importance of the protection and improvement of human health.	In line with the identified document, the RTS should seek to reduce the negative impacts of transport on human health, including the impact of pollution, poor air quality.
Biodiversity, Flora & Fauna	The Ramsar Conventions 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	These documents provide an international framework to protect sites designated at the international level for reasons of biodiversity conservation and protect important species from harm. In particular: ▪ The Ramsar Convention on Wetlands provides the framework for national action and international co-	In line with the identified documents, the RTS should take account of policies and proposals which protect and, where appropriate, enhance sites designated at the international level for reasons of biodiversity conservation or ecological importance. The key sites of concern are highlighted in Table A:1.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		operation for the conservation and wise use of wetlands and their resources. ▪ The Convention on Biological Diversity requires the development of national biodiversity strategies and action plans, and to integrate these into broader national plans for environment and development including especially forestry, agriculture, fisheries, energy, transportation and urban planning. ▪ The Strategic Plan for Biodiversity is a 10-year plan to reverse biodiversity loss and provides an international framework for biodiversity comprised of a vision, mission statement, strategic goals and the 20 global targets known as the Aichi targets. The Plan supports the establishment of national strategies and targets to implement the Convention.	
Soil & Land	N/A	N/A	N/A
Water	N/A	N/A	N/A
Air & Noise	World Health Organisation (2018) Environmental Noise Guidelines, WHO (2021) Global Air Quality Guidelines, United Nations (1979) Geneva Convention on Long Range Transboundary Air Pollution	The WHO Environmental Noise Guidelines and Air Quality Guidelines identify the main sources of community/environmental noise and atmospheric pollution (including from transport systems), population exposure levels, health impacts of exposure, recommended noise and air quality limits, management strategies and priorities for noise reduction and air quality improvement.	In line with the identified documents, the RTS should set out polices and proposals to tackle poor air quality for all communities and seek to reduce noise levels and amenity impacts from transport. Noise and air quality impacts form key issues for assessment of transport interventions in the SEA.
Climatic Factors	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.	These documents provide an international framework which identifies the need for climate change mitigation and adaptation action. In particular: ▪ 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	The transport sector is a significant source of GHG emissions. In line with the identified documents, the RTS must contribute towards limiting global warming to well below 2 degrees Celsius, compared to pre-industrial levels, through polices and projects that reduce the use of diesel and petrol

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		interference with the climate system. The Convention focuses on mitigating (reducing) GHG emissions, adapting to climate change, reporting of national emissions, and financing of climate action in developing countries. ▪ The Kyoto Protocol established legal frameworks for the GHG emission reduction targets, with the 2nd commitment period established for 2013 - 2020. The Paris Agreement aims to hold global average temperature increases to well below 2 degrees above pre-industrial levels and to pursue efforts to limit warming to 1.5 degrees Celsius. ▪ The Cancun Adaptation Framework recognises that adaptation required to given same priority as mitigation including reducing vulnerability and increasing resilience.	vehicles, promote more sustainable lower carbon modes, promote walking and cycling, reduce the need to travel and promote more sustainable development. The SEA has taken account of these issues and Scotland's own legislated Net Zero targets in assessing the likely impacts on climate of transport packages. Additionally, the RTS must take account of and wherever possible integrate with adaptation programmes and seek to reduce adverse impacts of climate change including flooding and temperature stresses on transport systems and to promote resilience of transport systems and networks.
Material Assets	N/A	N/A	N/A
Cultural Heritage	UNESCO (1972) Convention Concerning the Protection of the World Cultural and Natural Heritage	The Convention establishes state duties in relation to identifying, protecting and preserving natural or cultural sites comprising the World Heritage List.	In line with the identified document, the RTS should avoid adverse impacts on cultural heritage and the historic environment. Of note, within the study area are the Antonine Wall World Heritage Site and New Lanark World Heritage site.
Landscape	N/A	N/A	N/A
Interrelated Effects	Johannesburg Declaration on Sustainable Development, Communication COM (2005) 666: Taking Sustainable use of resources forward	Commits the sustainable use of resources and promotes sustainable development.	In line with the identified document, the RTS should take account of policies and proposals which support the use of sustainable resources and delivery of sustainable development.
European – all legislative and policy frameworks are informed by relevant higher level international frameworks			

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
Population (including relevant socioeconomic issues)	European Commission (2003) Public Sector Information Directive (PSI) 2003/98/EC, European Commission (2013) Towards Social Investment for Growth and Cohesion 2014-2020, European Commission (2010) Europe 2020: A strategy for smart, sustainable and inclusive growth.	These documents provide a European framework to further social cohesion, freedom of information, economic growth and inclusion.	In line with the identified documents, the RTS should set out policies and proposals to meet population needs, facilitate economic growth, enhance community cohesion, address inequalities in society and tackle social exclusion (within the context of the RTS's influence and objectives). It must also be developed in a transparent manner.
Human Health	European Commission (2007) Together for Health - A Strategic Approach for the EU 2008-2013, European Mental Health Strategy, European Framework for Action on Mental Health and Wellbeing (2013), WHO (2020) Health 2020 (European health policy framework)	These documents provide a European framework to promote a strategic vision for improving health standards. In particular: ▪ The European Mental Health Strategy (WHO Europe) sets out 7 key objectives for improving mental health including the crosscutting objective that physical and mental health are interdependent.	In line with the identified documents, the RTS should take account of policies and proposals for the improvement of health and wellbeing, including mental health. The SEA includes a specific SEA Objective to consider the health impacts of key elements of the RTS.
Biodiversity, Flora & Fauna	Council of Europe (1981) Convention on the Conservation of European Wildlife and Natural Habitats - The Bern Convention, EU Biodiversity Strategy - Our Life Insurance, Our Nature Capital: An EU Biodiversity Strategy (2011), European Commission (2008) Environmental Quality Standards Directive 2008/105/EC, EU Birds Directive (Directive 009/147/EC/ on the conservation of wild birds), EU Habitats Directive (EU Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (As amended by 97/62/EC), EU Species Action Plans, EU 2030 Biodiversity Strategy, EU Green Infrastructure Strategy	These documents provide a European framework to protect sites designated at the European level for reasons of biodiversity conservation and important habitats and species from harm. In particular: ▪ The Birds and Habitats Directives, amongst other measures, afford protection to certain habitats and animal and plant species targeted for conservation. The Birds Directive establishes Special Protection Areas (SPAs) to protect wild bird species and habitats. The Habitats Directive aims to maintain biodiversity and establishes the European network of protected areas known as Natura 2000. The Habitats Directive is transposed into law in Scotland by the 'Conservation (Natural Habitats, &c.) Regulations 1994', as amended.	In line with the identified documents, the RTS must, directly or indirectly, support the conservation of protected species and habitats, promote biodiversity and seek to reduce harmful impacts of transport systems and development on species, habitats and biodiversity including habitat loss or fragmentation, severance, pollution, and climate change. The SEA includes a specific appraisal objective on Biodiversity, Geodiversity and Soil.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		▪ The 2030 EU Biodiversity Strategy aims sets out a series of key commitments to be met by 2030 to support nature recovery and reverse the degradation of ecosystems. It forms a core part of the European Green Deal.	
Soil & Land	European Thematic Strategy on Soil Protection European Commission (2006), Environmental Liability Directive 2004/35/EC	These documents provide a European framework to promote the sustainable use of soil resources, soil restoration and the prevention of land degradation. The Thematic Strategy for Soil Protection sets a framework for Member States to take preventative measures to ensure sustainable soil use, identify soil problems and develop and maintain an inventory of contaminated sites, and develop and implement actions to improve and protect soils and remediate contaminated sites.	In line with the identified document, the RTS should take note of the sustainable and efficient use of soil and land resources. A key issue may be the threat to soil quality arising from transport routes and systems. The SEA includes a specific appraisal objective on Biodiversity, Geodiversity and Soil.
Water	**Flood Risks** EU Floods Directive (Directive 2007/60/EC) EU Water Framework Directive (Directive 2000/60/EC), European Commission Groundwater Directive 2006/118/EC, European Commission (1991) The Urban Waste Water Directive 91/271/EEC **Waterbodies** European Commission: The Drinking Water Directive 98/83/EC, European Commission: The Bathing Waters Directive 2006/7/EC, European Commission Marine Strategy Framework Directive 2008/56/EC	These documents provide a European framework which seeks to protect the quality of the water environment, including through ensuring safe levels for bathing and drinking water and by promoting sustainable urban drainage. In particular: ▪ The Water Framework Directive aims to protect, sustain and improve the water environment through achievement of standards and objectives for inland surface waters, transitional waters, coastal waters and groundwater, remediating and reversing any increasing trends in groundwater pollutants and continuous and progressive reduction of groundwater pollution; and, ▪ The Floods Directive sets requirements for preliminary Flood Risk Assessments to be drawn up by Member States and for Flood Risk Management Plans to be produced in order to assess, communicate and manage flood risks.	In line with the identified documents, it will be important to minimise flood risks and promote sustainable flood risk management. Across the region there are several water bodies that may need to be considered, most notably the River Clyde. The SEA takes account of water resources (quality and quantity) and future changes in climate affecting flood risk.
Air & Noise	European Parliament 2008/50/EC Ambient Air Quality Directive and Air Quality Framework	The EU Noise directive underpins overarching environmental policies such as monitoring noise	In line with the identified documents, the RTS must recognise transport as a

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	Fourth Daughter Directive 2004/107/EC, European Parliament 2002/49/EC Environmental Noise Directive, European Commission (2005) EU Thematic Strategy on Air Quality	pollution by drawing up strategic noise maps, holding consultations over noise exposure and addressing local issues through action plans. These EU Directives and associated documents provide European frameworks to protect and enhance air quality and to reduce noise pollution. Overall, these EU Directives set out mandatory monitoring, compliance and reporting requirements for air quality, as well as priority areas to reduce noise pollution. In particular: The Ambient Air Quality Directive sets legally binding limits for concentrations in ambient (outdoor) air of major air pollutants that are known to have a significant impact on human health including particulate matter (PM_{10} and $PM_{2.5}$) and nitrogen dioxide (NO_2). The Ambient Air Quality Directive, along with the Directive 2004/107/EC, provides the current framework for the control of ambient concentrations of air pollution in the EU including aims to control emissions from mobile sources, improve fuel quality and promote and integrate environmental protection requirements into the transport and energy sector. Member states should assess and report on air pollution levels, prepare and implement action plans where pollution levels exceed limits or targets, and inform the population about air quality issues. The Environmental Noise Directive is the main EU instrument to identify noise pollution levels and to trigger the necessary actions both at EU level and member state. The Directive sets out three areas for action including the determination and quantification of exposure to environmental noise through Noise Mapping exercises, dissemination of information on environmental noise exposure to the population and	significant source of air pollution and environmental noise and support the policy framework to reduce the adverse impacts of both in accordance with European legislation. Of particular concern will be Air Quality Management Areas (AQMAs) which have already been identified as areas with poor air quality. The assessment and reporting of air pollution and environmental noise levels is also important. The SEA incorporates an objective addressing air quality and noise and has included a strategic level assessment of these issues.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		preventing and reducing environmental noise where necessary and preserving noise quality where it is good through preparation and implementation of Action Plans. Additional EU regulations apply to specific sources of noise including road traffic, aircraft and railway.	
Climatic Factors	**Greenhouse Gas Emissions** EU (2009) Renewable Energy Directive (2009/28/EC), EU (2009) European Commission (2001), European Commission (2010) Energy 2020 - A Strategy for Competitive, Sustainable and Secure Energy, European Commission (2011) A Roadmap for Moving to a Competitive Low Carbon Economy in 2050, European Commission (2012) Energy Efficiency Directive (2012/27/EU), European Commission (2014) 2030 Climate and Energy Framework, EC 2030 Climate Target Plan **Climate Change Impacts** European Council (2013) Seventh EU Environmental Action Plan (EAP) (2013-2020), European Commission (2013) Strategy on Adaptation to Climate Change	These documents provide a European framework to respond to the global challenge of climate change through both mitigation and adaptation measures. The Roadmap suggests that EU emissions should be cut by 80% by 2050 (below 1990) including 40% reduction milestone by 2030, all sectors need to contribute, and that transition is affordable and feasible. The 2030 Climate Target Plan increases the target to reduce GHGs by 55% by 2030. The transport sector could reduce emissions by 60% by 2050 through more efficient vehicles, transition to electric vehicles and use of biofuels.	In line with the identified documents, the RTS should set out policies and proposals to decarbonise the transport sector and more generally, help to mitigate climate change, as well as policies and proposals which increase resilience to adverse weather and the effects of climate change. This should include transitioning to more efficient vehicles to cut greenhouse gas emissions and improve air quality across the region. Of particular relevance, given the expected period of the emerging RTS, is the 2030 Climate and Energy Framework. The RTS should aim to achieve reductions in GHGs which support national legislated targets for emissions reductions in Scotland.
Material Assets	**Infrastructure** European Commission (2011) Roadmap to a Single European Transport Area	This document promotes measures to create a competitive and resource efficient transport system across Europe.	In line with the identified document, the RTS should align with the Roadmap, creating a competitive and resource efficient transport system.
Cultural Heritage	**Historic Assets** European Convention on the Protection of Archaeological Heritage (1992) Convention for	The key purposes of this Conventions is to protect and enhance architectural and archaeological heritage, including through improving pan-European co-operation	In line with the identified document, the RTS (and SEA) should seek to preserve, protect and, where

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	the Protection of the Architectural Heritage of Europe (Granada Convention)	in knowledge exchange, policy development and guidance.	appropriate, enhance cultural heritage assets and their setting.
Landscape	European Landscape Convention (The Florence Convention, 2000)	This Convention provides a European framework to define and protect important landscapes which contribute to cultural and social heritage and quality of life. It promotes the protection, management and planning of all landscapes, including natural, managed, urban and peri-urban areas.	In line with the identified document, the RTS should set out policies and proposals to protect and enhance landscape character and visual amenity within the region.
Interrelated Effects	European Spatial Development Perspective, EU Strategic Environmental Assessment (SEA) Directive (Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment), EU Environmental Action Programme: Living Well, Within the Limits of Our Planet, European Sustainable Development Strategy 2001 (Renewed 2006, Reviewed 2009), European Commission (1999) European Spatial Development Perspective (ESDP) (97/150/EC), European Commission (2009) Review of the EU Sustainable Development Strategy, European Union (2014) Environmental Impact Assessment Directive 2014/52/EU amending Directive 2011/92/EU	These documents provide an overarching European framework to support the delivery of sustainable development, including through spatial and transport planning. In particular: ▪ The SEA Directive requires all Member States to assess the likely significant environmental effects of relevant and qualifying emerging plans and programmes prior to their adoption. ▪ The revised EIA Directive requires all Member States to carry out EIAs of certain projects likely to have a significant impact on the environment.	All emerging policy and proposals should be assessed to understand the likely environmental impacts. Additionally, the EIA Directive should be taken account of within the emerging RTS and its SEA.
UK – legislative and policy frameworks are informed by relevant higher level of European and international frameworks			
Population (including relevant socioeconomic issues)	The Enterprise and Regulatory Reform Act (2013), Equality Act (2010)	These documents provide a framework at the UK level to support economic growth and to tackle inequalities in society. The Equality Act 2010 protects people from discrimination in the work environment and wider society. The Act covers most land based public transport operations in relation to rules on services to the public and specific provisions on making taxis,	In line with the identified documents, the RTS should set out policies and proposals to facilitate economic growth, in particular the growth of key economic sectors, and to tackle inequality.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		public service vehicles and train carriages physically accessible.	The implications of the Equality Act 2010 for the emerging RTS are detailed in a separate EqIA Report**.**
Human Health	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.	These documents provide a framework at the UK level to identify the key determinants of health, reduce health inequalities and improve health outcomes.	In line with the identified documents, the RTS should recognise the role of the transport sector on human health and set out policies and proposals to minimise negative impacts. This includes promoting sustainable development and recognising the role of transport in improving human health through facilitating access to healthcare facilities and services and seeking to improve accessibility, especially for more vulnerable and at-risk populations. The SEA includes a specific objective to provide a framework for assessment of health impacts of the RTS.
Biodiversity, Flora & Fauna	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, Environment Act 2021	These documents provide a framework at the UK level to provide protection for protected species and habitats. In particular: ▪ The Wildlife and Countryside Act is the UK's primary legislation for the protection and conservation of animals, plants and habitats. The Act establishes the SSSI classification for sites deemed to be of special interest due to biological, geological or physiological features and the measures to be taken to protect them. ▪ The Protection of Badgers Act requires protection of badgers and their habitats in the UK. ▪ The Habitats Regulations require assessment of plans and projects that affect Natura sites to be	In line with the identified documents, the emerging RTS should set out policies and proposals to take account of the need to protect and enhance biodiversity interests, including sites designated at the national level. As noted in Table A:1, the following large-scale SSSI's were identified in the region: ▪ Muirkirk Uplands ▪ Arran Northern Mountains & Arran Moors ▪ Renfrewshire Heights

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		carried out by the competent authority in certain circumstances. ▪ The UK Post-2010 Biodiversity Framework is the response to the EU Biodiversity Strategy to 2020 and sets out the UK response required to meet the Aichi targets. The framework sets out the activities required of Scotland (and the other 3 UK countries) to contribute towards the international obligations on biodiversity. ▪ The UK National Ecosystem Assessment provides an analysis of the state of the UK's natural environment and the benefits it provides for society and continued economic prosperity.	The SEA incorporates an objective to provide a framework for consideration of the impacts of the RTS interventions on biodiversity and to identify suitable mitigation and where relevant enhancement proposals.
Soil & Land	Environmental Protection Act 1990	This legislation provides a framework at the UK level for the identification, management and remediation of contaminated land that is causing or has the potential to cause significant harm or significant pollution to the water environment.	In line with the identified document, the RTS must recognise the threats to soil and land quality arising from transport routes and systems. It should also take account of policies and proposals which prioritise the remediation and redevelopment of contaminated land.
Water	Defra (2012) Marine Strategy Part 1: UK Initial Assessment and Good Environmental Status, 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, UK environmental permitting regime	These documents provide a framework at the UK level regarding the protection of water and coastal environments.	In line with the identified documents, the RTS and SEA should take account of policies and proposals to minimise flood risks and promote sustainable flood risk management. It should also protect, and where appropriate, enhance waterbodies, the water environment and utilities infrastructure.
Air & Noise	Environmental Protection Act 1990, The Environment Act 1995, The Air Quality Standards Regulations (2010) as amended, 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:	These documents provide a framework at the UK level to implement objectives for the reduction of air and noise pollution. The framework sets out the transport-related causes of air pollution, air quality standards and the legal responsibilities for these, and identifies the cross-government, multi-stakeholder actions necessary to improve air quality.	In line with the identified documents, the RTS should set out policies and proposals to tackle poor air quality and noise pollution. It is important to take cognisance of transport related causes of air pollution and implement the identified actions including actions for

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	List of UK and National Measures, UK Clean Air Strategy (2019)	The framework also presents the evidence of linking noise pollution and poor health and wellbeing outcomes and establishes standards and actions to reduce adverse impacts of noise on human health.	transport policy to increase walking, cycling and public transport use, use of less polluting fuels and electric vehicles and improvements for the freight industry. It is also important to mitigate adverse impacts of noise pollution from the transport sector.
Climatic Factors	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 2022	These documents provide a framework at the UK level regarding the need to mitigate and adapt to climate change. The Climate Change Act 2008 commits the UK government by law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050 and requires a programme of rolling carbon budgets to be set to achieve this.	In line with the identified documents, the RTS should set out policies and proposals supporting efforts to decarbonise the transport sector and more generally help to mitigate climate change. In particular, the RTS must take cognisance of the Climate Change Act 2008 which sets a legally binding target of reducing the UK's GHG emissions by 80% by 2050 compared with 1990.
Material Assets	HM Treasury (2016) National Infrastructure Plan, HM Government (2009) The UK Renewable Energy Strategy, HM Government (2020) National Infrastructure Strategy	These documents provide a framework at the UK level regarding infrastructure development and energy generation.	In line with the identified documents, the RTS should facilitate the efficient use of material assets including infrastructure to meet identified needs and to support the deployment of renewable and low carbon technologies. The following should be considered: infrastructure capacity, resource efficiency, land us, energy efficiency, connectivity and accessibility.
Cultural Heritage	The Ancient Monuments and Archaeological Areas Act (1979)	This legislation provides statutory protection for Scheduled Monuments and designated archaeological sites.	In line with the identified document, the RTS should take account of policies and proposals to preserve and protect sites highlighted in Table A:1.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
Landscape	National Parks and Access to the Countryside Act (1949), Forestry Act (1967), National Planning Policy Framework (NPPF)	These documents provide a framework at the UK level regarding the protection of national parks, countryside and rural communities including rights of way and the protection of forests.	In line with the identified documents, the RTS should protect and enhance public access to open space. Of particular note is the Loch Lomond & The Trossachs National Park, in the northwest of the region.
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.	These documents provide a framework at the UK level to promote sustainable development and sustainable transport initiatives.	In line with the identified documents, the RTS should set out policies and proposals which support the delivery of sustainable development.
Scotland – all legislative and policy frameworks are informed by relevant higher-level UK, European and international frameworks			
Population (including relevant socioeconomic issues)	General Registers of Scotland: National Population Projections 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 National Strategy for Economic Transformation (2022), Town Centre Action Plan, The National Bus Travel Concession Scheme for Young Persons (Scotland) Order, 2021	These documents provide a national framework to support economic growth, improve accessibility, enhance social inclusion and to tackle inequalities in society. The Scottish population projections project a 27% increase in the population aged 75 years and over up to 2027. The Scottish Government's Accessible Travel Framework sets a national vision and outcomes for accessible travel and a high level action plan. The purpose of the framework is to support disabled people's rights by removing barriers and improving access to travel; and ensure disabled people are fully involved in work to improve all aspects of travel. Scotland's Economic Strategy (2022) is the national framework to create a fairer society and achieve long	In line with the identified policy context, the RTS must improve accessibility and reduce barriers to travel for individuals and communities, including rural communities and areas of socio-economic deprivation and must consider and plan for impacts of demographic change. It take account of policies and proposals to tackle poverty and inequality. The implications of the Equality Act 2010 as amended, including in respect of the Fairer Scotland Duty, for the emerging RTS are detailed in the separate EqIA Report.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		term sustainable economic growth, based on the principle that reducing inequalities and achieving sustainable growth are mutually reinforcing objectives. The Scottish Government's Town Centre Action Plan sets out a range of actions for the economic development and regeneration of town centres to create healthy centres at the heart of communities providing a range of services, spaces to interact and support the needs of residents, business and visitors. The action plan includes a range of transport-related actions including increasing the role of town centres as public transport hubs and improving access to town centres.	
Human Health	**Physical Activity** 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, Long Term Vision for Active Travel in Scotland 2014 **Road Safety** Scottish Government: Scotland's Road Safety Framework to 2030 **Access to Healthcare** 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	**Physical Activity** This national policy framework provides evidence of the relationship between increasing physical activity and improving physical and mental health outcomes and identifies increasing walking and cycling as key actions to achieve the outcomes. **Road Accidents** The Road Safety Framework sets the Scottish Government's road safety targets to 2030, identifies the benefits of reducing social and economic costs of road accidents, identifies the range of road safety stakeholders and identifies priorities, issues and commitments to achieve the targets. The priorities include improved partnership working, promoting road user responsibilities, establishing a lifelong learning approach to driving, reducing risks on roads including rural roads, driver impairment, seatbelt use, speeds and driver distraction, and road design. **Access to Healthcare** This national policy framework and evidence base sets out the role of transport in the delivery of healthcare	In line with the identified documents, the RTS should support objectives and outcomes to improve human health. The following should be considered: ▪ Recognising that the role of transport and active travel as integral to the delivery of national and local objectives to improve physical and mental health through increasing physical activity. ▪ Increase walking and cycling and improving access to opportunities to be active. ▪ Recognise the adverse effects of roads accidents on human health, align to the Scottish Road Safety Framework and seek to improve road safety for all users including pedestrians and cyclists through a range of actions. ▪ Recognise the role of transport in improving human health through

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	Placemaking and Built Environment 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), Draft National Planning Framework 4 (2021) **Health Inequalities and Life Expectancy** Scottish Government: Equally Well (2008), First Equally Well Review (2010), Second Equally Well Review (2014), Equally Well Implementation Plan and Outcomes Frameworks (2008), Public Health Scotland's Strategic Plan 2020 to 2023	services and achieving objectives for increased personal independence, reduced social isolation and improved access to employment and other services that help reduce impacts of socio-economic deprivation on physical and mental health. **Placemaking and Built Environment** This national policy framework identifies the links between health & wellbeing, place and transport with an emphasis towards positively improving health through creating healthy, attractive and accessible environments and places that encourage healthy behaviours including more walking and cycling and increasing opportunities for social interaction. **Health Inequalities and Life Expectancy** This national policy framework recognises the underlying causes of health inequalities including poverty and deprivation needed to be tackled through holistic, cross-governmental approaches. Key transport interventions identified to support reducing health inequalities include increasing active travel, improving access to open/green space, improving access to healthcare, education and employment, and reducing adverse environmental impacts of transport that may have greater impact on the health of some groups or communities than others including road accidents, pollution, noise and severance. Healthy Life Expectancy (HLE) is a key measure of health inequalities. HLE is significantly lower in the most deprived areas than in the least deprived areas in Scotland.	facilitating access to healthcare facilities and services and should seek to improve accessibility especially for more vulnerable and at-risk populations. ▪ Recognise the relationships between transport systems and high-quality places that support improved health and wellbeing. ▪ Supporting the implementation of relevant Scottish planning and architectural policies and place making objectives through a range of actions including reducing speeds, improving the quality of infrastructure including more attractive and safe walking and cycling routes, avoiding severance and improving local air quality.
Biodiversity, Flora & Fauna	Nature Conservation (Scotland) Act 2004, Wildlife and Natural Environment (Scotland) Act 2011, Habitats Regulations (as amended), Scottish Government: Scottish Forestry	The Nature Conservation Act relates to the conservation of biodiversity and protection of birds, animals and plants, and conservation and enhancement of Scotland's natural features. The Act places duty on	In line with the identified documents, the RTS will directly, or indirectly, support conservation of protected species and habitats, promote

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	Strategy 2019-2029, 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	every public body to further the conservation and enhancement of biodiversity, establishes requirement for Scottish Biodiversity Strategy and strengthens legal protection for threatened species. The Wildlife and Natural Environment Act amends existing legislation on the protection of certain birds, habitats and species for the purpose of making more effective and proportionate legislation for the protection and management of wildlife and the natural environment. The Scottish Forestry Strategy seeks to protect and expand Scottish woodlands and forests and increase their value to society and the environment. The key themes of the implementation plan are climate change, timber, business development, community development, access and health, environmental quality and biodiversity. The Scottish Biodiversity Strategy, "Scotland's Biodiversity: It's in Your Hands" (2005) sets out the rationale for conserving biodiversity for the health, enjoyment and wellbeing of the people of Scotland now and in the future. The 2020 Challenge for Scotland's Biodiversity is Scotland's response to the Aichi Targets set by the United Nations Convention on Biological Diversity, and the European Union's Biodiversity Strategy for 2020. It sets out the major steps necessary to improve nature and biodiversity in Scotland and to meet the international targets. The two documents together comprise the Scottish Biodiversity Strategy and aim to: 1) protect and restore biodiversity on land and in our seas, and to support healthy ecosystems; 2) connect people with the natural world, for their health and well-being, and to involve them more in decision	biodiversity and seek to reduce harmful impacts of transport systems and development on species, habitats and biodiversity including habitat loss or fragmentation, severance, pollution, and climate change. Any species or sites of significance at international, national or local levels for purposes of conservation, protection or promotion of biodiversity are identified in Table A:1 The SEA includes a specific objective to provide a framework for assessment of the predicted impacts of the RTS on ecological receptors.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		making; and 3) maximise the benefits for Scotland of a diverse natural environment and the services it provides, contributing to sustainable economic growth. The key outcomes of the Biodiversity Strategy likely to be most relevant to regional transport strategies include 1) Diverse natural environment is a national asset we must protect; 2) Health and well-being improved through physical activity and contact with nature; and 3) Healthy natural environment is much more resilient to climate change. The Route Map to 2020 / 6 Big Steps for Nature sets out priorities and key projects to achieve healthy biodiversity including ecosystem restoration, investment in natural capital, quality greenspace for health and educational benefits, conserving wildlife in Scotland, sustainable management of land and freshwater, and sustainable management of marine and coastal ecosystems. The Biodiversity List is a list of animals, plants and habitats that are of principal importance for conservation in Scotland. The List is grouped by 4 categories for action - conservation action needed, avoid negative impacts, watching brief only and communicating with the public. Scotland's Biodiversity Strategy Indicators measure progress of the Biodiversity Strategy, with two groups of indicators measuring both changes in biodiversity and how people are interacting with biodiversity.	
Soil & Land	Scottish Government and its Key Agencies: The Scottish Soil Framework (2009), State of Scotland's Soils Report 2011, National Soil Map of Scotland, Soil Monitoring Action Plan & Implementation Plan, Contaminated Land (Scotland) Regulations 2000 as amended, Scottish Government's Statutory Guidance: Edition 2 (2006), Getting the best	The Scottish Soil Framework aims to promote the sustainable management and protection of soils as integral to the nation's economic, social and environmental needs, raise awareness of sustainable soil management, and achieve improved policy integration including with climate change/emissions, water quality, flood management, biodiversity, heritage and land use & development. Key actions include	In line with the identified documents, the RTS should recognise the threats to soil quality arising from transport routes and systems and support the policy frameworks to reduce adverse impacts on soil quality from transport sources. It should support the protection of soils, improve soil quality, prioritise the

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	from our land: A Land Use Strategy for Scotland 2021 – 2026, National Peatland Plan (2015)	reducing soil erosion, reducing pressures on soils through promoting brownfield development over greenfield, enhancing soil management to improve water quality and reducing greenhouse gas emissions from soils. The State of Scotland's Soils Reports, National Soil Map of Scotland and Soil Monitoring Action Plan provide information and evidence on Scotland's soils and increase awareness of the importance of soil. The State of Scotland's Soils report identified the key threats to healthy soils as loss of organic matter, changes in soil biodiversity, erosion and covering soils with waterproof materials with the main challenges being improving policy integration, tackling the lack of systematic Scottish soil data and understanding of soil management. The construction and expansion of urban and industrial areas and transport routes and transport systems are identified as a significant pressure on the most productive soils in Scotland, threatening loss of organic matter, sealing of soils, contamination, changes in biodiversity, and erosion. The Contaminated Land (Scotland) Regulations 2000 as amended and the Scottish Government's Statutory Guidance: Edition 2 (2006) support the implementation of Part SEA of the Environmental Protection Act 1990. Acting together, these documents provide the framework in Scotland for the identification, management and remediation of contaminated land that is causing or has the potential to cause significant harm or significant pollution to the water environment.	redevelopment of brownfield land and address contamination. The SEA considers soils as part of an integrated objective with biodiversity and geodiversity.
Water	Water Environment and Water Services (Scotland) Act 2003, Water Environment (Controlled Activities) (Scotland) Regulations 2011 as amended (CAR), Groundwater	The Water Environment and Water Services (Scotland) Act makes provision for protection and improvement of the water environment in Scotland including implementation of the Water Framework Directive. The	In line with the identified documents, the RTS must recognise the River Basin Management Plan and transport proposals must avoid adverse effects

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	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, Scottish Canals Asset Management Strategy 2019-30, Marine (Scotland) Act 2010	WEWS makes provision to protect and improve the water environment, to promote sustainable water use, reduce discharges of priority substances and cease discharges of priority hazardous substances, and to contribute to mitigating the effects of floods and droughts. The CAR apply regulatory controls over activities which may affect Scotland's water environment including lochs, rivers, estuaries, coastal waters, groundwater, and groundwater dependent wetlands. The Groundwater Protection Policy aims to provide a sustainable future for Scotland's groundwater resources by protecting legitimate uses of groundwater, minimising risk to groundwater from pollution sources and avoid adverse effects on groundwater quality by influencing development and authorising abstractions. The River Basin Management Plan implements the requirement of the WFD for a holistic approach to management of the water environment. The RBMP set out objectives and a programme of measures to protect and improve the water environment including managing sources of pollution, changes in the flow of water and changes to the physical characteristics of the water environment. The Flood Risk Management (Scotland) Act 2009 creates a coordinated process to manage flood risk sustainably, taking into account climate change risk, at national and local levels, including new responsibilities for SEPA, Scottish Water and Local Authorities. The Act created a framework for all organisations involved in flood risk management and sets out requirements for the assessment and preparation of flood risk management plans. Organisations involved in flood risk management can coordinate actions to deliver sustainable and modern approaches to flood risk management.	on the water environment. It must also recognise the objectives of the FRMPs and any transport proposals must support mitigation of any identified relevant flooding risks. The potential for impacts on the water environment is considered in the SEA under the framework of an SEA Objective addressing water resources and flooding.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		The Scottish Canals Asset Management Strategy sets out how Scottish Canals will manage, care and prioritise investment in the Scottish Canals infrastructure. The Marine (Scotland) Act 2010 provides a framework for the safeguarding of Scotland's seas and simplified planning and management system. The Act introduces a Duty to protect and enhance the marine environment.	
Air & Noise	Air Quality (Scotland) Regulations (amended) 2016, Cleaner Air for Scotland 2 (CAFS2) - Towards a Better Place for Everyone, 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.	**Clean Air** This policy framework sets out the transport-related causes of air pollution, air quality standards and the legal responsibilities for these, and the cross-government, multi-stakeholder actions necessary to improve air quality including actions for transport policy to increase walking, cycling and public transport use, use of less polluting fuels and electric vehicles and improvements for the freight industry. CAFS2 is shaped round 10 general themes for air quality improvement. Transport forms one of these themes and the Strategy sets out the need for increased modal shift to active travel and public transport to reduce transport emissions through provision of better active travel facilities and public transport services. Reference is also made to Scotland's four Low Emissions Zones (LEZs), one of which is located in Glasgow. **Noise** This policy framework presents evidence linking noise pollution and poor health and wellbeing outcomes, and therefore establishes standards and actions to reduce adverse impacts of noise on human health. Transport is the greatest source of environmental noise in Scotland.	In line with the identified documents, the RTS must recognise transport as a significant source of air and noise pollution and support the policy framework to reduce emissions and the adverse impacts of air and noise pollution from transport sources. Transport emissions is a core element of the RTS and the SEA has included an assessment of potential air quality and noise impacts from each group of transport packages in the principal Strategy corridors.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
Climatic Factors	Climate Change (Scotland) Act 2009 and Orders + Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, The Scottish Government's Climate Change Plan (and 2020 update), 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, Route Map to a 20% reduction in car kilometres by 2030 (2022)	The Climate Change Scotland Act 2009 and 2019, and related Orders, sets GHG emission reduction targets for Scotland up to 2045 including requirement to set annual reduction targets and the policies and proposals to achieve these reductions. The Climate Change Plan 2018 -2032 aims to achieve 66% reduction in GHG emission (on 1990 baseline) by 2032 including through actions in the transport sector, which is expected to achieve a 37% reduction over the period of the Plan. Specific policies for the transport sector include phasing out petrol and diesel engine cars and vans by 2032, uptake of ultra-low emission vehicles, modal shift towards walking and cycling and management of freight activities. Climate Ready Scotland SCCAP sets out the national objectives, policies and proposals for adaptation, as required by the Climate Change Scotland Act 2009.	The transport sector is a significant source of GHG emissions. In line with the identified documents, the RTS must contribute towards Scotland's GHG emissions reductions targets for the transport sector through polices and projects that reduce the use of diesel and petrol vehicles, promote more sustainable lower carbon modes, promote walking and cycling, reduce the need to travel and promote more sustainable development.
Material Assets	Transport (Scotland) Act 2005, Scotland's Energy Strategy 2017, Switched On Scotland Roadmap 2013, Switched On Scotland Phase Two: An Action Plan for Growth, Strategic Transport Projects Review 2 (2022), Infrastructure Investment Plan (2021-22 to 2025-26), Scotland's National Transport Strategy NTS2, 2020 (and delivery plans), Scottish Planning Policy (2014), Draft National Planning Framework 4, 2021	*Scotland's Energy Strategy* (2017) sets out the Scottish Government's vision for the future energy system in Scotland and describes the ways in which the Scottish Government will strengthen the development of local energy, protect and empower consumers, and support Scotland's climate change ambitions. It sets two new targets for the Scottish energy system by 2030: ▪ The equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources; and ▪ An increase by 30% in the productivity of energy use across the Scottish economy. The Strategy envisages renewable and low carbon solutions providing the basis for secure and affordable heat, mobility and power in future decades. It also notes the ambition to phase out the need for new petrol and diesel cars and vans by 2032.	In line with the identified documents, the RTS must contribute to the achievement of the targets set out in Scotland's Energy Strategy (2017) and promote the uptake of electric and low emission vehicles. The RTS must also support the Scottish Government's ambition to phase out the need for new petrol and diesel cars and vans by 2032. The RTS must reflect committed infrastructure projects and ensure that existing infrastructure is used in a sustainable and efficient manner, whilst supporting the development of new or upgraded infrastructure in future to meet identified needs.

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		Switched On Scotland Roadmap 2013 Phase Two sets out a long-term vision and strategic approach to advance widespread adoption of electric vehicles (EVs) whereby in 2050 Scotland's towns, cities and communities will be free from the damaging emissions of petrol and diesel fuelled vehicles. The second phase of implementing the Roadmap, in the period 2017-2020, places an emphasis on growth, focusing on actions that accelerate the uptake of EVs as part of both a wider sustainable transport system and a smart energy grid. The *Scottish Government's Strategic Transport Projects Review* (2022) sets out the Scottish Government's 45 recommendations for transport investment priorities. Similarly, the *Infrastructure Investment Plan* sets out priorities for investment and a long term strategy for the development of public infrastructure in Scotland. Commitments are identified across key sectors. It promotes the sustainable use and management of existing infrastructure and the alignment of future infrastructure / resource provision with planning activities. The *National Transport Strategy* (NTS2) sets out the Scottish Government's ambitions for transport, including four priorities: ▪ Reduces inequalities ▪ Takes climate action ▪ Helps deliver inclusive economic growth ▪ Improves our health and wellbeing	
Cultural Heritage	The Historic Environment Policy for Scotland 2019, 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	These documents set out a framework at the national level to conserve, protect, enhance and manage cultural and historical heritage in Scotland. The various policies establish the requirements for the identification, designation and protection of the historic environment including historic built environment, ancient monuments	In line with the identified documents, the RTS should take account of the policies and proposals to preserve and protect sites highlighted in Table A.1 (where relevant) and for potential

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	Historic Environment (Scotland) Act 2014, 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	and archaeological sites including Scheduled Ancient Monuments, Areas of Archaeological Importance, listed buildings, Conservation Areas and designed landscapes and gardens. The *Historic Environment Policy for Scotland, SPP, Historic Environment Circular 1 and PAN 71* together provide the direction and guidance in relation to planning matters and the historic environment. Our Place in Time is a high level strategy to ensure the cultural, social, environmental, and economic value of Scotland's historic environment contributes to national and population wellbeing. The Strategy sets out strategic priorities to improve knowledge about historic environment, to conserve and protect historic environment and to improve access to the historic environment.	effects on non-designated heritage assets and their settings. A specific SEA Objective on Cultural Heritage has been included in the assessment framework to provide a basis for assessment of RTS policies and (future) interventions on cultural heritage resources. The review of policy highlights the importance of conservation, protection and enhancement of cultural heritage resources in the Strategy region. Key criteria have been captured for this in the SEA assessment framework.
Landscape	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	These documents provide a framework at the national level to protect and enhance Scotland's landscapes, important landscape features and distinctive landscape characters. In particular: ▪ *Scotland's Scenic Heritage* identifies 40 National Scenic areas (2 within the SPT area). Provision under the Planning etc. (Scotland) Act 2006, in place from 2010 requires that new development does not detract from quality or character of the landscape. ▪ The *SNH Landscape Policy Framework* sets out SNH's approach for Scotland's landscape with the aim "to safeguard and enhance the distinct identity, the diverse character and the special qualities of Scotland's landscapes as a whole, so as to ensure tomorrow's landscapes contribute positively to people's environment and are at least as attractive and valued as they are today."	In line with the identified documents, the RTS should seek to protect and enhance public access to land and protect and enhance Scotland's landscapes. Of particular note are designations including Loch Lomond and Trossachs National Park, National Scenic Areas and other local designations.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		▪ Part 10 of the Planning etc. (Scotland) Act 2006 provides protection through the planning system for National Scenic Areas in terms of the desirability of safeguarding or enhancing its character or appearance. *Creating Places* recognises landscape's contribution to better places, and the need to consider landscape character and capacity to guide landscape change.	
Interrelated Effects	Scotland's National Strategy for Economic Transformation 2022, Infrastructure Investment Plan 2021, Scotland's National Transport Strategy (NTS2), Cycling Action Plan for Scotland, National Walking Strategy, Delivering the Goods - Scotland's Rail Freight Strategy, Rail Enhancements & Capital Investment Strategy, Scottish Ferries Plan, STPR (2021), SPP (2014), Draft NPF4 (2021), Designing Streets (2010), The Islands (Scotland) Act 2018.	*Scotland's Economic Strategy* is the national framework to create a fairer society and achieve long term sustainable economic growth, based on the principle that reducing inequalities and achieving sustainable growth are mutually reinforcing objectives. The *Infrastructure Investment Plan* sets out the Scottish Government's infrastructure investment priorities and plans up to 2040 including EGIP, strategic roads projects, high speed rail, Glasgow subway modernisation, low emission vehicle infrastructure, active travel infrastructure and accessibility improvements to infrastructure. Aligned with the NTS, the *Cycling Action Plan* sets out a national vision to achieve 10% of all journeys made by bike by 2020 and contains a range of actions to deliver the vision for local, regional and national partners. The *National Walking Strategy* similarly aims to promote walking as part of everyday activity for transport and leisure purposes. The *Rail Freight Strategy* sets out the Scottish Government's vision for a competitive, sustainable rail freight sector playing an increasing role in Scotland's economic growth by providing a safer, greener and more efficient way of transporting products and materials. The Strategy is structured around 4 levers of	In line with the identified documents, the RTS should set out policies and proposals which support the delivery of sustainable development in the region and its island communities.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		success - innovation, facilitation, promotion and investment. The *Rail Enhancements and Capital Investment Strategy* sets out the Scottish Government's new approach to planning and funding rail projects, setting out how the project pipeline is managed and the process for promoting new infrastructure. The *Scottish Ferries Plan* sets out how ferry services will be planned, funded, procured and operated to 2022. The *STPR2* identifies strategic transport investment priorities to support the delivery of sustainable economic growth and the achievement of the Scottish Government's strategic objectives. This includes the Clyde Metro. The *NPF4 (2021)* 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.	
SPT Region - all policy frameworks are informed by relevant higher-level Scotland, UK, European and international frameworks			
Population (including relevant socio-economic issues)	Glasgow City Region Economic Action Plan, Clydeplan (2017) Strategic Development Plan, Emerging Glasgow City Region Regional Spatial Strategy (RSS) Regional Spatial Strategies (RSS) and Local Development Plans covering Ayrshire & Arran and relevant parts of Argyll & Bute, and Loch Lomond & Trossachs National Park	The GCR Economic Action Plan sets a vision to 2025 to create a strong, inclusive, competitive and outward-looking economy, sustaining growth and prosperity with every person and business reaching their full potential. Eleven objectives support the vision with specific actions for transport to improve links between communities, jobs and learning opportunities and deliver the suite of Glasgow City Deal infrastructure investment projects. The Strategic Development Plan (SDP) sets out a vision and spatial strategy for land use and development issues at the strategic level across the eight local authorities in the Clydeplan area (which overlaps	In line with the identified documents, key economic assets, including transport assets, should be maximised. Future development of the Glasgow City Region RSS and the other LDP's and RSS's in the region will be taken into account in the RTS development as far as they are relevant at the strategic level of detail of the Strategy.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
		extensively with the SPT region). LDP's so this beyond the Clydeplan boundary.	
Human Health	N/A	N/A	N/A
Biodiversity, Flora & Fauna	Central Scotland Green Network Outcomes, Glasgow and Clyde Valley (GCV) Green Network Strategy / Blueprint	The CSGN is a national development in NPF4 which aims to transform the environment of Central Scotland by 2050 to contribute towards sustainable economic growth and population wellbeing. The CSGN is framed around 5 themes and several outcomes are relevant to biodiversity and conservation including improving resilience of habitats and species as a result of integrated habitat networks and increasing/creating habitat including woodland and green infrastructure / green networks. The vision of the GCV Green Network Partnership is to create a transformed environment to improve lives and communities and support business through the provision of well-connected, high quality, multi-functional green spaces throughout the region that provide access to the outdoor for everyone	In line with the identified document, biodiversity interests, including the CSGN, should be taken into account in RTS development to ensure key sites and habitats are protected and enhanced.
Soil & Land	No region specific plans have been identified.	N/A	N/A
Water	Clyde and Loch Lomond Flood Risk Management Strategy, Ayrshire Flood Risk Management Plan	The Clyde and Loch Lomond Flood Risk Management Plan and Ayrshire Flood Risk Management Plan provide a short overview of the Local Plan Districts and the flood risk authorities involved. The Plans set out actions for flood risk management within the Clyde and Loch Lomond District and Ayrshire Districts.	The FRMPs have an overall objective to reduce flood risk, set out the economic costs of low, medium and high flooding scenarios and set out actions for the management and mitigation of floods.
Air & Noise	Glasgow Agglomeration Draft Noise Action Plan 2019-2023	Prepared as part of the Scottish Government's implementation of the Environmental Noise Directive. Estimates population exposure to noise from transport and other sources. Identifies Candidate Noise Management Areas (CNMAs) which form the focus of actions to reduce exposure to noise in the Glasgow agglomeration.	There are 80 road related CNMAs and 19 rail related CNMAs in the agglomeration including within Glasgow City, Renfrewshire, West Dunbartonshire, South Lanarkshire and North Lanarkshire.

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Climatic Factors	Climate Ready Clyde Regional Adaptation Strategy and Action Plan, Glasgow's Climate Plan	This Action Plan sets out the key challenges and ambitions for the Glasgow conurbation in relation to adapting to climate change in the short and long term (up to 2050).	The RTS must support adaptation programmes including Climate Ready Clyde and seek to reduce adverse impacts of climate change, including flooding and temperature stresses on transport systems and networks and to promote resilience of transport systems and networks.
Material Assets	No region specific plans have been identified.	N/A	N/A
Cultural Heritage	No region specific plans have been identified.	N/A	N/A
Landscape	Loch Lomond and Trossachs National Park Management Plan	This plan sets out a vision framed around Conservation & Land Management; Visitor Experience; Rural Development as key components of the management of the Loch Lomond and the Trossachs National Park in support of its four statutory objectives.	In line with the identified document, the RTS should take account of the importance of landscape features, including the Loch Lomond and Trossachs National Park. Landscape impacts of the RTS have been specifically assessed within one of the SEA objectives.
Interrelated Effects	Clydeplan Strategic Development Plan (2017)	The SDP recognises the need for modal shift from private car to more sustainable choices to achieve carbon reduction objectives and the need to increase active travel to achieve a range of objectives including improving health.	The SDP outlines the development of a regional active travel network, improving access to Glasgow airport and support for high-speed rail into Glasgow. The RTS should take account of the strategic planning commitments and policies in this document.
Constituent Local Authorities within the SPT Region - all policy frameworks are informed by relevant higher-level regional, Scotland, UK, European and international frameworks			
Population (including relevant socio-economic issues)	Local development Plans iRSS	The LOIPs set out a range of local priorities and outcomes to reduce inequalities across local authority areas and increase inclusive growth.	Accessibility to health, employment and learning are identified as key priorities in many of the current LOIPs within the SPT region.

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	Local Outcome Improvement Plans (LOIPs) (for each constituent local authority and associated Community Planning Partnership) Glasgow City Region City Deal, Ayrshire Growth Deal and Rural Growth Deal for Argyll.	The City and Growth Deal's will fund major infrastructure projects; creating jobs and attracting new business; assisting people back to work and existing companies to expand; improving public transport and connectivity and driving business innovation and growth.	
Human Health	Local Open Space Strategies, Local Walking, Cycling and Active Travel Strategies (for each constituent local authority and associated Community Planning Partnership).	These local plans and strategies set out local priorities and actions to improve access to high quality open spaces, to create healthier places and to increase the uptake of active travel.	The SEA assesses impacts of the proposed RTS on Health taking account of measures to enhance active travel.
Biodiversity, Flora & Fauna	Argyll and Bute Council Biodiversity Duty Action Plan, Ayrshire Local Biodiversity Action Plan, Ayrshire Green Network Strategy, East Dunbartonshire LBAP 2017-2021, East Dunbartonshire GeoDiversity Charter 2017-2021, East Dunbartonshire Green Network Strategy 2017-2021, East Dunbartonshire / Campsies Strategy 2011, East Renfrewshire/Renfrewshire/Inverclyde LBAP, Glasgow LBAP (2017 -2027), North Lanarkshire LBAP 2015 -2020, Renfrewshire LBAP 2018-2022, South Lanarkshire LBAP 2018-2022 (draft), West Dunbartonshire Biodiversity Report 2015	Local Biodiversity Action Plans and Partnerships operate at a local level to conserve and enhance biodiversity and provide local focus for the national strategies. The local action plans support delivery of the national Biodiversity strategy targets and priorities as well as locally valued species and habitats. Local green network strategies / plans support delivery of the regional & national strategies as well as local green networks.	In line with the identified documents, the conservation and enhancement of biodiversity in the region should be taken into account in development of the RTS.
Soil & Land	No local area specific plans have been identified.	N/A	N/A
Water	Local Flood Risk Management Plans - Clyde and Loch Lomond Local Plan District & Ayrshire Local Plan District	The LRFMs are the local delivery plans for the FRMS including providing detail on the costs, benefits and delivery timescales for local actions.	There are two local plan districts (LPDs) in the SPT area that must be considered.
Air & Noise	Air Quality Action Plans covering the following Air Quality Management Areas (AQMAs) designated within the SPT region due to transport related pollutants: Bearsden, Bishopbriggs, Byres Road/Dumbarton Road,	These documents set out the AQMAs in the regional and the associated Action Plans. The action plans and noise maps are key tools in Local Development Planning and Local Transport Strategies and are linked to Air Quality Action Plans where actions/measures may	There are 15 AQMAs in the SPT area for transport-related pollutants which need to be considered. The associated Action Plans set out a range of actions and interventions to improve local air

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	Chapelhall, Coatbridge, Glasgow City Centre, Johnstone, Lanark, Motherwell, Paisley Town Centre, Parkhead Cross, Renfrew Town Centre, Rutherglen and Whirlies Roundabout (East Kilbride) Glasgow Agglomeration Noise Action Plan	support environmental noise mitigation as well as improve local air quality.	quality including infrastructure and traffic management measures and modal shift to more sustainable modes.
Climatic Factors	Local Authority Climate Change Strategies (for each constituent local authority)	All 12 Local authorities in the SPT area signed the Climate Change Declaration in 2007, which commits them to take action in relation to mitigation and adaptation. The majority of local strategies include actions for transport including increasing walking and cycling and promoting public transport to reduce use of private cars.	Transport is a key source of climate emissions which will form a focus for the RTS. The SEA includes a high level assessment of impacts of transport measures on climate.
Material Assets	Active Travel Strategies, Core Path Plans and Minerals Local Development Plans (LDPs) / LDP policies (for each constituent local authority). The following councils within the SPT region have published Active Travel Strategies*; ▪ East Dunbartonshire Council 2015-2020 ▪ West Dunbartonshire Council (Westbound Green Travel Plan) ▪ Glasgow City Council Active Travel Future City Glasgow[48] ▪ North Lanarkshire Council (Walking and Cycling Strategy) ▪ South Lanarkshire Council Cycling Strategy 2015-2020 ▪ North Ayrshire Council Outdoor Access Strategy ▪ South Ayrshire Council Sustainable Travel Plan	Core Paths Plans set out a framework or network of the most useful and important paths both for recreation and everyday journeys for local people and visitors. These core paths networks should provide opportunities for walking, cycling, horse riding and other non-motorised activities, including access to coastal and inland waters, by people of all ages and abilities. Plans are put together in close consultation with local people and land managers to try to make sure that the paths meet community needs whilst minimising any impact on farming and other land management practices. Minerals Local Development Plans (LDPs) / LDP policies set out the settled view of local authorities on where minerals development should and should not occur and set out the proposals for the future use of abandoned and unrestored minerals sites.	The aims and actions set out in the current LTS within the SPT region must be considered, including protecting and enhancing the Core Path Network to create an integrated cross boundary network. The implementation of existing and emerging land use strategies at the local level within the SPT region is also relevant.

[48] Glasgow City Council http://futurecity.glasgow.gov.uk/active-travel/

SEA Topic	Relevant Plans, Programmes and Strategies	Overview of Purpose and Key Requirements	Key Issues and Environmental Projection Objectives
	▪ Inverclyde Council Active Living Strategy (forthcoming; approved 30/08/18) ▪ East Renfrewshire Council Active Travel Action Plan ▪ Renfrewshire Council Outdoor Access Strategy 2016-2026.		
Cultural Heritage	Antonine Wall Management Plan and New Lanark Management Plan (UNESCO world heritage sites)	The Antonine Wall Management Plan and the New Lanark Management Plans set out the requirements to manage, protect and preserve these World Heritage Sites including buffer zones around them.	In line with the identified document, the preservation, protection and enhancement of the historic environment including key sites such as the Antonine Wall has been taken into account in the RTS and SEA.
Landscape	No local area specific plans have been identified.	N/A	N/A
Interrelated Effects	Local Transport Strategies and Local Development Plans (for each constituent local authority)	The 12 LDPs in the SPT area set out local frameworks for growth and development in the short and long term, with a presumption in favour of development that contributes to sustainable development as set out Scottish Planning Policy (2014). LTS set out policies and actions to address local transport issues as identified by local authorities. They must be prepared in line with Scottish Government Guidance and in conformity with the current RTS applicable to their area.	Both the LDPs and LTSs should be taken into consideration in development of the RTS and integration of measures with existing local transport planning.

Appendix C Responses to Comments on SEA Scoping Report and SEA Case for Change Report

C.1 Introduction

7.2.3 This appendix support Section 4.3 of the Environmental Report and provides a list of consultee comments regarding:

- The SEA Scoping Report; and
- The SEA Case for Change Report.

7.2.4 The SEA team response to each of the comments is also included within the table. This includes noting any actions that have been taken as a result of the consultee comment.

Consultee	Consultee Comment(s)	SEA Team Response
Feedback on the SEA Scoping Report		
Scottish Natural Heritage (SNH[49])	We are content with the scope and the level of detail to be included in the Environmental Report (ER). We welcome the approach being taken to scope-in to the SEA process all SEA Topics required to be considered by the 2005 Act.	Noted, thank you.
	We welcome the emphasis on creating a sustainable transport system in the vision for the RTS for the west of Scotland.	Noted, thank you.
	We are happy to engage further with SPT on how this can be developed and implemented, in particular how active travel and green infrastructure can both contribute to an improved quality of life for those who live in and visit the area.	Noted, thank you.
Scottish Environment Protection Agency (SEPA)	Some of the PPS included in Table B1 (Appendix B) have themselves been subject to SEA. Where this is the case you may find it useful to prepare a summary of the key SEA findings that may be relevant to the SPT Regional Transport Strategy. This may assist you with data sources and environmental baseline information and also ensure the current SEA picks up environmental issues or mitigation actions which may have been identified elsewhere.	Other PPS SEA ERs have been reviewed where relevant to identify useful contributory information and findings. A commitment has been included in Section 6 of the ER to co-ordination of future monitoring with other key transport plan SEAs. More specific baselines for each RTS corridor are likely to be developed to support future stages in the delivery of the RTS. These would be able to draw closely on material prepared for other relevant Strategies and their SEAs, notably the documents for STPR2.
	Although we are generally satisfied to see that air quality is being considered in relation to transport, we would expect to see a stronger link being made in the scoping report between the objectives within the Council's Air Quality Action Plans (there are 13 of them) and the assessment criteria.	Noted. The SEA Framework has been updated from the version presented in the Scoping Report to provide clearer reference in assessment guide questions to relevant Air Quality Action Plans.

[49] SNH was renamed as NatureScot in August 2020

Consultee	Consultee Comment(s)	SEA Team Response
	SEPA holds significant amounts of environmental data which may be of interest to you in preparing the environmental baseline, identifying environmental problems, and summarising the likely changes to the environment in the absence of the PPS, all of which are required for the assessment. Many of these data are now readily available on SEPA's website. Other sources of data for issues that fall within SEPA's remit are referenced in our SEA topic guidance notes for air, soil, water, material assets, climatic factors and human health	Noted, thank you. Information of relevance for the environmental baseline in the SEA and the identification of key environmental issues has been used from these sources.
	We consider that the environmental problems described generally highlight the main issues of relevance for the SEA topics within our remit.	Noted, thank you.
	We are satisfied with the proposed alternatives outlined (as in section 5.3.12). These should be assessed as part of the SEA process and the findings of the assessment should inform the choice of the preferred option. This should be documented in the Environmental Report.	Noted. An extensive series of transport intervention options were developed and appraised as part of the STAG appraisal process (including SEA). The best performing options were then taken forward and aligned in the Draft RTS with the relevant policy themes.
	We agree that in this instance all environmental topics should be scoped into the assessment.	Noted.
	We note and are content with the proposed compatibility matrix to assess vision and strategic objectives and welcome that (as stated in section 5.3.4) a commentary section will be included within the matrices. The commentary section within the matrices should state, where necessary, the reasons for the effects cited and the score given helps to fully explain the rationale behind the assessment results. This allows the Responsible Authority to be transparent and also allows the reader to understand the rationale behind the scores given.	Noted. Commentaries have been provided in the tables presenting the compatibility assessments in Section 5 the ER.
	When it comes to setting out the results of the assessment in the Environmental Report please provide enough information to clearly justify the reasons for each of the assessments presented. It would also be helpful to set out assumptions that are made during the assessment and difficulties and limitations encountered.	Noted. The ER provides commentary on the results of the assessment. A section of assumptions and limitations is set out in Section 4.3 of the report.

Consultee	Consultee Comment(s)	SEA Team Response
	We are content with the proposed SEA objectives (as in Table 4.1) to be used in the assessment.	Noted, thank you.
	We would encourage you to use the assessment as a way to improve the environmental performance of individual aspects of the final option; hence we support proposals for enhancement of positive effects as well as mitigation of negative effects.	Noted. An iterative process has been followed between the SEA and transport planning teams where feedback has been provided on options to reduce environmental impacts and identify opportunities for enhancement where practical. This approach is explained in Section 2.2 and measures to secure enhancement have been set out as part of the mitigation principles in Section 6 of the ER.
	It is useful to show the link between potential effects and proposed mitigation / enhancement measures in the assessment framework.	Noted. Mitigation and enhancement has been captured in the assessment frameworks (see Appendix E and Section 6.2).
	We would encourage you to be very clear in the Environmental Report about mitigation measures which are proposed as a result of the assessment. These should follow the mitigation hierarchy (avoid, reduce, remedy or compensate).	Noted. Mitigation has been presented as clearly as possible at the strategic level of this RTS SEA. All measures would be treated as commitments by SPT to be taken forward as part of relevant implementing plans.
	One of the most important ways to mitigate significant environmental effects identified through the assessment is to make changes to the plan itself so that significant effects are avoided. The Environmental Report should therefore identify any changes made to the plan as a result of the SEA.	Noted. Section 4.5 explains how the SEA assessment and mitigation process has informed the plan making process and iteration of the RTS.
	Although not specifically required at this stage, monitoring is a requirement of the Act and early consideration should be given to a monitoring approach particularly in the choice of indicators. It would be helpful if the Environmental Report included a description of the measures envisaged to monitor the significant environmental effects of the plan.	Noted. A high level description of proposals for future monitoring of environmental effects of RTS implementation is provided in Section 6.3 of the Draft RTS SEA ER.
	We are satisfied with the proposal for a 12 week consultation period for the Issues and Objectives Report and Draft RTS and 8 week consultation period for the Transport Option Report.	Noted, thank you.

Consultee	Consultee Comment(s)	SEA Team Response
	We would find it helpful if the Environmental Report included a summary of the scoping outcomes and how comments from the Consultation Authorities were taken into account.	This table sets out the SEA team's response to the comments provided by the Consultation Authorities on the SEA Scoping Report.
	Although not specifically required at this stage, monitoring is a requirement of the Act and early consideration should be given to a monitoring approach particularly in the choice of indicators. It would be helpful if the Environmental Report included a description of the measures envisaged to monitor the significant environmental effects of the plan.	Noted. A high level description of proposals for future monitoring of environmental effects of RTS implementation is provided in Section 6.3 of the Draft RTS SEA ER
Historic Environment Scotland	Relationship between the Emerging RTS and Other Relevant Plans - We note that the review of other relevant plans has not identified any relevant implications for the emerging RTS in relation to the historic environment. We recommend that you revisit this review, as we would expect you to identify relevant policy, priorities and objectives for the historic environment which should inform development of the RTS.	Noted. The review has been checked and updated to accommodate this recommendation and is set out in Table B.1 (policy review) and Table 4.2 (SEA Framework) of this SEA ER.
	Table 4.4: Proposed RTS SEA Framework - We are broadly content with the objectives, guide questions and criteria proposed for the historic environment under Cultural Heritage. We recommend that the assessment considers effects on historic places and spaces as well as individual assets. The Proposed Criteria to Assess Candidate Transport Interventions and Schemes refer only to designated assets; your assessment should also consider undesignated and unknown historic environment assets and spaces.	Noted. The SEA Framework has been updated to accommodate this point (as presented in the SEA Case for Change report).
	Your review of relevant PPS at Appendix B identifies that 'the SEA Framework should allow for the assessment of likely significant effects in terms of access to cultural heritage and the understanding of cultural heritage assets'. We agreed with this conclusion and recommend that you address this within the objectives, guide questions and criteria.	Noted. The SEA framework guide questions and criteria (presented in Table 4.2) has been updated accordingly.
	Table A.1: Designated Sites of Relevance to the Emerging RTS - Your review of baseline for the historic environment should be expanded to include nationally designated assets such as Inventory Gardens and Designed Landscapes and Inventory Battlefields, but also locally designated assets, and non-designated historic environment assets (such as those identified on local historic environment records) and their settings. The Implications for Emerging RTS and Implications for SEA sections of this table should recognise these elements of the historic environment baseline by referring to the	Noted. Since the SEA Scoping Report was prepared some development of the environment baseline has been undertaken and reference made to these elements (see Appendix A). The relevance of this information has been captured in Table 3.1 which synthesises key information from the baseline review.

Consultee	Consultee Comment(s)	SEA Team Response
	protection and enhancement (where applicable) of both designated and undesignated and unknown historic environment assets.	It is important to note that the Draft RTS is a strategic document and the SEA at this stage has not included assessment of locational effects as site-specific interventions are not included in the Strategy. It is proposed that as the RTS is implemented, including through a Delivery Plan, that more detailed transport corridor environmental baselines would be developed.
	You propose a consultation period of 12 weeks for the Issues & Objectives Report and Draft RTS and accompanying Environmental Reports, and a period of 8 weeks for the Transport Options Report and ER. We are content with the consultation periods proposed. Please note that, for administrative purposes, we consider that the consultation period commences on receipt of the relevant documents by the SEA Gateway.	Noted, thank you.
Feedback on the SEA Case for Change Report[50]		
Glasgow City Council	The SEA report seems comprehensive. Clarity on the process would be helpful – will the ER be updated once the appraisal of options is complete in the RTS?	Noted. The appraisal of options includes environmental assessment which is captured in this Draft RTS SEA ER. Following consultation on the Draft RTS, it will be revised and finalised and an SEA Post Adoption Statement will be published providing a summary of how environmental issues have been addressed in the Strategy.
Cumnock Community Council	SEA: A comprehensive and detailed report, but insufficient detail of how and when it will be implemented (in full?)	Please see above response. Further information on how the environmental effects of implementation of the RTS in future will be mitigated and managed is presented in Section 6 of this ER.

[50] No formal responses were received on the Case for Change SEA Environmental Report from the SEA Consultation Authorities

Consultee	Consultee Comment(s)	SEA Team Response
		The Draft RTS document (for consultation) also includes more information on the proposals for implementation including an RTS Delivery Plan.

Appendix D Environmental Appraisal of RTS Transport Options

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 option. This appraisal was undertaken in line with Scottish Transport Appraisal (STAG) guidance.

D.1.2 Further information on the process of transport option development and STAG appraisal is set out in a stand-alone appraisal report (Stantec UK, 2022) which will be made available during consultation on the Draft RTS and this SEA ER.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
1 - Regional accessibility strategy to prioritise and deliver actions from the Scottish Accessible Travel Framework	0	At that margin, implementing measures from a Regional Accessibility Strategy could encourage public transport use through improved accessibility at the expense of the private car leading to environmental improvements but this impact would be very modest	0	At that margin, implementing measures from a Regional Accessibility Strategy could encourage public transport use through improved accessibility at the expense of the private car leading to recued carbon emissions but this impact would be very modest.
2 - Journey assistance services across all public transport operators in the region	0	At that margin, implementing journey assistance services could encourage public transport use through improved accessibility at the expense of the private car (lifts etc.) leading to environmental improvements but this impact would be very modest	0	At that margin, implementing journey assistance services could encourage public transport use through improved accessibility at the expense of the private car (lifts etc.) leading to recued carbon emissions but this impact would be very modest.
3 - Integration of journey assistance services between operators / modes	0	At that margin, this could encourage public transport use through improved accessibility at the expense of the private car (lifts etc.) leading to environmental improvements but this impact would be very modest.	0	At that margin, this could encourage public transport use through improved accessibility at the expense of the private car (lifts etc.) leading to recued carbon emissions but this impact would be very modest.
4 - Fully accessible and comprehensive travel information and journey planning services – at stops/stations, on board services, and digital – including improved audio/visual information	0	At the margin, implementing fully accessible and comprehensive travel information and journey planning would encourage public transport use through improved accessibility and ease of travel at the expense of the private car (lifts etc.) leading to environmental improvements, but this impact would be very modest.	0	At the margin, implementing fully accessible and comprehensive travel information and journey planning would encourage public transport use at the expense of the private car (lifts etc.) leading to environmental improvements, but this impact would be very modest..
5 - Promote awareness and training to public transport staff about hidden disabilities	0	Providing staff training on non-visible disabilities will improve public transport accessibility for certain groups, however, this option is not expected to encourage substantial modal shift or subsequent material environmental impacts..	0	Providing staff training on non-visible disabilities is not expected to encourage substantial model shift or subsequent changes to traffic levels or emissions
6 - Enhanced accessibility of public	0	At the margin, enhanced physical accessibility of public transport and active travel infrastructure would encourage the use of sustainable	0	At the margin, enhanced physical accessibility of public transport and active travel infrastructure would

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
transport and active travel infrastructure		transport at the expense of the private a leading to environmental improvements but this impact would be very modest.		encourage the use of sustainable transport at the expense of the private a leading to reduced emissions but this impact would be very modest.
7 - Increased access to accessible demand responsive transport services	0	Increasing access to DRT services is not expected to have any environmental impacts.	0	Increasing access to DRT services is not expected to encourage substantial modal shift or lead to subsequent changes to traffic levels or emissions..
8 - “Level of Service” regional policy – this would clarify and define the desired level of access by public transport / active travel for a geographic area or community	×-✓	Implementing a level of service policy could encourage increased public transport use if network coverage and frequencies increase. The environmental impact would depend on the balance of the impacts of additional bus-km and reduced car traffic from any mode shift.	×-✓	Implementing a level of service policy could encourage increased public transport use if network coverage and frequencies increase. The impact on emissions would depend on the balance of the impacts of additional bus-km and reduced car traffic from any mode shift.
9 - “Total Transport” approach and initiatives – options to integrate transport services in geographic areas that are currently commissioned by different government agencies and delivered by different operators, such as non-emergency patient transport, socially necessary bus services, adult social care transport and home to school transport.	0	Implementation of a ‘total transport’ approach would be a mainly organisation change and would not be likely to have any material impact on the supply side and therefore travel behaviour	0	Implementation of a ‘total transport’ approach would be a mainly organisation change and would not be likely to have any material impact on the supply side and therefore travel behaviour.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
10 - Local accessibility frameworks or plans for local communities to tackle specific problems (e.g. locality planning areas)	0	While the implementation of a local accessibility framework could encourage undertaking local journeys, it is unlikely to have any material environmental impacts.	0 - ✓	The implementation of a local accessibility framework could encourage undertaking local journeys more sustainably, but it is not expected that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions.
11 - Jobs access schemes – option to develop schemes that help unemployed people into work by removing transport barriers including cost, information and journey planning barriers. Typically, these schemes offer personalised travel advice and free or discounted travel particularly during the first weeks of a new job before wages are received.	0	The implementation of measures from job access schemes are not predicted to have material environmental impacts	0	The implementation of measures from job access schemes are not predicted to lead to substantial modal shift or a subsequent material impact on traffic levels and emissions.
12 - Health and Transport Action Plan with each Health board in the region	0	The implementation of measures from a Health and Transport Action Plan are not predicted to have material environmental impacts.	0	The implementation of measures from a Health and Transport Action Plan are not predicted to lead to substantial modal shift or a subsequent material impact on traffic levels and emissions.
13 - Improved walking & cycling routes to public transport	✗-✓	This option may require infrastructure enhancements which could have a negative impact on the environment. However, improving access to public transport stops / stations encourages public transport	✓	This option may require infrastructure enhancements which could have a short-term negative impact on emissions during construction. However, improving access to public transport stops / stations encourages

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
		and mode shift from the car. This would have beneficial environmental impacts through improved air quality and reduced traffic noise etc.		public transport and mode shift from the car, reducing greenhouse gas emissions.
14 - Increase and enhance active walking & cycling network	×-✓	This option may require infrastructure enhancements which could have a negative impact on the environment. However, improving the active walking and cycling network encourages public transport and mode shift from the car. This would have beneficial environmental impacts through improved air quality and reduced traffic noise etc.	✓	This option may require infrastructure enhancements which could have a short-term negative impact on emissions during construction. However, improving the active walking and cycling network encourages public transport and mode shift from the car, reducing greenhouse gas emissions.
15 - Improved safety and security on routes to public transport	✓	Improving the safety and security on routes to public transport encourages public transport use which could reduce reliance on the private car, in turn improving air quality and reducing roadside noise from traffic. All infrastructure improvements should be implemented to avoid adverse impacts on areas of local environmental sensitivity.	✓	Improving the safety and security on routes to public transport encourages public transport use which could reduce reliance on the private car, in turn reducing greenhouse gas emissions.
16 - Enhanced walking and cycling infrastructure including segregation and safer crossings	×-✓	Enhanced walking and cycling infrastructure would improve access to, and engagement in, active travel. This would potentially encourage modal shift leading to beneficial environmental impacts through improved air quality and reduced roadside noise from traffic in the locations of improved infrastructure. However, the beneficial impacts are not predicted to be significant unless delivered on a major scale. Additionally, any enhancements should be designed to avoid adverse impacts on areas of local environmental sensitivity.	✓	Enhanced walking and cycling infrastructure would improve access to, and engagement in, active travel. This would potentially encourage modal shift leading to beneficial impacts through reduced greenhouse gas emissions. However, the beneficial impacts are not predicted to be significant unless delivered on a major scale, and there would be embodied carbon associated with construction work.
17 - Strategic active travel network and active freeways	✓	Implementing a strategic active travel network would encourage cross-region active travel journeys and modal shift. This would potentially encourage modal shift leading to beneficial environmental impacts through improved air quality and potentially reduced roadside noise from road traffic in the locations of improved infrastructure. This option will likely require significant infrastructure improvements which should be designed to avoid adverse impacts on areas of local environmental sensitivity.	✓-✓✓	Implementing a strategic active travel network would encourage cross-region active travel journeys and modal shift. This would potentially encourage modal shift leading to beneficial impacts through overall reduced greenhouse gas emissions. The effects may be locally significant in key corridors where the measures were delivered at scale, although there be embodied carbon associated with new construction.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
18 - Regional Active Travel Network Strategy	✓	Implementing measures from a Regional Active Travel Network Strategy would encourage active travel journeys. This would potentially encourage modal shift leading to beneficial environmental impacts through improved air quality and potentially reduced roadside noise from traffic in the locations/key corridors of improved infrastructure.	✓	Implementing measures from a Regional Active Travel Network Strategy would encourage active travel journeys. This would potentially encourage modal shift leading to beneficial impacts through overall reduced greenhouse gas emissions. The effects will be dependent on the measures implemented.
19 - Implementation of Pavement Parking guidance and regulations	0	While the implementation of Pavement Parking guidance and regulations would make it easier to undertake active travel journeys, it not expected that there would be substantial material impact on air quality or other environmental considerations.	0	The implementation of Pavement Parking guidance and regulations would make it easier to undertake active travel journeys. However, it is not expected that there would be significant modal shift or a subsequent material impact on traffic levels and subsequent emissions.
20 - Place-making schemes to improve the quality of the built environment for walking and cycling	0 - ✓	Place-making schemes would encourage active travel, especially for short, local journeys. This would potentially encourage modal shift leading to beneficial environmental impacts through improved air quality and reduced roadside traffic noise. Any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.	0 - ✓	Place-making schemes would encourage active travel, especially for short, local journeys. This would potentially encourage modal shift leading to beneficial impacts through reduced greenhouse gas emissions. this would be offset by embodied carbon associated with any construction.
21 - Active travel promotional, marketing and branding activities	✓	Active travel promotional, marketing and branding activities would encourage active travel, especially for short, local journeys. This would potentially encourage modal shift leading to beneficial environmental impacts through improved air quality etc.	✓	Active travel promotional, marketing and branding activities would encourage active travel, especially for short, local journeys. This would potentially encourage modal shift leading to beneficial impacts through overall reduced greenhouse gas emissions.
22 - Support and promote uptake of electric bikes	✓	Supporting and promoting the uptake of electric bikes may encourage active travel. It would potentially encourage modal shift by providing a realistic alternative to the private car for some journeys. There may be potential benefits through improved air quality and reduced roadside traffic noise in corridors where uptake is substantial.	✓	Supporting and promoting the uptake of electric bikes may encourage active travel. It would potentially encourage modal shift by providing a realistic alternative to the private car for some journeys. There may be potential benefits through reduced greenhouse gas emissions in corridors where uptake is substantial.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
23 - Invest in electric bike infrastructure	0 - ✓	Investing in electric bike infrastructure may encourage active travel. It would potentially encourage modal shift by providing a realistic alternative to the private car for some journeys. There may be potential benefits through improved air quality and reduced roadside traffic noise in corridors where uptake is substantial. There would be local environmental implications at any new charging stations.	0 - ✓	Investing in electric bike infrastructure may encourage active travel. It would potentially encourage modal shift by providing a realistic alternative to the private car for some journeys. There may be potential benefits through reduced greenhouse gas emissions in corridors where uptake is substantial.
24 - Develop local bike hire & bike sharing schemes and initiatives	0 - ✓	Developing bike hire and sharing schemes would help make cycling more accessible and encourage active travel. There may be potential environmental benefits through improved air quality. There would be local environmental implications at any new charging stations	✓	Developing bike hire and sharing schemes would make cycling more accessible and encourage active travel. There may be potential benefits through reduced greenhouse gas emissions.
25 - Facilitate development of cross-boundary bike hire / bike sharing opportunities	0 - ✓	Developing bike hire and sharing schemes would help make cycling more accessible and encourage active travel. There may be potential environmental benefits through improved air quality. There would be local environmental implications at any new charging stations	✓	Developing bike hire and sharing schemes would make cycling more accessible and encourage active travel. There may be potential benefits through reduced greenhouse gas emissions.
26 - Co-ordinated and enhanced active travel journey planning information	0 - ✓	Co-ordinated and enhanced active travel journey planning would encourage active travel journeys. There may be potential benefits through modal shift, including improved air quality. However, it is not predicted that this would lead to substantial modal shift without other supporting measures and therefore the benefits are likely to be modest.	0 - ✓	Co-ordinated and enhanced active travel journey planning would encourage active travel journeys. There may be potential benefits through modal shift, including reduced greenhouse gas emissions. However, it is not predicted that it would lead to substantial modal shift without other supporting measures and therefore the benefits are likely to be modest.
27 - Support development of national aviation review	✗-✓	Supporting the development of a National Aviation Review may increase air travel and consequently would have negative environmental impacts including reduced local air quality. However, depending on the nature of the review, it may promote more efficient travel and/or reduce the number of flights. This could reduce the negative environmental impacts of aviation particularly in combination with future low carbon aircraft designs and fuels.	✗-✓	Supporting the development of a National Aviation Review may increase air travel and consequently increase emissions. However, depending on the nature of the review, it may promote more efficient travel and/or reduce the number of flights. This could reduce the negative impacts of aviation in the region particularly in combination with future low carbon aircraft designs and fuels.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
28 – Increase travel planning including promoting TravelKnowHow	0 - ✓	Improved travel planning may reduce traffic volumes and therefore improve air quality and reduce roadside traffic noise etc. However, it is not anticipated to lead to substantial modal shift without supporting measures and the benefits are likely to be modest	0 - ✓	Improved travel planning information may encourage car sharing and/or modal shift leading to reduced greenhouse gas emissions. However, it is not anticipated to lead to substantial modal shift without supporting measures and the benefits are likely to be modest.
29 – Support and develop behaviour change activities that tackle wider societal norms around car use particularly to support sustainable travel to school	0 - ✓	As this option would not physically alter the transport network, it is unlikely to have any impact on the physical environmental. Behavioural change initiatives may reduce traffic volumes which would improve air quality (particularly around schools) and reduce roadside traffic noise etc. Benefits could be significant around schools..	0 - ✓	Reduced car use for school travel and other behavioural change measures would reduce greenhouse gas emissions
30 - Enhanced local / regional bus services & networks	✓	Enhanced bus services and networks encourages bus use and can reduce the use of private cars. This would potentially have beneficial environmental impacts through improved air quality and reduced roadside noise from traffic etc. This would be offset somewhat by noise and emissions from additional bus km.	✓-✓✓	Enhanced bus services and networks encourages bus use and can reduce the use of private cars. This would potentially have beneficial impacts through reduced greenhouse gas emissions. This level of impact would depend on the balance of any additional emissions from new bus-km and the reduction in emissions through modal shift from car. Moderate beneficial impacts could result in corridors where there was a material change in traffic levels.
31 -New / enhanced bus lanes/segregation	✗-✓	New / enhanced bus lanes/segregation may encourage public transport use through shorter journey times and improved reliability. Mode shift from car would have beneficial environmental impacts through improved air quality and reduced roadside noise. There may be construction impacts and land take requirements depending on the individual intervention. The impacts are very scalable depending on the level of investment. Any re-routeing of general traffic may generate negative impacts for communities affected by this.	✗-✓	New / enhanced bus lanes/segregation may encourage public transport use through shorter journey times and improved reliability. Mode shift from car would reduce greenhouse gas emissions. The level of new construction would determine any embedded carbon impacts and new construction would be futureproofed against the impacts of climate change. The impacts are very scalable depending on the level of investment. Any re-routing of

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
				general traffic may generate additional emissions outweighing the savings made.
32 - Improved traffic management measures to support bus priority	0 - ✓	This option may encourage public transport use through shorter journey time improved reliability. This would potentially have beneficial environmental impacts through improved air quality and a reduction of roadside noise from traffic. It is unlikely that there would be an impact on wider environmental considerations.	0 - ✓	This option may encourage public transport use through shorter journey times and improved reliability. This would potentially have beneficial impacts through reduced greenhouse gas emissions and lower emissions of local air pollutants. However, it is not expected that there would be substantial modal shift or a subsequent significant impact on emissions. These measures would be expected to have less of an effect on traffic routeing compared to the reallocation of roadspace.
33 -New / enhanced traffic signal control	0 - ✓	The option may encourage public transport use through journey time reliability. This would potentially have beneficial environmental impacts through improved air equality and reduced roadside noise from traffic. It is unlikely that there would be an impact on wider environmental considerations. As a stand-alone measure the benefits are not predicted to be significant.	0 - ✓	The option may encourage public transport use through journey time reliability. This would potentially have beneficial impacts through reduced greenhouse gas emissions and emissions of local air pollutants. However, it is not expected that there would be substantial modal shift or a subsequent significant impact on traffic levels and emissions.
34 - Enhanced enforcement of bus lanes	0 - ✓	At the margin, this option may encourage public transport use through journey time improvements and reliability at the expense of the car. This would potentially have beneficial environmental impacts through improved air quality.	0 - ✓	At the margin, this option may encourage public transport use through journey time improvements and reliability at the expense of the car. This would have beneficial impacts through reduced greenhouse gas emissions.
35 - New / Enhanced bus park and ride	✖-✓	New/ enhanced bus park and ride will encourage multi-modal trips and increased public transport use. This would potentially have environmental beneficial impacts through reduced improved air quality and reduction of roadside noise from traffic where modal shift is achieved. Any new P&R sites would need to be located in suitable areas to avoid significant effects on locally sensitive areas and	0 - ✓	New/ enhanced bus park and ride will encourage multi-modal trips and increased public transport use. This would potentially have beneficial impacts through reduced greenhouse gas emissions. However, the construction of the site would generate carbon emissions, as would any additional buses used to operate the service, and the site may encourage some to travel by

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		communities. There would though be environmental impacts associated with new construction..		car / bus when previously their journey was entirely by bus.
36 - Community Transport sector transition to ultra-low emission vehicles	✓	Transitioning the community transport sector to ultra-low emission vehicles has the potential to improve local quality at the margin..	✓	Transitioning the community transport sector to ultra-low emission vehicles would help to reduce greenhouse gas emissions at the margin.
37 - Support role of Community Transport in providing access to healthcare	0	At the margin, supporting the role of CT in providing access to healthcare may reduce the use of private vehicles with very modest environmental benefits, although his would depend on the type of vehicle used by the CT provider.	0	At the margin, supporting the role of CT in providing access to healthcare may reduce the use of private vehicles with very modest impacts on carbon emissions, although his would depend on the type of vehicle used by the CT provider
38 - Development and enhanced capacity building & resilience of Community Transport Network	0	At the margin, supporting the role of CT in providing access to healthcare may reduce the use of private vehicles with very modest environmental benefits, although his would depend on the type of vehicle used by the CT provider.	0	At the margin, supporting the role of CT in providing access to healthcare may reduce the use of private vehicles with very modest impacts on carbon emissions, although his would depend on the type of vehicle used by the CT provider.
39 - Regional Electric Vehicle (EV) network charging strategy	✓✓	The implementation of a Regional Electric Vehicle charging strategy will, by definition, support the transition to electric vehicles. This will have local benefits related to improved air quality and potentially reduced roadside traffic noise. However, there could be indirect negative global environmental impacts from increased battery production which requires mineral mining	✓✓	The implementation of a Regional Electric Vehicle charging strategy will, by definition, support the transition to electric vehicles. This will have benefits related to reduced tailpipe greenhouse gas emissions. However, the benefits of this will depend on the whole life carbon costs of EVs versus conventional vehicles in the Scottish context.
40 - Invest in EV charging infrastructure	✓✓	Investing in EV charging infrastructure will, by definition, support the transition to electric vehicles. This will have local benefits related to improved air quality and potentially reduced roadside traffic noise. However, there could be indirect negative global environmental	✓✓	Investing in EV charging infrastructure will support the transition to electric vehicles. This will have benefits related to reduced tailpipe greenhouse gas emissions. However, the benefits of this will depend on the whole life

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		impacts from increased battery production which requires mineral mining		carbon costs of EVs versus conventional vehicles in the Scottish context..
41 - Promotion of Ultra Low Emissions Vehicles (ULEVs)	0 - ✓	The promotion of ULEVs will support and encourage the transition to low carbon private transport. If realised, this would have local benefits related to improved local air quality and reduced roadside traffic noise	0 - ✓	The promotion of ULEVs will support and encourage the transition to low carbon private transport. If realised, this would have benefits related to reduced greenhouse gas emissions.
42 - Local bus fleet transition to ultra-low emission buses	✓✓	Transitioning the local bus fleet to ULEVs would reduce the impact of buses on the environment. This would have beneficial impacts through improved air quality and potentially reduced roadside noise from road traffic	✓✓	Transitioning the local bus fleet to ULEVs would reduce the bus network's impact on climate change. This would have beneficial impacts through reduced greenhouse gas emissions.
43 - Freight sector transition to ultra-low emission vehicles	✓-✓✓	Transitioning the freight network to ULEVs reduces the impact of the freight sector on the environment. This would have beneficial impacts through improved air quality and potentially reduced roadside noise from road traffic. Where implemented at scale there is potential for significant beneficial impacts.	✓-✓✓	Transitioning the freight network to ULEVs reduces the impact of the freight sector on the environment. This would have beneficial impacts through reduced greenhouse gas tailpipe emissions. Where implemented at scale there is potential for significant beneficial impacts. However, the benefits of this will depend on the whole life carbon costs versus conventional vehicles in the Scottish context.
44 - Development of alternatives to battery electric vehicles, particularly Hydrogen opportunities and for larger vehicles	✓-✓✓	Developing alternatives to battery electric vehicles, such as 'green' hydrogen, will support the transition to alternative fuel vehicles. This would have beneficial environmental impacts through improved local air quality. The level of benefits realised will depend on the implementation of the option but might be significant where deployed at scale.	✓-✓✓	Developing alternatives to battery electric vehicles, such as 'green' hydrogen, will support the transition to alternative fuel vehicles. This would have beneficial impacts through reduced greenhouse gas emissions. The level of benefits realised will depend on the implementation of the option but might be significant where deployed at scale
45 - Implementation of Low Emission Zones	✓✓	The implementation of an LEZ would have significant beneficial impacts through improved local air quality and reduced roadside noise from road traffic in urban areas. Additionally, it may generate revenue which can be used to reinvest in sustainable transport infrastructure	✓✓	The implementation of an LEZ would have significant beneficial impacts through reduced greenhouse gas emissions. Additionally, it may generate revenue which can be used to reinvest in sustainable transport

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		which could also help to improve local air quality further. The level of benefits realised will depend on the implementation of the option but may be significant in the LEZ areas. There may be displacement of higher polluting vehicles to bordering neighbourhoods		infrastructure which could also help to reduce emissions further. The level of benefits realised will depend on the implementation of the option but may be significant in the LEZ areas
46 - Air quality mitigation measures	✓-✓✓	The implementation of air quality mitigation measures would have potentially significant beneficial impacts through improved local air quality. The level of benefits realised will depend on the nature and scale of the measures implemented. It is unlikely that there would be wider environmental implications	✓-✓✓	The implementation of air quality mitigation measures would have potentially significant beneficial impacts through reduced greenhouse gas emissions. The level of benefits realised will depend on the nature and scale of the measures implemented
47 - Taxi sector transition to low emission vehicles	✓	Transitioning the taxi sector to low emission vehicles would help to reduce emissions with beneficial environmental impacts. Thus, there is scope to improve local air quality.	✓	Transitioning the taxi sector to low emission vehicles would reduce tailpipe greenhouse gas emissions.
48 - Support Rail Services Decarbonisation Plan	✓✓	Supporting implementation of the Rail Services Decarbonisation Action Plan would have the potential for significant beneficial environmental impacts through improved local air quality and reduction of noise pollution, depending on the scale and nature of implementation. Air quality at stations would be likely to significantly improve for passengers and staff.	✓✓	Supporting implementation of the Rail Services Decarbonisation Plan would have the potential for significant beneficial environmental impacts through reduced greenhouse gas emissions, depending on the scale and nature of implementation..
49 - Regional demand management policy – option to develop regional policy framework to support the development and implementation of demand management interventions in the region including establishing principles of what types of	0 -✓✓✓	Developing the strategy will have no impact on the STAG criteria. Implementing a regional demand management policy has significant scope to reduce car-based travel. Where this is achieved, there is potential to improve air quality and the other negative local impacts of road traffic..	0 - ✓✓✓	Developing the strategy will have no impact on the STAG criteria. Implementing a regional demand management policy has significant scope to reduce the level of greenhouse emissions produced by road vehicles.

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interventions are best developed on a cross-boundary, regional or national level.				
50 - Demand management measures – options for road space reallocation, parking, pricing and behaviour change	✓✓✓	Implementing demand management measures would have significant scope to reduce car-based travel. Where this is achieved, there is potential to improve air quality and the other negative local impacts of road traffic. The reallocation of roadspace could be used for urban realm improvements. The reallocation of roadspace could be used for urban realm improvements. Where implementation of measures generates revenue, this may be used to reinvest in sustainable transport infrastructure which could also help to improve local air quality further	✓✓✓	The implementation of demand management measures has significant scope to reduce the level of greenhouse gas produced by road vehicles.
51 - Increased capacity, flexibility and coverage of demand responsive services	0	Increasing capacity and coverage of DRT services is not expected to have substantial environmental impacts.	0	Increasing capacity and coverage of DRT services is not expected to encourage substantial modal shift or lead to subsequent changes to traffic levels or emissions
52 - Support development and delivery of the Islands Connectivity Plan	-	Unknown at this stage – SPT will encourage options which minimise environmental impact	-	Unknown at this stage – SPT will encourage options which minimise carbon emissions
53 - Enhanced resilience of ferry services for Arran and Cumbrae and peninsular communities on the Clyde.	0	Reduced cancelations of ferry services is unlikely to have a direct impact on the environment.	0	Any reduction in the ferry service disruption is unlikely to have a direct impact on carbon emissions. There may be some minor reduction in emissions from road vehicles which need to make long detours when ferry services are suspended and there are alternative routes / crossings..
54 - Enhanced harbour and terminal infrastructure for	××	Enhanced harbour and ferry terminal infrastructure is likely to have an impact on the environment during construction. These impacts could	×	Enhancing ferry terminal infrastructure has the potential to increase emissions locally during construction.

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passenger ferry services		be mitigated through suitable environmental management plans to avoid impacts to coastal habitats and water quality..		
55 - Enhanced capacity on ferry routes on the Clyde	✗-✓	Enhanced capacity on ferry routes on the Clyde would potentially require additional vessels and/or sailings which may negatively impact air quality (unless newer and more fuel-efficient vessels were introduced). It may also encourage more car travel to/from the islands which could worsen these negative impacts.	✗-✓	Enhanced capacity on ferry routes on the Clyde would potentially require additional vessels and/or sailings which may increase emissions (unless newer and more fuel-efficient vessels were introduced). Enhanced capacity may also encourage more car travel to/from the islands which could have some adverse environmental impacts e.g., from increased road traffic emissions.
56 - Transport (Scotland) Act 2019 provisions for local bus – options for franchising, municipal bus companies and Bus Service Improvement Partnerships	0 - ✓	This option will give SPT the opportunity to improve bus services and networks in their area which will encourage bus use. This would potentially have beneficial environmental impacts through improved air quality and reduced roadside noise from traffic etc. This would be offset somewhat by noise and emissions from additional bus km.	✓-✓✓	This option will give SPT the opportunity to provide enhanced bus services and networks encouraging bus use and can reduce the use of private cars. This would potentially have beneficial impacts through reduced greenhouse gas emissions. This level of impact would depend on the balance of any additional emissions from new bus-km and the reduction in emissions through modal shift from car. Moderate beneficial impacts could result in corridors where there was a material change in traffic levels.
57 - Improved integration between Community Transport, Demand Responsive Transport, and local public transport	0 - ✓	Improved integration of community transport, DRT and local bus services would improve the efficiency of services and encourage increased public transport use. This would potentially have beneficial impacts through improved air quality and reduced roadside noise from road traffic in some areas. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions. It is unlikely that there would be wider environmental implications.	0 - ✓	Improved integration of community transport, DRT and local bus services would improve the efficiency of services and encourage increased public transport use. This would potentially have beneficial impacts through reduced greenhouse gas emissions in some areas. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions
58 - Sustainable integrated transport hubs for hospitals,	✓-✓✓	Implementing sustainable integrated transport hubs for key destinations would encourage the increased use of public transport. It	✓-✓✓	Implementing sustainable integrated transport hubs for key destinations would encourage the increased use of

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campuses & town centres		would also improve access to sustainable services. In turn, this would be predicted to have beneficial environmental impacts through improved air quality and reduced noise from road traffic in key corridors. Any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.		public transport. It would also improve access to sustainable services. In turn, this would be predicted to have beneficial environmental impacts through reduced greenhouse gas emissions in key corridors.
59 - Integrated 'mini' transport hubs for smaller towns and rural communities to improve integration with mainstream public transport	✓	Enhanced public transport hubs and public transport service connections in smaller settlements would encourage the increased use of public transport in these areas. This would potentially have beneficial environmental impacts through improved air quality and potentially reduced noise from road traffic. However, beneficial impacts are not predicted to be significant. Any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.	✓	Enhanced public transport hubs and public transport service connections in smaller settlements would encourage the increased use of public transport in these areas. This would potentially have beneficial impacts through reduced greenhouse gas emissions. However, beneficial impacts are not predicted to be significant.
60 - Improved resilience and sustainability of rural transport services and networks in the region	0 - ✓	Increased sustainable transport options on islands and rural mainland communities will encourage increased public transport use and sustainable travel. This would potentially have small beneficial environmental impacts through improved local air quality. However, beneficial impacts are not predicted to be significant..	0 - ✓	Improved resilience and sustainability of rural transport services and networks will encourage increased public transport use and sustainable travel. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions. However, beneficial impacts are not predicted to be significant as a stand-alone measure
61 - Increased sustainable transport options on islands and rural mainland communities	✓	Increased sustainable transport options on islands and rural mainland communities will encourage increased public transport use and sustainable travel. This would potentially have small beneficial environmental impacts through improved local air quality. However, beneficial impacts are not predicted to be significant.	✓	Increased sustainable transport options on islands and rural mainland communities will encourage increased public transport use and sustainable travel. This would potentially have beneficial impacts through overall reductions in greenhouse gas emissions. However, beneficial impacts are not predicted to be significant.
62 - Improve integration of active travel and public transport	✓	Improving the integration of active travel and public transport encourages public transport use which could discourage people from using their private cars as their main mode of transport. This would	✓	Improving the integration of active travel and public transport encourages public transport use which could deter people from depending on their private cars as their

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		potentially have beneficial environmental impacts through improved local air quality. However, beneficial impacts are not predicted to be significant as a stand-alone measure. It is unlikely that there would be wider environmental implications.		main mode of transport. This would potentially have beneficial impacts through reduced greenhouse gas emissions. However, beneficial impacts are not predicted to be significant as a stand-alone measure.
63 - Improved multi-modal integration of public transport networks and services	✓ - ✓✓	Improving multi-modal integration of public transport networks and services encourages public transport use which could deter people from depending on their private cars as their main mode of transport. This would potentially have beneficial environmental impacts through improved local air quality. If designed and integrated properly, benefits could be significant. Any new integrated infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.	✓	Improving multi-modal integration of public transport networks and services encourages public transport use which could deter people from depending on their private cars as their main mode of transport. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions.
64 - A regional framework for Mobility as a Service – option to develop a framework for the development and delivery of MaaS in the region	0 - ✓	The implementation of a regional framework for MaaS may encourage public transport use and/or more efficient use of transport options if maas makes these modes easier to access and use. This would potentially have beneficial impacts through improved air quality where overall levels of car travel declined. However, there is some uncertainty around transport outcomes for MaaS and it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels. It is unlikely that there would be wider environmental implications.	0 - ✓	The implementation of a regional framework for MaaS may encourage public transport use and/or more efficient use of transport options if maas makes these modes easier to access and use. This would potentially have beneficial impacts through reduced greenhouse gas emissions where overall levels of car travel declined. However, there is some uncertainty around transport outcomes for MaaS and it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions.
65 - Transit-oriented development – land-use developments which support and facilitate sustainable travel	✓	TOD encourages public transport use and active travel which could deter people from depending on private cars as their main mode of transport and reduce overall vehicle kilometres. This would potentially have beneficial environmental impacts through reduced emissions of local air pollutants and roadside noise from road traffic. The predicted impacts would not be significant in the short to medium term but would contribute to future low/zero carbon development, particularly when promoted with complementary measures. It is unlikely that there would be wider environmental implications.	✓	TOD encourages public transport use and active travel which could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through a reduction in carbon emissions. The predicted impacts would not be significant in the short to medium term but would contribute to future low/zero carbon development particularly when promoted with complementary measures.

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66 – Sustainable transport for new development	0 - ✓	Implementing sustainable transport options for new developments encourages public transport use and active travel for those living, working or visiting the areas of development. This could deter people from depending on private cars as their main mode of transport for these trips. This would potentially have beneficial environmental impacts through improved air quality and reduced roadside noise from road traffic. However, modal shift would be dependent on the measures implemented and beneficial impacts are not predicted to be significant as a stand-alone measure particularly in the short to medium term. Any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.	0 - ✓	Implementing sustainable transport options for new developments encourages public transport use and active travel for those living, working or visiting the areas of development. This could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial climate impacts through reduced greenhouse gas emissions. However, modal shift would be dependent on the measures implemented and beneficial impacts are not predicted to be significant as a stand-alone measure, particularly in the short to medium term
67 - Develop a Housing & Transport Affordability Index (H&TA)	0 - ✓	Developing a H&TA Index encourages public transport and could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial environmental impacts through improved air quality. However, reductions in vehicle kilometres and/or modal shift would be dependent on the measures implemented and beneficial impacts are not predicted to be significant as a stand-alone measure. It is unlikely that there would be wider environmental implications.	0 - ✓	Developing a H&TA Index encourages public transport and could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial climate impacts through reduced greenhouse gas emissions. However, reductions in vehicle kilometres and/or modal shift would be dependent on the measures implemented and beneficial impacts are not predicted to be significant as a stand-alone measure..
68 - City & town centre living strategies	0 - ✓	Implementing City & Town Centre Living Strategies would encourage public transport and active travel while potentially deterring people in urban centres from depending on private cars as their main mode of transport. This would potentially have beneficial environmental impacts through improved air quality. However, reduced vehicle kilometres and /or modal shift would be dependent on the measures implemented and beneficial impacts are not predicted to be significant as a stand-alone measure..	0 - ✓	Implementing City & Town Centre Living Strategies would encourage public transport and active travel while potentially deterring people in urban centres from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through reduced greenhouse gas emissions. However, reduced vehicle kilometres and /or modal shift would be dependent on the measures implemented and beneficial

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				impacts are not predicted to be significant as a stand-alone measure..
69 - “20-minute neighbourhoods”	✓	Implementing 20-minute neighbourhoods would encourage active travel, particularly for short, local journeys. This would potentially have beneficial environmental impacts through improved air quality and reduced roadside noise from road traffic. Beneficial impacts are not predicted to be significant as a stand-alone measure in the short to medium term. It is unlikely that there would be wider environmental implications.	✓	Implementing 20-minute neighbourhoods would encourage active travel, particularly for short, local journeys. This would potentially have beneficial climate impacts through reduced greenhouse gas emissions. Beneficial impacts are not predicted to be significant as a stand-alone measure in the short to medium term.
70 -No/Low car housing development	0 - ✓	No/low car housing development encourages public transport use and active travel. There could be benefits from reduced car use including improved local air quality. However, modal shift would be dependent on the other services offered and beneficial impacts are not predicted to be significant as a stand-alone measure particularly in the short to medium term. It is unlikely that there would be wider environmental implications.	0 - ✓	No/low car housing development encourages public transport use and active travel. There could be benefits from reduced car use including reduced greenhouse gas emissions. However, modal shift would be dependent on the other services offered and beneficial impacts are not predicted to be significant as a stand-alone measure particularly in the short to medium term
71 - Glasgow Metro – options for Glasgow Metro system including modal interventions and integration (options development aligned with Glasgow City Region processes)	××-✓✓	Depending on the location and nature of this option, there is potential for adverse impacts on the environment e.g. from permanent loss of areas of importance for biodiversity, landscape and the historic environment, although it is likely the route will be diverted to avoid adverse impacts as much as possible. The creation of a Glasgow Metro would require the use of new material assets. Noise, vibration and emission of some pollutants would be predicted during construction. This option does however have excellent potential to induce modal shift, reducing car kms and improving local air quality.	✓✓	The creation of a Glasgow Metro would require the use of new material assets which could increase emissions during construction. However, it has potential to induce modal shift, reducing car kms and greenhouse gas emissions from road traffic.
72 – Cyclelogistics – improvements to transport of freight by bike	✓	Improving the movement of freight by bike would increase the sustainable transport of goods. This would potentially have beneficial environmental impacts through improved local air quality and reduced roadside noise from traffic associated with commercial vehicles.	✓	Improving the movement of freight by bike would increase the sustainable transport of goods. This would potentially have a beneficial impact through reduced

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		Additionally, any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.		greenhouse gas emissions from traffic associated with commercial vehicles.
73 - 'Last mile' innovations – improving integration and better co-ordination of the 'last mile' in freight transport deliveries	✓	Improving the integration and co-ordination of the 'last mile' in freight transport deliveries would increase the sustainable transport of goods, particularly in urban areas. This would have beneficial environmental impacts through improved local air quality and reduced roadside noise from traffic..	✓	Improving the integration and co-ordination of the 'last mile' in freight transport deliveries would increase the sustainable transport of goods, particularly in urban areas. This would have beneficial impacts through reduced greenhouse gas emissions.
74 - Freight consolidation centres	0 - ✓	Freight consolidation centres will encourage more efficient movement of goods which may reduce commercial vehicle traffic volumes. This would have beneficial environmental impacts through improved local air quality. Any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity	0 - ✓	Freight consolidation centres will encourage more efficient movement of goods which may reduce commercial vehicle traffic volumes. This would have beneficial impacts through reduced emissions of greenhouse gases. Any embodied carbon associated with construction would need to be accounted for.
75 - Low emission road freight where rail freight alternatives do not exist	✓✓	Low emission road freight where rail freight alternatives do not exist will help to reduce the negative impacts of freight on the environment. This would have beneficial environmental impacts through overall improved local air quality..	✓✓	Low emission road freight where rail freight alternatives do not exist will help to reduce the negative impacts of freight on climate change. This would have beneficial impacts through overall reduced greenhouse gas emissions from road traffic
76 - Support Rail freight market development	✗-✓	Supporting the development of rail freight encourages the movement of goods using more sustainable travel modes particularly for long distance freight. This would potentially have environmental beneficial impacts through overall improved air quality. There is some potential for adverse impacts in locations around rail freight terminals if increased road traffic resulted, which would need to be managed. Local communities may object to the environmental impact of new facilities.	✓	Supporting the development of rail freight encourages the movement of goods using more sustainable travel modes particularly for long distance freight traffic. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions from road traffic. There would be embodied carbon associated with any new construction

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77 - HGV rest stops and enhanced secure overnight facilities	×-0	Improved HGV rest stops and enhanced secure overnight facilities are unlikely to have a material impact on the environment other than with the construction of any new facility.	0	Improved HGV rest stops and enhanced secure overnight facilities are unlikely to have a material impact on climate change. The construction of any new facility would involve embodied carbon however
78 - Enhanced intermodal freight transfer facilities	×-✓	Enhanced intermodal freight transfer facilities encourage the movement of goods using more sustainable travel modes particularly for long distance freight traffic. This would have beneficial impacts through overall improved local air quality. Where implemented measures include rail freight, there is some potential for adverse impacts in locations around rail freight terminals if increased road traffic resulted, which would need to be managed. Local communities may object to the environmental impact of new facilities.	✓	Enhanced intermodal freight transfer facilities encourage the movement of goods using more sustainable travel modes particularly for long distance freight traffic. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions from road traffic. There would be embodied carbon associated with any new construction.
79 - Rail enhancements to support freight modal shift to rail	×-✓	Rail enhancements to support freight modal shift to rail encourages the movement of goods using more sustainable travel modes. This would have beneficial environmental impacts through improved air quality and reduced roadside noise from road traffic where modal shift was achieved. Dependent on the locations of rail infrastructure works there is potential for adverse impacts on other environmental criteria which would need to be managed/mitigated.	✓	Rail enhancements to support freight modal shift to rail encourages the movement of goods using more sustainable travel modes. This would have beneficial impacts through reduced greenhouse gas emissions where modal shift is achieved. There would be embodied carbon associated with any new construction.
80 - Improved safety and security at public transport hubs	0	Improved safety and security at public transport hubs encourages public transport use. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on the environment.	0	Improved safety and security at public transport hubs encourages public transport use. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions.
81 - Improved safety and security on board public transport	0	Improved safety and security on public transport encourages greater public transport use. However, it is not expected that there would be substantial modal shift or a subsequent material impact on the environment.	0	Improved safety and security on public transport encourages greater public transport use. However, it is not expected that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions

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82 - Implement public transport Hate Crime Charter in region	0	Implementing the public transport Hate Crime Charter encourages public transport use through improved safety and security. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on the environment.	0	Implementing the public transport Hate Crime Charter encourages public transport use through improved safety and security. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions.
83 - Service Quality regional policy – option to develop regional policy focused on defining the desired public transport service quality, particularly to achieve a modal shift	✓	Delivering a Service Quality Regional Policy, particularly focused on achieving modal shift, encourages public transport use and could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial environmental impacts including improved local air quality.	✓✓	Delivering a Service Quality Regional Policy, particularly focused on achieving modal shift, encourages public transport use and could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions. This would be offset by any additional emissions associated with extra public transport services.
84 - Public transport Passenger Charter	0 - ✓	The implementation of a public transport Passenger Charter would improve the quality of, and encourage increased use of, public transport. This would potentially have beneficial environmental impacts through overall improved air quality. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions as a result of this stand-alone option.	0 - ✓	The implementation of a public transport Passenger Charter would improve the quality of, and encourage increased use of, public transport. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions from road traffic. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions as a result of this stand-alone option.
85 - Enhanced local public transport networks and service frequencies	✓	Enhancing local public transport network and service frequencies encourages public transport use and could deter people from using private cars as their main mode of transport. This would potentially have beneficial environmental impacts through overall improved air quality and potentially reduced roadside noise from traffic in some areas, although this would be offset by additional bus-km.	✓	Enhancing local public transport network and service frequencies encourages public transport use and could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions, although this may be offset by additional bus-km if not zero emission.

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86 - Improved local public transport journey times, reliability and punctuality	✓	Improving local public transport journey times, reliability and punctuality would encourage increased public transport use and could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial environmental impacts through improved air quality. It is unlikely that there would be wider environmental implications.	✓	Improving local public transport journey times, reliability and punctuality would encourage increased public transport use and could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions from road traffic.
87 - Enhanced local public transport stop/station infrastructure	0 - ✓	Enhancing local public transport stop/station infrastructure would encourage increased public transport use at the expense of the car. This would potentially have beneficial environmental impacts through overall improved air quality. However, it is unlikely that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions as a result of this option. Additionally, any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.	✓	Enhancing local public transport stop/station infrastructure would encourage increased public transport use at the expense of the car. This would potentially have beneficial impacts through reduced greenhouse gas emissions. However, it is unlikely that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions as a result of this option.
88 - Enhanced and integrated promotional, marketing and branding activities for local public transport	0 - ✓	Enhancing the promotion of local public transport would raise awareness of, and encourage increased use, of public transport. This would potentially have beneficial environmental impacts through overall improved air quality. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions as a result of this stand-alone option.	0 - ✓	Enhancing the promotion of local public transport would raise awareness of, and encourage increased use, of public transport. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions as a result of this stand-alone option..
89 - Improved monitoring of passenger satisfaction	0	Improved monitoring of passenger satisfaction is not predicted to induce substantial modal shift or a subsequent material impact on the environment.	0	Improved monitoring of passenger satisfaction is not expected to induce substantial modal shift or a subsequent material impact on traffic levels and emissions.
90 - Enhance provision of real time passenger information	0	Enhancing the provision of real time passenger information in the region would encourage increased use of public transport at the margin as the passenger experience would be improved for some.	0	Enhancing the provision of real time passenger information in the region would encourage increased use of public transport at the margin as the passenger

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
		This would potentially have beneficial impacts through overall improved air quality - however, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and the environment.		experience would be improved for some. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions.
91 - New rail stations	×-✓	Implementing new rail stations would encourage public transport use which could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through improved air quality. Depending on the location of the new stations, there is potential for local impacts to biodiversity, landscape/townscape and other receptors which would need to be carefully managed and mitigated.	✓	Implementing new rail stations would encourage public transport use which could deter people from depending on private cars as their main mode of transport. This would potentially have beneficial impacts through reduced greenhouse gas emissions
92 - Capacity enhancements and constraint resolution on rail network	×-0-✓	Capacity enhancements would encourage public transport use by enabling more people to travel by rail at the expense of the car. This would potentially have beneficial environmental impacts through improved air quality etc. There is some potential for adverse impacts to other environmental receptors depending on the location of new infrastructure which would need to be managed and mitigated.	0 - ✓	Capacity enhancements would encourage public transport use by enabling more people to travel by rail at the expense of the car. This would have beneficial environmental impacts through overall reduced greenhouse gas emissions from road traffic. There would be embodied carbon associated with new construction..
93 - Improved resilience and adaptation of rail	×-0	Enhanced rail resilience would enable more reliable rail travel in the region, despite adverse weather conditions. At the margin, this would reduce car-km at times when rail travel may not have been possible. Any new construction will have environmental impacts.	✓	Enhanced rail resilience would enable more reliable rail journeys in the region, despite adverse weather conditions. At the margin, this would reduce car-km at times when rail travel may not have been possible. Any new construction will have embodied carbon impacts. This option seeks to adapt the rail network which is likely to include resilience against the impacts of climate change..
94 - Enhanced economic and social value of rural railways	0 - ✓	Enhancing the economic and social value of rural railways may encourage public transport use which could deter people from	0 - ✓	Enhancing the economic and social value of rural railways may encourage public transport use which could

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
		depending on private cars when travelling on rural routes. This would potentially have some environmental beneficial impacts including improved air quality. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions.		deter people from depending on private cars when travelling on rural routes. This would potentially have some beneficial impacts including reduced greenhouse gas emissions. However, it is not predicted that there would be substantial modal shift or a subsequent material impact on traffic levels and emissions.
95 - Re-opening of disused rail lines (passenger and freight)	✗✗-✓	Re-opening disused rail lines for passengers will encourage the use of public transport at the expense of the car. This would have beneficial environmental impacts through overall improved air quality and reduced roadside noise from traffic in the affected corridors. There is some potential for impacts on local biodiversity, landscape/visual and cultural heritage from the change in land use which would require mitigation and management to avoid or reduce significant environmental effects (dependent upon location and baseline sensitivity).	✓	Re-opening disused rail lines for passengers will encourage the use of public transport at the expense of the car. This would have beneficial impacts through overall reduced greenhouse gas emissions, although construction activity would involve embodied carbon, and the power source for the trains could also be a factor if diesel..
96 - Support Glasgow Central capacity enhancement (aligned with STPR2 process)	✗-✓	Supporting Glasgow Central capacity enhancements would encourage the use of public transport at the expense of the private car by facilitating a range of new train services. This would have beneficial environmental impacts through improved air quality where the measure supported some mode shift from road to rail. Any new infrastructure facilities should be designed to avoid adverse impacts on areas of local environmental sensitivity.	✓✓	Supporting Glasgow Central capacity enhancements would encourage the use of public transport at the expense of the private car by facilitating a range of new train services This would have beneficial impacts through reduced greenhouse gas emissions, some of which may be offset by embodied carbon during construction.
97 - Support delivery of High Speed Rail to the region (aligned with STPR2 process)	✗✗-✓	Supporting the delivery of High-Speed Rail in the region will encourage the use of public transport due to journey time savings and potentially enhanced connections/capacity. This would potentially have beneficial environmental impacts through improved air quality. Dependent on routes and the nature of new rail infrastructure, impacts on other environmental receptors such as biodiversity, landscape, soils, water and cultural heritage are possible and would require	✓	Supporting the delivery of High Speed Rail in the region will encourage the use of public transport due to journey time savings and potentially enhanced rail network connections/capacity. This would potentially have beneficial environmental impacts through reduced greenhouse gas emissions from car and domestic air. It will increase carbon emissions during construction.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
		further assessment and mitigation to avoid or reduce significant environmental effects as far as possible		
98 - New/Enhanced rail park and ride	×-✓	New/Enhanced rail park and ride encourages the use of public transport for at least part of the journey. It will support modal shift from car to public transport and as such, there would potentially be beneficial environmental impacts through improved air quality and potentially reduced roadside noise from traffic. New sites would need to be designed and located sensitively to avoid significant effects on other receptors from land use changes, and to minimise any new car trips created (e.g. trip which were previously made entirely by bus)..	0-✓	New/Enhanced rail park and ride encourages the use of public transport for at least part of people's journeys. It will support modal shift from car to public transport and as such, there would potentially be beneficial impacts through reduced greenhouse gas emissions. The beneficial impacts of this option will depend on the number and location of implemented park and ride sites. There would be embodied carbon to account for in any construction and any new car trips generated may add to emissions.
99 -Implement Road Safety Framework in the region	0	Implementing a Road Safety Framework in the region is unlikely to have a major impact on the environment although more people may use active modes if they become more confident with road safety	0	Implementing a Road Safety Framework in the region is unlikely to have a material impact on emissions.
100 - Support capacity enhancements and constraint resolution on roads network	××	This option may lead to increased travel via private car which has the potential to induce additional road traffic and have a negative impact on air quality, in addition to intensifying noise and vibration from upgraded sections of roads. There could also be some adverse visual amenity and landscape impacts from new infrastructure along with possible implications for biodiversity..	×-××	This option may facilitate travel via private car which has the potential to induce additional road traffic further contributing to greenhouse gas emissions.
101 - Enhanced or new fixed links for Cross-Clyde connectivity	××-✓ (?)	The impact of this option is highly dependent on the nature of its implementation. On one hand it may facilitate people travelling via private car which may induce more road traffic further contributing to reduced air quality and increased roadside noise from traffic. On the other hand, it may reduce overall vehicle kilometres and/or encourage public transport use which would contribute modal shift and have beneficial impacts on the environment. Construction of fixed links	×-✓ (?)	The impact of this option is highly dependent on the nature of its implementation. On one hand it may facilitate people travelling via private car which may induce more road traffic further contributing to increased greenhouse gas emissions, emissions. On the other hand, it may reduce overall vehicle kilometres and/or

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
		would require resource use and depending on location may have adverse impacts on environmental receptors including biodiversity, soils, water resources and the historic environment which would need to be managed/mitigated.		encourage public transport use which would contribute modal shift which has potential to reduce emissions.
102 - Improved resilience of local roads networks to flooding and other weather-related incidents	×-✓	Improving the resilience and efficiency of the transport network will reduce congestion and stalled traffic, especially during the peak-hours which would have positive environmental impacts through improved air quality. However, improving network efficiency and reducing journey times might encourage more people to travel by car which would have negative environmental impacts.	×-✓	Improving the resilience and efficiency of the transport network will reduce congestion and stalled traffic, especially during the peak-hours and would benefit bus services during affected periods. This might reduce emissions for car-based travel on the network. However, improving network efficiency and reducing journey times might encourage more people to travel by car which would have negative impacts through increased emissions.
103 - Smart / managed motorways using Intelligent Transport Systems	××-✓	By making the road network more efficient there could be improvements in air quality from reduced congestion. However, the increased efficiency and capacity could make road transport more attractive which would potentially increase the number of road users and lead to more journeys being undertaken by car, having an adverse impact on local air quality and traffic noise, and vibration.	××-✓	By making the road network more efficient, there could be a reduction in emissions produced by road traffic from reduced congestion. However, the increased efficiency and capacity could make road transport more attractive which would potentially increase the number of road users and lead to more journeys being undertaken by car, having an adverse impact on emissions.
104 - Enhanced Urban Traffic Control systems for all local roads authorities in the region	×-✓	Improving the efficiency of the transport network through UTC systems will potentially reduce congestion, especially during the peak-hours and benefit public transport through prioritisation measures. Air quality may improve from reduced traffic volumes. However, efficiency improvements may encourage car travel, increase traffic volumes, and worsen air quality. It is unlikely that there would be wider environmental implications.	×-✓	Improving the efficiency of the transport network through UTC systems will potentially reduce congestion, especially during the peak-hours and benefit public transport through prioritisation measures. This has some potential to reduce emissions for car-based travel on the network although improving network efficiency and reducing journey times might encourage more people to travel by car. Where the measure is used primarily to prioritise public transport, beneficial effects would be predicted through potential overall emissions reductions

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
				where improved services effected some modal shift and discouraged car use
105 - 20mph speed limits and 20mph zones	✓	Restricting has potential for beneficial environmental impacts on air quality due to vehicles making fewer sharp accelerations and decelerations. 20 mph zones can also encourage active travel, by making roads safer, which would compound these benefits where walking and cycling trips replaced car journeys. Lower speeds also help to reduce noise from traffic. However, the impacts are predicted to be modest overall as a stand-alone measure.	✓	Restricting speed has potential for beneficial impacts on emissions due to vehicles making fewer sharp accelerations and decelerations. 20 mph zones can also encourage active travel which would also help reduce emissions where walking and cycling trips replaced car journeys. However, the impacts are predicted to be modest overall as a stand-alone measure
106 - Package of shared mobility options – options to reduce personal car ownership and single occupancy car trips including journey sharing, car sharing including car clubs, bike sharing	✓	Introducing a package of shared mobility options may require infrastructure enhancements. There could potentially have a negative impact on land-use and the historic environment. However, this impact is not predicted to be significant. The potential reduction in car travel may improve air quality.	✓	Introducing a package of shared mobility options would contribute to reduced personal car ownership and single occupancy car trips. This would potentially have beneficial impacts through reduced greenhouse gas emissions.
107 - Increased availability of accessible taxis	0	Increasing the availability of accessible taxis is not predicted to lead to a substantial modal shift or a subsequent material impact on the environment.	✓	Increasing the availability of accessible taxis is not predicted to lead to a substantial modal shift or a subsequent material impact on emissions. Any acceleration of vehicle fleet replacement may bring more EVs into the fleet however.
108 - Improved accessibility of shared mobility options e.g. Car Share schemes	✓	Improving the accessibility of shared mobility options would contribute to reduced personal car ownership and single occupancy car trips. This would potentially have beneficial environmental impacts through improved air quality.	✓	Improving the accessibility of shared mobility options would contribute to reduced personal car ownership and single occupancy car trips. This would potentially have beneficial climate change impacts through reduced greenhouse gas emissions and lower emissions of local air pollutants from road traffic.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
109 – New Subway service plan (following the completion of Subway Modernisation)	0	A new Subway Service Plan will follow the completion of any Subway Modernisation and is not predicted to have any significant adverse environmental impacts related to construction..	0 - ✓	The Plan is likely to improve and encourage the use of public transport services, with some potential for reduced car use and associated reductions in road transport emissions. If services are increased, then electricity will be required to power the units
110 – Affordable fares regional policy	0	Implementing an affordable fares policy would encourage public transport use through improved accessibility and lower cost. It is not thought that there would be substantial modal shift from car given the nature of the policy..	0	Implementing an affordable fares policy would encourage public transport use through improved accessibility and lower cost. It is not thought that there would be substantial modal shift from car given the nature of the policy.
111 - Changes to eligibility criteria and scope of concessionary fares schemes	0 - ✓	Changes to eligibility criteria for concessionary fares may at the margin encourage increased public transport use and some mode switch from the car with associated environmental improvements	0 - ✓	Changes to eligibility criteria for concessionary fares may at the margin encourage increased public transport use and some mode switch from the car with associated reductions in greenhouse gas emissions.
112 - "Free" or very low public transport fares	✓-✓✓	"Free" or very low public transport fares would encourage public transport use and significant mode shift from car. This would have beneficial environmental impacts through improved air quality and reduced roadside noise from traffic. Increased demand may lead to an increase in bus-km with adverse impacts on the environment.	✓✓	"Free" or very low public transport fares would encourage public transport use and significant mode shift from car. This would have beneficial impacts through reduced carbon emissions. Increased demand may lead to an increase in bus-km with adverse impacts on the environment.
113 - Improve integration of ticketing and fares	✓	Implementing measures to improve the integration of ticketing and fares will encourage public transport use. This option makes travelling by public transport more convenient and should reduce costs for many public transport users leading to modal shift away from car and associated environmental improvements.	✓	Implementing measures to improve the integration of ticketing and fares will encourage public transport use. This option makes travelling by public transport more convenient and should reduce costs for many public transport users leading to modal shift away from car and associated reductions in carbon emissions.

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
114 - Influence local bus fares to support wider policy objectives	0 - ✓	Implementing measures to lower bus fares may encourage public transport use. However, it is not expected that there would be substantial modal shift or a subsequent material impact on air quality.	0 - ✓	Implementing measures to lower bus fares may encourage public transport use. Mode shift would be dependant on the level of fare changes which could then impact on greenhouse gas emissions.
115 - Influence and develop fares and ticketing structures to be more responsive to flexible, shift and part time working patterns	0 - ✓	Improved integration of ticketing and fares to working time patterns may encourage public transport use and reduce dependency on private vehicles. This would potentially have beneficial environmental impacts through improved air quality and reduced noise from road traffic. However, beneficial impacts are not predicted to be significant as a stand-alone measure.	0 - ✓	Improved integration of ticketing and fares to working time patterns may encourage public transport use and reduce dependency on private vehicles. This would potentially have beneficial impacts through reduced greenhouse gas emissions. However, beneficial impacts are not predicted to be significant as a stand-alone measure.
116 - Review Subway fares policy	0 - ✓	Implementing measures to reduce Subway fares encourages public transport use which could reduce reliance on private cars. This would potentially have beneficial environmental impacts through improved air quality. However, beneficial impacts are not predicted to be significant as a stand-alone measure. It is important to note that the Subway covers a small geographic area and as such benefits will not be felt regionally.	0 - ✓	Implementing measures to reduce Subway fares encourages public transport use which could reduce reliance on private cars. This would potentially have beneficial impacts through some reduction in greenhouse gas emissions. However, beneficial impacts are not predicted to be significant as a stand-alone measure. It is important to note that the Subway covers a small geographic area and as such benefits will not be felt regionally.
117 - ZoneCard modernisation	0 - ✓	Zonecard modernisation may encourage public transport use across different modes in the region. This would potentially have beneficial environmental impacts through improved air quality. However impacts are not predicted to be significant as a stand-alone measure.	0 - ✓	Zonecard modernisation may encourage public transport use across different modes in the region. This would potentially have beneficial impacts through some reduction in greenhouse gas emissions. Beneficial impacts are not predicted to be significant as a stand-alone measure.
118 - Enhanced Smart and integrated ticketing	✓	Enhanced smart and integrated ticketing for the region would encourage public transport use across different modes in the region at	✓	Enhanced smart and integrated ticketing for the region would encourage public transport use across different modes in the region at the expense of the car. This would

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
for the region (e.g. tap on/tap off)		the expense of the car. This would potentially have beneficial environmental impacts through improved air quality etc.		potentially have beneficial impacts through reduced greenhouse gas emissions.
N1 – Support decarbonisation of ferry services in the SPT region	✓	Decarbonising ferry services would reduce the impact of the ferry network's operations on the environment. There may be air quality benefits around ferry terminals.	✓✓✓	Ferries are a significant source of carbon emissions. Decarbonising ferry services would reduce the ferry network's impact on climate change. This would have beneficial impacts through reduced greenhouse gas emissions..
N2 - Support decarbonisation of air services in the SPT region	0- ✓	Decarbonising air services would reduce the impact of the airline operations on the environment. While air quality benefits from aircraft will be negligible, there may be significant benefits in decarbonising surface access to airports themselves..	✓✓✓	Decarbonising air services would reduce the air industry's impact on climate change. This would have beneficial impacts through reduced greenhouse gas emissions.
N3 - Increase and enhance role of e-bikes	✓	Supporting and planning for electric bikes may encourage active travel. It would potentially encourage modal shift by providing a realistic alternative to the private car for some longer journeys. There may be potential benefits through improved air quality and reduced roadside traffic noise in corridors where uptake is substantial.	✓	This option may encourage active travel. It would potentially encourage modal shift by providing a realistic alternative to the private car for some longer journeys. There may be potential benefits through reduced greenhouse gas emissions in corridors where uptake is substantial
N4 - Integrate active travel networks and green networks	✖-✓	This option may require infrastructure enhancements which could have a negative impact on the environment. However, improving access to public transport stops / stations encourages public transport and mode shift from the car. This would have beneficial environmental impacts through improved air quality and reduced traffic noise etc.	✓	This option may require infrastructure enhancements which could have a short-term negative impact on emissions during construction. However, improving access to public transport stops / stations encourages public transport and mode shift from the car, reducing greenhouse gas emissions
N5 - Adapt public transport services, vehicles and hubs to effects of climate	0 - ✓	Improved resilience and sustainability of public transport services and networks will encourage increased public transport use and sustainable travel. This would potentially have small beneficial environmental impacts through improved air quality and reduction of roadside noise from road traffic. However, beneficial impacts are not	0 - ✓	Improved resilience and sustainability of public transport services and networks will encourage increased public transport use and sustainable travel. This would potentially have beneficial impacts through overall reduced greenhouse gas emissions. However, beneficial

Option	Environment		Climate	
	Score	Commentary	Score	Commentary
change for staff and passenger welfare		predicted to be significant as a stand-alone measure. It is unlikely that there would be wider environmental implications..		impacts are not predicted to be significant as a stand-alone measure..

Appendix E Environmental Assessment of RTS Policies

E.1 Introduction

E.1.1 This appendix supports Section 5.4 of the Environmental Report by presenting the detailed assessment of each RTS policy, split into the 10 overarching policy themes.

E.1.2 Each policy theme is described in turn, including the transport policies within that theme and the correlating transport options (see Appendix D). The policies have been assessed against each of the SEA Objectives, drawing on consideration of the predicted environmental effects of the polices (and where relevant linked option) within each theme.

E.1.3 Relevant assumptions, proposed mitigation and monitoring indicators are also presented for each policy theme.

E.2 Accessing and Using Transport

Accessing and Using Transport *This policy theme focuses on making the transport system accessible, affordable, available and safe for all users. While transport has a large role in tackling poverty and socio-economic and health inequalities, many aspects of the transport system can disable or limit access to work and other everyday activities.* *SPT propose four regional transport policies, as listed below, to enable everyone to be able to use the transport system and ensure the transport system contributes to tackling wider societal challenges.*	
Transport Policy	**Relevant Options**
P.A1 Accessible transport *Ensure the transport system is accessible to all. Support delivery of the Scottish Accessible Travel Framework (SATF) and Annual Delivery Plans within the region. Improve the convenience, comfort and certainty of experience for people when travelling by active travel or public transport, particularly people who have a disability including non-visible disability. Ensure accessibility is considered in the application of the sustainable travel hierarchy and is a core objective in transport innovations and new forms of transport services and infrastructure including Electric Vehicle charging infrastructure.*	▪ Option 1 – Regional accessibility strategy to prioritise and deliver actions from the Scottish Accessible Travel Framework ▪ Option 6 – Enhanced accessibility of public transport and active travel infrastructure ▪ Option 19 – Implementation of Pavement Parking guidance and regulations ▪ Option 39 - Regional Electric Vehicle (EV) network charging strategy ▪ Option 107 – Increased availability of accessible taxis ▪ Option 108 – Improved accessibility of shared mobility options e.g. Car Share Schemes
P.A2 Affordable transport *Promote and facilitate public transport to be more affordable particularly for people living in poverty, in socio-disadvantaged communities and in rural and remote areas. Ensure public transport passengers find it easy to choose and access the best value ticket for their journey. Facilitate public transport ticketing to be more flexible, affordable and integrated and to better reflect the way people need to travel, particularly people who have insecure, part time or shift work or unpaid care work. Ensure affordability is a core objective in developments and enhancements related to smart and integrated ticketing, Mobility as a Service and other relevant transport innovations. Develop and facilitate the role of active travel as an affordable transport option.*	▪ Option 24 - Develop local bike hire & bike sharing schemes and initiatives ▪ Option 25 - Facilitate development of cross-boundary bike hire / bike sharing opportunities ▪ Option 100 - Support capacity enhancements and constraint resolution on roads network ▪ Option 111 – Changes to eligibility criteria and scope of concessionary fares schemes ▪ Option 112 – “Free” or very low public transport fares ▪ Option 113 – Improve integration of ticketing and fares ▪ Option 114 – Influence local bus fares to support wider policy objectives ▪ Option 115 – Influence and develop fares and ticketing structures to be more responsive to flexible, shift and part time working patterns ▪ Option 117 – ZoneCard modernisation ▪ Option 118 – Enhanced Smart and integrated ticketing for the region (e.g., tap on/tap off)
P.A3 Availability of transport *Ensure a minimum level of active travel and public transport coverage for all areas in the region to key locations, particularly town centres, employment*	▪ Option 9 – “Total Transport” approach and initiatives – options to integrate transport services in geographic areas that are currently commissioned by different government agencies and delivered by different operators, such as

centres, colleges and universities, hospitals and key sustainable transport hubs/interchanges, and aim for enhanced transport coverage where possible. Ensure transport networks reflect the needs of all communities, particularly groups and communities who are more likely to depend upon active travel or public transport for every day travel including women and single parent households, disabled people, young people, older people, lower income households, people who cannot drive and/or do not have access to a private car, and black and minority ethnic people. Improve the availability and stability of public transport services in rural, remote and island communities and socio-economically disadvantaged communities. Develop the role of local bus, Community Transport, taxis and other Demand Responsive Transport services, shared transport and shared mobility to ensure public transport is available to all communities.	non-emergency patient transport, socially necessary bus services, adult social care transport and home to school transport ▪ Option 10 – Local accessibility frameworks or plans for local communities to tackle specific problems (e.g., locality planning areas) ▪ Option 11 - Jobs access schemes – option to develop schemes that help unemployed people into work by removing transport barriers including cost, information and journey planning barriers. Typically, these schemes offer personalised travel advice and free or discounted travel particularly during the first weeks of a new job before wages are received ▪ Option 12 - Health and Transport Action Plan with each Health board in the region ▪ Option 37 – Support the role of Community Transport in providing access to healthcare ▪ Option 38 - Development and enhanced capacity building & resilience of Community Transport Network ▪ Option 51 – Increased capacity, flexibility and coverage of demand responsive services ▪ Option 57 – Improved integration between Community Transport, Demand Responsive Transport, and local public transport ▪ Option 94 – Enhanced economic and social value of rural railways ▪ Option 111 – Changes to eligibility criteria and scope of concessionary fares schemes ▪ Option 112 – “Free” or very low public transport fares
P.A4 Safety and security of public transport *Increase personal safety and security of people using and accessing public transport services. Ensure everyone is able to use public transport services free from fear of harassment and discrimination based upon ethnicity, disability, sex, sexual orientation, gender identity or age. Promote safety by design and involve equality groups in the design process. Improve perceptions of personal safety and security of public transport services.*	▪ Option 15 - Improved safety and security on routes to public transport ▪ Option 80 - Improved safety and security at public transport hubs ▪ Option 81 - Improved safety and security on board public transport ▪ Option 82 - Implement public transport Hate Crime Charter in region
Relevant Findings of Options STAG Appraisal	▪ A range of impacts predicted from neutral to moderate beneficial but mostly minor beneficial environmental impacts associated with potential for enhanced public transport to facilitate mode shift away from private vehicles.
Assumptions	▪ The environmental assessment presented in this table is based on an assumption that the ambition of each policy would be fully achieved through detailed implementation of the RTS in order to predict the likely significant effects of its implementation. ▪ It is assumed that implementation of these polices would not involve development of significant new transport infrastructure.

	▪ Increased future public transport provision would be assumed to involve new ultra-low or zero emission vehicles.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These policies are generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for health and accessibility. The policies on accessing and using transport are also predicted to have some beneficial effects for SEA topics of productivity, air quality and climate change. Enhanced public transport networks and services may also give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment.	+
Proposed Mitigation and Enhancement	▪ Increased provision of public transport capacity and services should deploy zero or ultra-low emission vehicles. ▪ Public transport operators should be supported to achieve rapid decarbonisation or existing vehicle fleets. ▪ 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.	
Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ CO_2 emission estimates from road transport ▪ Grammes CO_2 per passenger km by mode/vehicle type ▪ Average CO_2 emissions – all licensed cars ▪ Average CO_2 emissions – newly registered cars ▪ Number of Air Quality Management Areas (AQMAs) ▪ Affordability of public transport fares ▪ Proportion of households with no car available for use ▪ Use of concessionary fares pass – new indicator for under 22's scheme ▪ MyBus usage ▪ Bus network coverage and service frequency ▪ Natural Capital Asset Index ▪ Population - spatial depopulation ▪ Child Poverty: Percentage of children in combined material deprivation and low income after housing costs (below 70% of UK median income). ▪ Employment rate ▪ Relative poverty: The proportion of individuals living in private households with an equivalised income of less than 60% of the UK median after housing costs. ▪ Proportion of adults aged 16-64 with low or no qualifications at SCQF level 4 or below ▪ Percentage of young adults (16-19-year olds) participating in education, training or employment ▪ Healthy life expectancy ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include:	

	▪ A health based indicator such as reported incidences of respiratory disease or asthma ▪ Concentrations of roadside local air pollutants at key monitoring locations

SEA Objective	P.A1	P.A2	P.A3	P.A4	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	+	+	++	▪ The polices are predicted to be clearly supportive of the SEA objective on health, in particular through enhanced opportunities for access to services, healthcare facilities, open space and employment.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	++	++	++	+	▪ The policies for accessing and using transport are inherently compatible with the SEA objective for accessibility with significant beneficial effects predicted where these polices were implemented as stated.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	0	0	?	0	▪ The policies may have some minor beneficial effects on the SEA objective for material assets. For example, through encouraging more efficient forms of transport and its land-uses, although overall no significant effects are predicted.
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	+	+	+	0	▪ The policies for accessing and using transport are generally compatible with the SEA objective for productivity because they potentially support improved access to employment opportunities and improved physical access for all.
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	+	+	+	0	▪ Implementation of enhanced public transport provision and affordability is predicted to deliver modal shift for a broad range of journeys which would be predicted to reduce transport emissions overall in key corridors. This is predicted to have beneficial effects on air quality.

SEA Objective	P.A1	P.A2	P.A3	P.A4	Commentary
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	+	0	▪ The polices which support enhanced public transport accessibility and availability would be predicted to generate mode shift in key corridors where a step change in transport is achieved. Overall, it is predicted that implementation of the policies would lead to reductions in regional carbon emissions.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	+	+	+	0	▪ The policies are predicted to have the potential for indirect beneficial effects on some aspects of this SEA objective. Where the policies contribute to reduced traffic emissions, then minor beneficial effects may be predicted for some natural heritage receptors in proximity to key transport routes.
8. **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.	0	0	0	0	▪ Implementation of the polices are not predicted to have significant effects on water resources and flooding.
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	0	▪ Implementation of the polices are not predicted to have significant effects on cultural heritage assets. There is some potential for improved public transport services to provide opportunities for people to visit sites of cultural heritage interest more easily.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	0	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity. There is some potential on key corridors where traffic levels were reduced for minor beneficial effects on visual amenity for some receptors.

E.3 Reducing the need to travel and managing demand for car travel

Reducing the need to travel and managing demand for car travel *This policy theme focuses on reducing the need to travel and, in particular, reducing travel by car to help reduce harmful transport emissions, improve health and overall quality of life, and enable investment in sustainable transport.* *The RTS sets out seven policies to help reduce the ned to travel and manage car travel demands.*	
Transport Policy	**Relevant Options**
P.R1 Integration of transport and land use *Seek to minimise physical separation and travel distances between the places where people live and the places where people need to go to for work and other everyday activities. Embed the sustainable travel hierarchy and sustainable transport investment hierarchy as key principles in land use policy and development plans and strategies. Support new development that is located in areas that are accessible by active travel and public transport, designed to facilitate movement by walking, wheeling, cycling and public transport, and integrated with existing and planned active travel and public transport networks, services and hubs.*	▪ Option 66 - Sustainable transport for new development ▪ Option 68 - City & town centre living strategies ▪ Option 69 - "20-minute neighbourhoods"
P.R2 20-minute neighbourhoods *Support and facilitate development of 20-minute neighbourhoods including developing improved active travel, public transport and sustainable mobility hubs.*	▪ Option 69 - "20-minute neighbourhoods"
P.R3 Flexible working and remote access to services *Reduce the need to travel by supporting development of digital & remote access to public services and flexible working models.*	
P.R4 Road space reallocation *Encourage and support reallocation of road space to active travel and public transport where possible to increase and enhance capacity for active travel and public transport provision and tackle car-centric road systems.*	▪ Option 49 - Regional demand management policy – option to develop regional policy framework to support the development and implementation of demand management interventions in the region including establishing principles of what types of interventions are best developed on a cross-boundary, regional or national level
P.R5 Car demand management – parking *Encourage and support development of local parking policies that encourage more sustainable travel behaviours, in line with the sustainable travel hierarchy.*	▪ Option 49 - Regional demand management policy – option to develop regional policy framework to support the development and implementation of demand management interventions in the region including establishing

Investigate and develop pricing strategies for park and ride provision to encourage sustainable travel to bus, rail or Subway stations/hubs, where appropriate.	principles of what types of interventions are best developed on a cross-boundary, regional or national level
P.R6 Car demand management – pricing *Support the investigation, development and implementation of road and parking pricing policies that encourage more sustainable travel behaviours and provide opportunities to fund active travel and public transport, in line with the sustainable travel hierarchy, and contribute to the development of the national Car Demand Management Framework. Support development of a Workplace Parking Licensing scheme in Glasgow and other towns in the region as appropriate.*	▪ Option 50 - Demand management measures – options for road space reallocation, parking, pricing and behaviour change
P.R7 Behavioural change *Facilitate a change in behaviours and attitudes towards travelling by car particularly travelling to school by car where high quality, active travel and public transport alternatives are available. Support Smarter Choices and promote more sustainable travel behaviours for all journey types including journeys made for leisure, recreational and tourism purposes.*	▪ Option 28 - Increased travel planning including promoting TravelKnowHow ▪ Option 29 - Support and develop behaviour change activities that tackle wider societal norms around car use particularly to support sustainable travel to school
P.R8 Shared transport and shared journeys *Facilitate and support improved and increased shared transport provision in the region. Support a shift in car ownership behaviours from private ownership to shared transport. Facilitate and support increased sharing of journeys in the region, aiming to increase car vehicle occupancies for journeys that need to be made by car.*	▪ Option 61 - Increased sustainable transport options on islands and rural mainland communities ▪ Option 106 - Package of shared mobility options – options to reduce personal car ownership and single occupancy car trips including journey sharing, car sharing including car clubs, bike sharing
Relevant Findings of Options STAG Appraisal	▪ Predominantly minor to moderate (significant) beneficial impacts on air quality and reduced carbon emissions in particular through potential to manage demand and reduce road traffic.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation. ▪ It is assumed that implementation of these polices would not involve development of significant new transport infrastructure. ▪ Shared transport provision would be assumed to involve new low or zero emission vehicles. ▪ Where car management demand measures are implemented, appropriate alternative sustainable options will be provided.

Environmental Assessment of Policy / Package

Commentary on Predicted Effects	▪ The policies on demand management are either supportive or generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for accessibility material assets, productivity, air quality and climate change mitigation. The policies are also predicted to have some beneficial effects for SEA topics of health and biodiversity where they result in reduced road traffic flows on key transport corridors. Improving 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 car travel.	+
Proposed Mitigation and Enhancement	▪ Increased provision of public transport capacity and services should deploy zero or ultra-low emission vehicles. ▪ 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. ▪ 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	

Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include:
	  ▪ CO_2 emission estimates from road transport
	  ▪ Grammes CO_2 per passenger km by mode/vehicle type
	  ▪ Average CO_2 emissions – all licensed cars
	  ▪ Average CO_2 emissions – newly registered cars
	  ▪ Number of Air Quality Management Areas (AQMAs)
	  ▪ Proportion of journeys 5km or less in distance that are made by walking or cycling
	  ▪ Mental Wellbeing (Mean WEMWBS score)
	▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include:
	  ▪ A health based indicator such as reported incidences of respiratory disease or asthma
	  ▪ Concentrations of roadside local air pollutants at key monitoring locations	

SEA Objective	P.R1	P.R2	P.R3	P.R4	P.R5	P.R6	P.R7	P.R8	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	+	0	0	+	0	▪ The policies are generally predicted to be supportive of the SEA objective on health, in particular through the implementation of the sustainable hierarchy and reduced demand for overall travel and car travel with attendant increases in levels of active

SEA Objective	P.R1	P.R2	P.R3	P.R4	P.R5	P.R6	P.R7	P.R8	Commentary
									travel and reduced time associated with commuting journeys
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	++	++	++	+	?	?	+	+	▪ The polices for reducing the need to travel and demand for car travel inherently increase accessibility of public services and economic opportunities, particularly through improved transport and land use integration. Effects are predicted to be significant beneficial where the need to travel is reduced for a broad range of journey purposes and where the need to travel is removed by providing digital alternatives.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	++	++	?	?	0	0	?	?	▪ The policies may have some beneficial effects on the SEA objective for material assets particularly through reduction in use of fossil fuels. Where policies improve the integration of land use and transport at scale and across all key corridors, the effect has the potential to be significant.
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	+	++	++	0	?	?	0	+	▪ The policies for reducing the need to travel and for car demand are generally compatible with the SEA objective for productivity, particularly where land use and transport integration increases employment opportunities and physical access for all. Policies would also have potential to make local and regional economies more efficient through improved health of employees and improved transport efficiency.

SEA Objective	P.R1	P.R2	P.R3	P.R4	P.R5	P.R6	P.R7	P.R8	Commentary
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	++	++	++	+	+	+	+	+	▪ The policies to integrate transport and land use, facilitate remote access to facilities, and reduce the need to travel for a range of journey purposes are predicted reduce transport emissions in key corridors where implemented effectively. Car demand management measures may deliver modal shift which would also be predicted to have some beneficial effects on air quality.
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	++	++	+	+	+	+	+	▪ The policies which implement car demand management would be predicted to generate mode shift in key corridors where a step change in use of transport is achieved. Additionally, transport and land use integration policies would reduce the overall need to travel for some journeys. Overall, it is predicted that implementation of the policies with a beneficial effect would contribute to reducing regional carbon emissions and this may be significant where delivered at scale across key transport corridors.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	+	+	+	0	0	0	0	0	▪ The polices that reduce the overall need to travel would be predicted to reduce emissions and, where significant, minor beneficial effects may be predicted for some natural heritage receptors in proximity to key transport routes e.g., from reduced atmospheric deposition of nitrogen on sensitive habitats.
8. **Water, Flood Risk and Resilience:** Conserve, protect and enhance water environments, water quality and water	0	0	0	0	0	0	0	0	▪ Implementation of the polices is not predicted to have significant effects on water resources and flooding.

SEA Objective	P.R1	P.R2	P.R3	P.R4	P.R5	P.R6	P.R7	P.R8	Commentary
resources, whilst adapting to climate change and reducing flood risks.									
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	0	0	0	0	0	▪ Implementation of the polices is not predicted to have significant effects on cultural heritage assets. Some minor beneficial effects may be predicted where reduced road traffic levels contributed to enhanced enjoyment (and preservation) of key built heritage assets.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	0	0	0	0	0	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity. There is some potential on key corridors where traffic levels could be significantly reduced for minor beneficial effects on visual amenity for some receptors.

E.4 Enabling walking, wheeling and cycling

Enabling walking, wheeling and cycling *The policy theme is focused on making walking, wheeling and cycling the natural choice for shorter everyday journeys to improve our quality of life and to support a modal shift to more sustainable travel.* *The RTS sets out five policies to help enable this change.*	
Transport Policy	**Relevant Options**
P.AT1 Regional Active Travel Network *Facilitate walking, wheeling and cycling to be the natural choice for every day, shorter journeys in line with the Sustainable Travel Hierarchy. Aim to make travelling actively more attractive than travelling by car as much as possible.*	▪ Option 17 - Strategic active travel network and active freeways ▪ Option 18 - Regional Active Travel Network Strategy

Ensure active travel networks are convenient, safe, accessible, inclusive and promote good health and wellbeing, aiming for full segregation from motorised traffic as much as possible. Develop active travel as a mass transit mode on high travel demand corridors and support development of Active Freeways. Develop active travel networks in built up areas to include both direct routes and green networks as much as possible to provide choice and maximise opportunities for healthy and sustainable travel behaviours. Facilitate development and delivery of a regional active travel network to achieve excellent active travel connectivity in the region and ensure integration with other sustainable transport modes including bus, rail, ferry, Subway and Clyde Metro.	
P.AT2 Accelerated delivery of walking, wheeling and cycling infrastructure and facilities *Enable accelerated delivery of new and enhanced walking, wheeling and cycling infrastructure and facilities to achieve a step change in active travel provision as soon as possible. Facilitate and support delivery of Scotland's Active Travel Framework in the region.*	▪ Option 17 - Strategic active travel network and active freeways ▪ Option 18 - Regional Active Travel Network Strategy
P.AT3 Access to bikes *Increase access to bikes and enable bike ownership including adapted bikes and other non-standard bikes.*	▪ Option 22 - Support and promote uptake of electric bikes ▪ Option 23 - Invest in electric bike infrastructure ▪ Option 24 - Develop local bike hire & bike sharing schemes and initiatives ▪ Option 25 - Facilitate development of cross-boundary bike hire / bike sharing opportunities ▪ Option N5 - Adapt public transport services, vehicles and hubs to effects of climate change for staff and passenger welfare
P.AT4 Integration of walking, wheeling and cycling with other sustainable transport modes *Increase and enhance integration of walking, wheeling and cycling networks and facilities with other sustainable transport modes including bus, rail, ferry, Subway and Clyde Metro.*	▪ Option 26 - Co-ordinated and enhanced active travel journey planning information ▪ Option 62 - Improve integration of active travel and public transport
P.AT5 Integration of micromobility and walking, wheeling and cycling *Support development of emerging micromobility transport, such as e-scooters, and support the safe integration into active travel networks.*	▪ Option 106 - Package of shared mobility options – options to reduce personal car ownership and single occupancy car trips including journey sharing, car sharing including car clubs, bike sharing
Relevant Findings of Options STAG Appraisal	▪ Predominantly minor to moderate beneficial impacts particularly for air quality and climate emissions from potential for modal shift of some trips from road to active travel.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation.

	▪ No location specific information is available at this stage for policies involving development and construction of new transport infrastructure. The assessment has been undertaken as a high level and taken account of mitigation (see below) in predicting potential environmental effects.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These policies are generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for health, accessibility, productivity, air quality and climate change. The policies on facilitating and encouraging active travel are also predicted to have some beneficial effects for SEA topic biodiversity. Improving active travel infrastructure may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment, while reducing emissions through reduced vehicle-based travel.	+
Proposed Mitigation and Enhancement	▪ The implementation of active travel infrastructure should be fully accessible for all users and integrated across the region to realise full benefits. ▪ 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 developed wherever possible through re-use and reallocation of existing transport assets / road space and where new links are required these should be designed and constructed following circular economy principles to minimise use of primary resources ▪ Where materials are required to develop transport infrastructure then priority should be given to the use of secondary, recycled and remanufactured materials and products before use of non-renewable resources ▪ 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 ▪ Where materials are required to develop transport infrastructure then priority should be given to the use of secondary, recycled and remanufactured materials and products before use of non-renewable resources	
Monitoring Indicators	▪ Monitoring and ticketing indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ CO_2 emissions estimates from road transport ▪ Grammes CO_2 per passenger km by mode/vehicle type ▪ Average CO_2 emissions – all licensed cars ▪ Average CO_2 emissions – newly registered cars ▪ Number of Air Quality Management Areas (AQMAs) ▪ Proportion of households with at least once bike available for use ▪ Proportion of adults who walk as a means of transport at least 1 day a week ▪ Proportion of adults who walk at least 1 day a week for leisure or to keep fit ▪ Proportion of journeys 5km or less in distance that are made by walking or cycling	

	▪ Proportion of journeys under 1km in distance that are made by car ▪ Proportion of all journeys that are 5km or shorter in distance ▪ Number and severity of reported road casualties ▪ Number and severity of reported pedestrian casualties ▪ Mental Wellbeing (Mean WEMWBS score) ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: ▪ A health based indicator such as reported incidences of respiratory disease or asthma ▪ Concentrations of roadside air local pollutants at key monitoring locations

SEA Objective	P.AT1	P.AT2	P.AT3	P.AT4	P.AT5	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	++	+	+	+	▪ The policies are predicted to be clearly supportive of the SEA objective on health (physical and mental health/wellbeing), in particular through facilitating and encouraging active travel and enhanced opportunities for access to services, open space and employment by active travel.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	++	+	+	+	+	▪ The policies for facilitating and encouraging active travel are compatible with the SEA objective for accessibility with significant beneficial effects predicted where these polices were implemented as stated and designed to be fully accessible for all users.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	?	?	?	0	0	▪ The policies may have some minor beneficial effects on the SEA objective for material assets. For example, through encouraging more efficient forms of transport, although overall no significant effects are predicted. Some effects are uncertain, particularly where new active travel infrastructure would involve a demand on new materials.
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth	++	+	+	+	0	▪ The policies for facilitating and encouraging active travel to access facilitates, open spaces and employment are compatible with the SEA objective on productivity by enhancing and

SEA Objective	P.AT1	P.AT2	P.AT3	P.AT4	P.AT5	Commentary
of key economic sectors and deliver increased and more inclusive employment.						facilitating efficient and inclusive forms of transport for a wider range of people in the workplace/economy.
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	++	+	+	+	0	▪ Facilitating and encouraging active travel is assumed to deliver modal shift (where implemented at scale) for a broad range of journeys which would be predicted to reduce road transport emissions overall in key corridors. This is predicted to have beneficial effects on air quality which may be significant where particular air quality problem areas are addressed.
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	++	+	+	+	0	▪ The policies which support facilitating and encouraging active travel would be predicted to generate mode shift in key corridors where a step change in transport is achieved. Overall, it is predicted that implementation of the policies would lead to reductions in regional carbon emissions through effective and sustained regional implementation of the policies.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	+	?	0	0	0	▪ The policies are predicted to have the potential for indirect beneficial effects on some aspects of this SEA objective. Where the policies contribute to reduced traffic emissions, then minor beneficial effects may be predicted for some natural heritage receptors in proximity to key transport routes. New infrastructure has some potential for adverse natural heritage effects from changes in land use, habitat loss etc. which with mitigation are generally not predicted to be significant.

SEA Objective	P.AT1	P.AT2	P.AT3	P.AT4	P.AT5	Commentary
8. **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.	0	0	0	0	0	▪ Implementation of the polices is generally not predicted to have significant effects on water resources and flooding. New infrastructure development has some potential for adverse effects on the water environment, however, with sensitive design it is not predicted that these would be significant.
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	?	0	0	0	▪ Implementation of the polices is not predicted to have significant effects on cultural heritage assets. There is some potential for improved active travel access to visit sites of cultural heritage interest. If new infrastructure was developed on greenfield land, the potential for impacts on archaeological resources would need to be considered further.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	0	0	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity. There is some potential on key corridors where traffic levels were reduced for minor beneficial effects on visual amenity for some receptors and new active travel routes have potential to open up opportunities to experience new landscapes which are not currently available.

E.5 Enhancing quality and integration of public transport

Enhancing quality and integration of public transport

This policy theme focuses on improving the quality and integration of public transport including network planning, ticketing, information and journey planning, and integration of public transport with other modes including active travel, Community Transport and Park and Ride.

The RTS sets out 11 policies to help tackle these issues and improve quality and integration of public transport.

Transport Policy	Relevant Options
P.PT1 Integrated public transport system *Enhance the quality and integration of the public transport system, aiming for a highly integrated, world class, passenger focused system that attracts users away from less sustainable modes of travel particularly private car usage. Promote and facilitate integration of public transport systems including networks, services, ticketing, information, marketing, and passenger facilities, aiming for a more unified system that is easy and convenient for passengers to navigate. Improve public transport service quality particularly reliability, punctuality and frequency. Improve passenger satisfaction including value for money and increase perceptions of the public transport system as attractive, convenient and desirable. Facilitate and support integration of public transport with other modes. Ensure public transport governance models facilitate and enable delivery of the regional transport strategy.*	▪ Option 54 - Enhanced harbour and terminal infrastructure for passenger ferry services ▪ Option 84 - Public transport Passenger Charter ▪ Option 88 - Enhanced and integrated promotional, marketing and branding activities for local public transport ▪ Option 89 - Improved monitoring of passenger satisfaction
P.PT2 Ticketing and information *Develop and facilitate enhanced integration of public transport systems for ticketing, travel information, booking and payment activities across all public transport modes in the region including inter-regional connections where appropriate. Aim for a single, integrated system, providing users with a high quality, simple and accessible experience for planning, booking and paying for travel on public transport. Integrate and align developments in ticketing and information with wider developments in Mobility as a Service.*	▪ Option 64 - A regional framework for Mobility as a Service – option to develop a framework for the development and delivery of MaaS in the region ▪ Option 117 - ZoneCard modernisation ▪ Option 118 - Enhanced Smart and integrated ticketing for the region (e.g. tap on/tap off)
P.PT3 Mobility as a Service *Develop and facilitate Mobility as a Service (MaaS) in the region, building upon existing opportunities including ZoneCard where appropriate. Ensure MaaS platforms are inter-operable with cross-regional and national MaaS solutions where appropriate.*	▪ Option 64 - A regional framework for Mobility as a Service – option to develop a framework for the development and delivery of MaaS in the region
P.PT4 Bus quality and integration *Facilitate and enable development of an enhanced and fully integrated bus system for the region. Ensure the bus system provides reliable and punctual services, offers good value for money and high levels of passenger satisfaction. Ensure bus is perceived to be an attractive, convenient and desirable mode of transport that attracts users away from less sustainable ways of travelling. Facilitate and support development of an enhanced regional bus network to ensure excellent bus connectivity for the region and ensure integration with other sustainable transport modes including rail, ferry, Subway and Clyde Metro.*	▪ Option 4 - Fully accessible and comprehensive travel information and journey planning services – at stops/stations, on board services, and digital – including improved audio/visual information ▪ Option 31 - New / enhanced bus lanes/segregation ▪ Option 32 - Improved traffic management measures to support bus priority ▪ Option 33 - New / enhanced traffic signal control ▪ Option 34 - Enhanced enforcement of bus lanes ▪ Option 87 - Enhanced local public transport stop/station infrastructure ▪ Option 90 - Enhance provision of real time passenger information

Support development and delivery of bus priority measures including Bus Partnership Fund. Facilitate development of bus partnerships, bus franchising and municipal bus operations where appropriate.	
P.PT5 Rail quality and integration *Facilitate and support development of the regional rail network in the region and ensure the multi-faceted role of rail in the region is recognised by investment decision makers. Ensure the rail system provides reliable and punctual services, offers good value for money and high levels of passenger satisfaction. Increase integration of the rail system with other sustainable transport modes including bus, ferry, Subway and Clyde Metro.*	▪ Option 92 - Capacity enhancements and constraint resolution on rail network ▪ Option 94 - Enhanced economic and social value of rural railways ▪ Option 95 - Re-opening of disused rail lines (passenger and freight) ▪ Option 96 - Support Glasgow Central capacity enhancement (aligned with STPR2 process)
P.PT6 Ferry quality and integration *Facilitate and support development of the ferry network in the region. Ensure the ferry network provides reliable and resilient services and meets the needs of island residents, businesses and visitors. Ensure ferry is integrated with the wider public transport system including island transport services to reduce adverse impacts of visitor car travel on Island communities and help achieve modal shift to sustainable travel methods.*	▪ Option 52 - Support development and delivery of the Islands Connectivity Plan ▪ Option 53 - Enhanced resilience of ferry services for Arran and Cumbrae and peninsular communities on the Clyde. ▪ Option 54 - Enhanced harbour and terminal infrastructure for passenger ferry services ▪ Option 55 - Enhanced capacity on ferry routes on the Clyde
P.PT7 Subway quality and integration *Develop the Subway to be fully integrated with active travel, bus, rail and Clyde Metro. Ensure the Subway provides reliable and punctual services, offers good value for money and high levels of passenger satisfaction.*	▪ Option 109 - New Subway service plan (following completion of Subway Modernisation)
P.PT8 Clyde Metro *Facilitate and support development and delivery of Clyde Metro and ensure integration with active travel, bus, rail and Subway networks. Ensure Clyde Metro provides reliable and punctual services, offers good value for money and high levels of passenger satisfaction.*	▪ Option 62 - Improve integration of active travel and public transport
P.PT9 Community Transport, Demand Responsive Transport and last mile connections *Increase and enhance the 'last mile' and community-level transport network. Develop the role and enhance integration of Community Transport, Demand Responsive Transport and taxis, active travel and shared transport with bus, rail, ferry, Subway and the future Clyde Metro. Integrate walking, wheeling and cycling networks and facilities with public transport.*	▪ Option 38 - Development and enhanced capacity building & resilience of Community Transport Network ▪ Option 51 - Increased capacity, flexibility and coverage of demand responsive services ▪ Option 57 - Improved integration between Community Transport, Demand Responsive Transport, and local public transport ▪ Option 62 - Improve integration of active travel and public transport ▪ Option 107 - Increased availability of accessible taxis
P.PT10 Park and Ride	▪ Option 98 - New/Enhanced rail park and ride

Increase and enhance Park & Ride facilities and Park & Ride systems where local active travel and public transport connections to stops/hubs/stations are limited.	
P.PT11 Sustainable mobility hubs *Facilitate and support development and enhancement of public transport interchanges and sustainable mobility hubs. Support development of national Mobility Hub Delivery Framework and ensure development of a sustainable mobility hub network is integrated with development of 20-minute neighbourhoods. Ensure that best use is made of existing facilities and integration with all sustainable modes including active and shared modes and Community Transport is assured.*	▪ Option 58 - Sustainable integrated transport hubs for hospitals, campuses & town centres ▪ Option 59 - Integrated 'mini' transport hubs for smaller towns and rural communities to improve integration with mainstream public transport

Relevant Findings of Options STAG Appraisal	▪ Due to the large number of options a range of impacts were predicted, primarily with minor beneficial environmental impacts from potential to effect modal shift and some potential adverse impacts where new infrastructure development is proposed, dependent on location.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation. ▪ Increased future public transport provision would be assumed to involve new low or zero emission vehicles. ▪ No location specific information is available at this stage for policies involving development and construction of new transport infrastructure. The assessment has been undertaken as a high level and taken account of mitigation (see below) in predicting potential environmental effects.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These public transport enhancement policies are generally compatible with the SEA objectives and in a number of cases significant beneficial effects are predicted including for health and accessibility. The policies on enhancing and integrating public transport are also predicted to have some beneficial effects for SEA topics of material assets, productivity, air quality and climate change. Enhanced public transport networks and services may also give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment. The development of new transport infrastructure such as the Metro and Park and Ride sites has some potential for adverse effects on a number of SEA objectives. With mitigation it is predicted, at this stage, that any adverse residual effects on environmental receptors would not be significant. Opportunities for environmental enhancement should be sought in all new transport infrastructure proposals.	+
Proposed Mitigation and Enhancement	▪ Increased provision of public transport capacity and services should deploy zero or ultra-low emission vehicles	

	▪ Public transport operators should be supported to achieve rapid decarbonisation of existing vehicle fleets and operational systems ▪ Enhancement to bus, rail, subway and ferry services and facilities should be designed and operated to ensure that the needs of all users and disabilities groups are accommodated ▪ New transport infrastructure should be developed wherever possible through re-use and reallocation of existing transport assets / road space and where new facilities, or infrastructure are required these should be designed and constructed following circular economy principles to minimise use of primary resources ▪ Where materials are required to develop transport infrastructure then priority should be given to the use of secondary, recycled and remanufactured materials and products before use of non-renewable resources ▪ Any new transport infrastructure would be subject to appropriate level of environmental assessment and consenting, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided
Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ CO_2 emission estimates from road transport ▪ Grammes CO_2 per passenger km by mode/vehicle type ▪ Average CO_2 emissions – all licensed cars ▪ Average CO_2 emissions – newly registered cars ▪ Number of Air Quality Management Areas (AQMAs) ▪ Bus network coverage and service frequency ▪ Level of service framework – accessibility & availability indicators ▪ MyBus usage ▪ Scotrail Public Performance Measure ▪ Usage of smart ticketing products ▪ Proportion of adults who are satisfied with local public transport ▪ Mobility as a Service indicator ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: ▪ A health based indicator such as reported incidences of respiratory disease or asthma ▪ Concentrations of roadside air pollutants at key monitoring locations

SEA Objective	P.PT1	P.PT2	P.PT3	P.PT4	P.PT5	P.PT6	P.PT7	P.PT8	P.PT9	P.PT10	P.PT11	Commentary
1. Health: Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	+	?	+	+	+	+	?	++	0	+	▪ The polices are predicted to be supportive of the SEA objective on health, in particular through better integration of public transport including with community transport and DRT. These policies would also contribute to enhanced opportunities for access to services, healthcare facilities, open space and employment with potential mental health and wellbeing benefits for some people.
2. Accessibility: Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	++	+	+	++	++	++	++	+	++	+	++	▪ The policies for enhancing and quality and integration of public transport are inherently compatible with the SEA objective for accessibility with significant beneficial effects predicted where these polices were implemented effectively and comprehensively.
3. Material Assets: Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	?	0	?	+	+	+	+	?	0	?	+	▪ The policies may have some minor beneficial effects on the SEA objective for material assets. For example, through encouraging more efficient forms of transport and its land-uses, although overall no significant effects are predicted. Some effects are uncertain, particularly where new transport infrastructure

SEA Objective	P.PT1	P.PT2	P.PT3	P.PT4	P.PT5	P.PT6	P.PT7	P.PT8	P.PT9	P.PT10	P.PT11	Commentary
												would involve a demand on new materials.
4. Productivity, Competitiveness and Innovation: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	+	0	+	+	+	+	+	+	0	+	+	▪ The policies for enhancing the quality and integration of public transport are generally compatible with this SEA objective for productivity because they potentially support improved access to employment opportunities and improved physical access for all. A step change in accessibility and regional transport would also be predicted to have beneficial effects on the regional economy and businesses efficiency.
5. Air Quality and Amenity: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	+	0	?	+	+	+	+	?	0	?	+	▪ Implementation of enhanced public transport provision and integration may deliver modal shift for a broad range of journeys which would be predicted to reduce transport emissions overall in key corridors. This is predicted to have some beneficial effects on local air quality. Measures such as the Metro and Park and Ride sties would require further appraisal to understand their effects on local traffic patterns and associated emissions.

SEA Objective	P.PT1	P.PT2	P.PT3	P.PT4	P.PT5	P.PT6	P.PT7	P.PT8	P.PT9	P.PT10	P.PT11	Commentary
6. Climate Change Mitigation: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	0	?	+	+	+	+	?	0	?	+	▪ The polices which support enhanced public transport provision and integration would be predicted to generate mode shift in key corridors where a step change in transport is achieved. Overall, it is predicted that implementation of the policies with a beneficial effect would reduce regional carbon emissions through effective and sustained regional implementation of the policies.
7. Biodiversity, Geodiversity and Soil: Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	0	0	0	0	0	0	0	-	0	-	0	▪ The policies are predicted to have the potential for indirect beneficial effects on some aspects of this SEA objective where they contribute to reduced traffic emissions. Although effects are not predicted to be significant. New infrastructure development has some potential for adverse natural heritage effects from changing in land use, habitat loss etc dependent on the scale and location of the proposals.
8. Water, Flood Risk and Resilience: Conserve, protect and enhance water environments, water quality and water resources, whilst	0	0	0	0	0	0	0	-	0	-	0	▪ Implementation of the polices are generally not predicted to have significant effects on water resources and flooding. New

SEA Objective	P.PT1	P.PT2	P.PT3	P.PT4	P.PT5	P.PT6	P.PT7	P.PT8	P.PT9	P.PT10	P.PT11	Commentary
adapting to climate change and reducing flood risks.												infrastructure development has some potential for adverse effects on the water environment, however, with sensitive design it is not predicted that these would be significant.
9. Cultural Heritage: Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	0	0	0	0	-	0	-	0	▪ Implementation of the polices are not predicted to have significant effects on cultural heritage assets. There is some potential for improved public transport services to provide opportunities for people to visit sites of cultural heritage interest more easily. Where new infrastructure was developed on greenfield land, the potential for impacts on archaeological resources would need to be considered further. Similarly, effects of new transport facilities on built heritage would need to be avoided or reduced through sensitive location and high quality design.
10. Landscape: Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	0	0	0	0	-	0	-	0	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity. There is some potential on key corridors where traffic levels were reduced for minor

SEA Objective	P.PT1	P.PT2	P.PT3	P.PT4	P.PT5	P.PT6	P.PT7	P.PT8	P.PT9	P.PT10	P.PT11	Commentary
												beneficial effects on visual amenity for some receptors. Proposals for new infrastructure would need to be designed sympathetically with the local landscape or townscape character and visual effects carefully considered to avoid significant adverse landscape and visual effects.

E.6 Improving road safety

Improving road safety *This policy theme focuses on improving road safety in the region particularly to improve safety for vulnerable road users and enable more walking, wheeling and cycling and development of high-quality places.* *The RTS sets out three policies to support road safety interventions in the region, providing additional focus on vulnerable road users and safe speeds to protect human health.*	
Transport Policy	**Relevant Options**
P.PS1 Road safety and vulnerable road users *Support and facilitate delivery of Scotland's Vision Zero where no is killed or seriously injured on roads by 2045. Support implementation of the Road Safety Framework and local Road Safety Plans and help meet road casualty reduction targets in the region. Aim for a sharp and consistent reduction in the number and severity of road traffic collisions in the region with particular focus on vulnerable road users including people who are walking, wheeling and cycling, children and young people, older people and disabled people.*	▪ Option 20 - Place-making schemes to improve the quality of the built environment for walking and cycling ▪ Option 99 - Implement Road Safety Framework in the region
P.PS2 Safe speeds	▪ Option 99 - Implement Road Safety Framework in the region

Support implementation of 20mph speed limits on a majority of roads in built up areas in the region including towns and villages. Support investigation and implementation of reduced speeds on rural roads in the region, where appropriate.	▪ Option 105 - 20mph speed limits and 20mph zones
P.PS3 Regional road network safety measures *Support implementation of road safety measures on the regional road network.*	▪ Option 99 - Implement Road Safety Framework in the region
Relevant Findings of Options STAG Appraisal	▪ Negligible to minor beneficial impacts predicted due to potential for road safety measures to facilitate reduction in road transport emissions.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation. ▪ It is assumed that a reduction in traffic speeds has the potential to reduce vehicle emissions.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These policies are generally not predicted to have significant environmental effects based on consideration of the SEA objectives. However, improving road safety would have significant beneficial effects for health through improved (safer) conditions on the region's roads and some minor beneficial effects are predicted for the SEA topics of accessibility, productivity, air quality and climate change.	0
Proposed Mitigation and Enhancement	▪ New transport infrastructure should be developed wherever possible through re-use and reallocation of existing transport assets / road space 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 transport infrastructure would be subject to appropriate level of environmental assessment and consenting, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided.	
Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ Number and severity of reported road casualties ▪ Number and severity of reported pedestrian casualties ▪ CO_2 emissions estimates from road transport ▪ Grammes CO_2 per passenger km by mode/vehicle type ▪ Average CO_2 emissions – all licensed cars ▪ Average CO_2 emissions – newly registered cars ▪ Number of Air Quality Management Areas (AQMAs) ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: ▪ A health based indicator such as reported incidences of respiratory disease or asthma	

	▪ Concentrations of roadside air pollutants at key monitoring locations

SEA Objective	P.PT1	P.PT2	P.PT3	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	++	+	▪ The policies are predicted to be clearly supportive of the SEA objective on health through improving road safety and reduced likelihood of transport-related road accidents and casualties.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	+	+	+	▪ The policies for improving road safety are not predicted to have significant benefits on accessibility. However, there may be some minor benefits through improved accessibility to the road network for some groups due to improved safety and lower traffic speeds.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	0	0	0	▪ The policies to improve road safety are not predicted to have any significant effects on material assets.
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	+	0	+	▪ The policies for improving road safety are not predicted to have significant benefits on productivity. There may be some minor benefits to the economy from reducing transport-related road accidents and improving the resilience of the road network.
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	0	+	0	▪ Implementing reduced speeds is predicted to reduce overall emissions and therefore, is predicted to have minor beneficial effects on air quality where implemented comprehensively.

SEA Objective	P.PT1	P.PT2	P.PT3	Commentary
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	0	+	0	▪ The policies which support road safety improvements, particularly introducing reduced speeds, is predicted to reduce local carbon emissions where implemented at scale across the region.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	0	0	0	▪ The polices are not predicted to results in significant effects on the SEA objective for biodiversity, geodiversity and soil. Where reduced speeds are introduced, there may be minor beneficial effects for some local natural heritage receptors e.g. from reduced potential for road kill of mammals.
8. **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.	0	0	0	▪ Implementation of the polices are generally not predicted to have significant effects on water resources and flooding. New infrastructure development has some potential for adverse effects on the water environment, however, with sensitive design it is not predicted that these would be significant.
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	▪ Implementation of the polices is not predicted to have significant effects on cultural heritage assets.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity.

E.7 Decarbonising vehicles and improving air quality

Decarbonising vehicles and improving air quality

This policy theme focuses on the transition from conventionally fuelled vehicles to electric, hydrogen and other alternative fuels and other policies that will help reduce transport emissions and improve air quality. *The RTS sets out six policies to support transport vehicle decarbonisation and two policies specifically for improving air quality.*	
Transport Policy	**Relevant Options**
P.GF1 Road transport vehicle decarbonisation *Facilitate and promote an accelerated transition to ultra-low emission road transport vehicles. Support and facilitate implementation of electric vehicle charging infrastructure. Support the development of regional / cross-boundary charging infrastructure networks including ensuring supply for rural and remote areas and integration with public transport and sustainable mobility hubs. Support introduction of tariffs for use of the electric vehicle charging network and support co-ordinated approaches to tariffs. Improve information and sharing of best practice related to road transport decarbonisation among consumers, business, freight sector and transport operators. Support and encourage bus operators to take up opportunities to decarbonise fleets, upgrade depots and develop partnerships with energy providers. Support and facilitate decarbonisation of the community transport sector in the region. Facilitate development of public charging infrastructure for bus and community transport particularly at SPT bus stations, and integrate with sustainable mobility hubs as appropriate. Support and encourage innovation and investment in alternative fuels and fuelling infrastructure including Green Hydrogen particularly to support decarbonisation of larger vehicles including buses and public sector fleets. Support alignment of transport decarbonisation and clean energy strategies and promote cross-sector working including improving data sharing.*	▪ Option 36 - Community Transport sector transition to ultra-low emission vehicles ▪ Option 39 – Regional Electric Vehicle (EV) network charging strategy ▪ Option 41 – Promotion of Ultra Low Emissions Vehicles (ULEVs) ▪ Option 42 - Local bus fleet transition to ultra-low emission buses ▪ Option 43 - Freight sector transition to ultra low emission vehicles ▪ Option 44 – Development of alternatives to battery electric vehicles, particularly Hydrogen opportunities and for larger vehicles ▪ Option 47 - Taxi sector transition to low emission vehicles ▪ Option 75 – Low emission road freight where rail freight alternatives do not exist
P.GF2 Rail decarbonisation *Support and facilitate decarbonisation of rail services in the region. Ensure investment in decarbonisation of rail services provides opportunities for improved and more resilient rail services and infrastructure in the region.*	▪ Option 48 – Support Rail Services Decarbonisation Plan
P.GF3 Subway decarbonisation *Develop and implement a net zero carbon strategy for the Subway.*	▪ SPT Business Planning
P.GF4 Ferry decarbonisation *Support decarbonisation of ferry services in the region and implementation of Island Connectivity Plan. Ensure ferry decarbonisation provides opportunities for improved and more resilient ferry services and infrastructure in the region.*	▪ Option 52 – Support development and delivery of the Islands Connectivity Plan ▪ Option 53 – Enhanced resilience of ferry services for Arran and Cumbrae and peninsular communities on the Clyde ▪ Option N1 - Support decarbonisation of ferry services in the SPT region

P.GF5 Aviation decarbonisation *Support decarbonisation of regional air services particularly lifeline services to Argyll and Bute, Highlands and Comhairle nan Eilean Siar. Increase low carbon surface transport to Glasgow Airport and Prestwick Airport.*	▪ Option 29 – Support and develop behaviour change activities that tackle wider societal norms around car use particularly to support sustainable travel to school ▪ Option N2 - Support decarbonisation of air services in the SPT region
P.GF6 Clyde Metro *Ensure that Clyde Metro is developed on the basis of minimising carbon and other harmful emissions. Promote lower energy consumption by incorporating renewable energies and zero emission transport designs as far as possible..*	▪ Option 62 - Improve integration of active travel and public transport
P.AQ1 Low Emission Zones *Support implementation and promotion of the Glasgow Low Emission Zone. Support investigation and implementation of additional Low Emission Zones in the region as appropriate.*	▪ Option 45 – Implementation of Low Emission Zones
P.AQ2 Air Quality Management Areas *Support implementation and delivery of transport improvements and measures to improve air quality within Air Quality Management Areas in the region. Aim to reduce the number of AQMAs in the region.*	▪ Option 27 – Support development of national aviation review
Relevant Findings of Options STAG Appraisal	▪ Predominantly minor to moderate (significant) beneficial impacts particularly for air quality and climate emissions from the proposed decarbonisation measures.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ Decarbonising vehicles and improving air quality would have significant beneficial effects on air quality and climate change mitigation and some beneficial effects for SEA topics of health, accessibility, productivity and biodiversity are also predicted. The policies are generally not predicted to have a significant effect on the other SEA objectives.	+
Proposed Mitigation and Enhancement	▪ Public transport operators should be supported to achieve rapid decarbonisation of existing vehicle fleets. ▪ 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. ▪ Enhancement to bus, rail, subway and ferry services and facilities should be designed and operated to ensure that the needs of all users and disabilities groups are accommodated. ▪ 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	

	▪ Any new transport infrastructure would be subject to appropriate level of environmental assessment and consenting, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided.
Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ CO_2 emissions estimates from road transport ▪ Road transport energy consumption estimates / tonnes of oil equivalent ▪ Grammes CO_2 per passenger km by mode/vehicle type ▪ Average CO_2 emissions – all licensed cars ▪ Average CO_2 emissions – newly registered cars ▪ Number of Air Quality Management Areas (AQMAs) ▪ Proportion of licensed cars and vans that are ULEV ▪ Grammes CO_2 per passenger-kilometre by mode/vehicle type ▪ Proportion of households with 2+ cars/vans ▪ Number of licensed cars / LGVs ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: ▪ A health based indicator such as reported incidences of respiratory disease or asthma ▪ Concentrations of roadside air pollutants at key monitoring locations

SEA Objective	P.GF1	P.GF2	P.GF3	P.GF4	P.GF5	P.GF6	P.AQ1	P.AQ2	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	+	+	+	+	+	+	+	▪ The policies are predicted to be supportive of the SEA objective on health, in particular through reducing the negative impacts of transport on human health in terms of pollution and poor air quality.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	+	0	0	0	0	0	?	0	▪ Policies to decarbonise vehicles and improve air quality are not predicted to have significant effects on the SEA objective for accessibility. There may be some minor beneficial effects through improved infrastructure, technological innovation and information sharing and benefits for disabled users where vehicles are upgraded to newer standards.

SEA Objective	P.GF1	P.GF2	P.GF3	P.GF4	P.GF5	P.GF6	P.AQ1	P.AQ2	Commentary
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	?	?	?	?	?	?	0	0	▪ The policies are not predicted to have significant beneficial effects on the SEA objective for material assets although vehicle efficiencies and upgrades have the potential to lower overall use of energy and particularly fossil fuels. Some effects are uncertain, particularly where new transport infrastructure and vehicles would involve a demand on new raw materials and electrical components (particularly large scale uptake of new batteries for EVs).
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	+	+	0	0	0	0	0	0	▪ There may be some minor beneficial effects of the policies on the SEA objective for productivity through improved resilience of services, particularly rail, ferry and air, but the effects are not predicted to be significant. Decarbonisation would also promote investment and demand in low carbon industries and energy generation and in the long term help businesses avoid the increasing costs of fossil fuels).
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	++	+	+	+	+	+	++	++	▪ Implementation of policies to decarbonise vehicles and improve air quality are inherently supportive of the SEA objective for air quality and significant beneficial effects would be predicted where measures are delivered comprehensively.
6. **Climate Change Mitigation**: Decarbonise the transport sector and	++	++	++	++	++	++	+	+	▪ The policies which support decarbonising vehicles are predicted to have significant beneficial effects on the SEA objective of climate

SEA Objective	P.GF1	P.GF2	P.GF3	P.GF4	P.GF5	P.GF6	P.AQ1	P.AQ2	Commentary
support wider efforts to mitigate climate change.									change mitigation by potentially reducing carbon emissions in the regional to a significant extent where implemented effectively. There may be some minor beneficial impacts through the implementation of Low Emission Zones and AQMA as they also encourage the transition to low-emission vehicles.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	+	0	0	0	0	0	0	0	▪ The polices are predicted to have the potential for indirect beneficial effects on some aspects of this SEA objectives where they contribute to reduced traffic emissions. Although effects are not predicted to be significant. New infrastructure development has some potential for adverse natural heritage effects from changing in land use, habitat loss etc.
8. **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.	0	0	0	0	0	0	0	0	▪ Implementation of the polices are generally not predicted to have significant effects on water resources and flooding. New infrastructure development has some potential for adverse effects on the water environment, however, with sensitive design it is not predicted that these would be significant.
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	0	0	0	0	0	▪ Implementation of the polices are not predicted to have significant effects on cultural heritage assets.

SEA Objective	P.GF1	P.GF2	P.GF3	P.GF4	P.GF5	P.GF6	P.AQ1	P.AQ2	Commentary
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	0	0	0	+	0	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity. There is some potential for minor beneficial effects on visual amenity for some receptors where the implementation of policies reduces traffic for example in urban areas where LEZs have the potential to materially reduce the presence of road traffic in civic areas.

E.8 Moving goods sustainably

Moving good sustainably *This policy theme focuses on the sustainable movement of goods in the region. The region has a large number of strategic freight generators and around two-fifths of Scotland's freight journeys originate in the region.* *The RTS sets three policies that aim to support national policy to increase freight modal shifts, particularly from road to rail, and to increase sustainable movement of goods within built up areas particularly las mile deliveries.*	
Transport Policy	**Relevant Options**
P.MG1 Strategic freight transport *Facilitate and support strategic freight transport to be more sustainable and energy efficient. Increase resilience and reliability of strategic road, rail and maritime freight transport. Enable strategic freight modal shifts, particularly from road to rail and to maritime transport where appropriate. Support and facilitate best practice and innovation in freight transport in the region.*	▪ Option 29 - Support and develop behaviour change activities that tackle wider societal norms around car use particularly to support sustainable travel to school ▪ Option 72 - Cyclelogistics – improvements to transport of freight by bike ▪ Option 75 - Low emission road freight where rail freight alternatives do not exist ▪ Option 76 - Support Rail freight market development ▪ Option 77 - HGV rest stops and enhanced secure overnight facilities ▪ Option 78 - Enhanced intermodal freight transfer facilities

P.MG2 Urban freight and last mile deliveries *Facilitate and support more sustainable and efficient movement of goods in City/town centres. Reduce adverse impacts of goods traffic on local roads networks and communities. Facilitate and support increased freight modal shift and innovation of the 'last mile' delivery to be more sustainable and to support development of 20-minute neighbourhoods.*	▪ Option 72 - Cyclelogistics – improvements to transport of freight by bike ▪ Option 73 - 'Last mile' innovations – improving integration and better co-ordination of the 'last mile' in freight transport deliveries
P.MG3 Freight hubs and facilities *Facilitate and support development and enhancement of freight hubs and freight facilities. Support development of freight consolidation hubs and networks.*	▪ Option 73 - 'Last mile' innovations – improving integration and better co-ordination of the 'last mile' in freight transport deliveries ▪ Option 74 - Freight consolidation centres
Relevant Findings of Options STAG Appraisal	▪ Generally beneficial (but non-significant) environmental impacts. Some potential for minor adverse effects for new infrastructure development, dependent on location.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These policies are generally not predicted to have a significant effect on the SEA objectives. However, facilitating the efficient and sustainable movement of freight would be predicted to have some beneficial effects for the SEA objectives relating to health, material assets and productivity, air quality and climate change. 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.	+
Proposed Mitigation and Enhancement	▪ Freight transport operators and facilities should be supported to achieve rapid decarbonisation of existing vehicle fleets. ▪ 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 ▪ New transport infrastructure should be developed wherever possible through re-use and reallocation of existing transport assets / road space and where new facilities, or infrastructure are required these should be designed and constructed following circular economy principles to minimise use of primary resources ▪ Where materials are required to develop transport infrastructure then priority should be given to the use of secondary, recycled and remanufactured materials and products before use of non-renewable resources ▪ Any new infrastructure would be subject to appropriate level of environmental assessment and consenting, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided.	

Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ CO_2 emissions estimates from road transport ▪ Road transport energy consumption estimates / tonnes of oil equivalent ▪ Grammes CO_2 per passenger km by mode/vehicle type ▪ Number of Air Quality Management Areas (AQMAs) ▪ Number of licensed LGVs ▪ Proportion of licensed cars and vans that are ULEV ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: ▪ Concentrations of roadside air pollutants at key monitoring locations

SEA Objective	P.MG1	P.MG2	P.MG3	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	+	0	0	▪ Implementation of the policies is not predicted to result in a significant effect on the SEA objective of health. There may be minor beneficial effects where freight modal shift reduces transport-related emissions in key corridors and areas where air quality challenges exist currently.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	0	0	0	▪ The policies for moving goods sustainably are not predicted to have a significant impact on the SEA objective for accessibility.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	+	0	?	▪ The policies may have some minor beneficial effects on the SEA objective for material assets. For example, through more efficient forms of transporting goods sustainably, including land-use integration with last mile delivery services and reductions in fossil fuel use in the region. New freight facilities would potentially require use of new materials. Overall no significant effects are predicted.

SEA Objective	P.MG1	P.MG2	P.MG3	Commentary
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	++	+	+	▪ The policies for moving goods sustainably are compatible with the SEA objective for productivity as they have good potential to facilitate the efficient and sustainable movement of freight across the region and support freight dependent businesses.
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	+	+	+	▪ The policies for moving good sustainably may deliver freight modal shift which would be predicted to reduce transport emissions of local air pollutants overall in key corridors where step changes in freight enhancement was achieved. This is predicted to have some beneficial effects on local air quality.
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	+	+	▪ The policies which support transporting freight efficiently and sustainably would be predicted to generate mode shift for freight in key corridors where implemented at scale. Overall, it is predicted that implementation of the policies would have a beneficial effect from reduced regional carbon emissions.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	0	0	?	▪ The policies are predicted to have the potential for indirect beneficial effects on some aspects of this SEA objective. Where the policies contribute to reduced traffic emissions, then minor beneficial effects may be predicted for some natural heritage receptors in proximity to key transport routes. New infrastructure development for freight hubs or facilities has some potential for adverse natural heritage effects from changing in land use, habitat loss etc depending on the scale and location of developments.
8. **Water, Flood Risk and Resilience:** Conserve, protect and enhance water	0	0	0	▪ Implementation of the policies is not predicted to have significant effects on water resources and

SEA Objective	P.MG1	P.MG2	P.MG3	Commentary
environments, water quality and water resources, whilst adapting to climate change and reducing flood risks.				flooding. New infrastructure development has some potential for adverse effects on the water environment, however, with sensitive design it is not predicted that these would be significant.
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	▪ Implementation of the polices is not predicted to have significant effects on cultural heritage assets. Where new infrastructure was developed on greenfield land, the potential for impacts on archaeological resources would need to be considered further and mitigated appropriately if required.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	?	0	?	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity. Proposals for new infrastructure would need to be designed sympathetically with the local landscape or townscape character and visual effects carefully considered.

E.9 Increasing resilience and adapting to climate change

Increasing resilience and adapting to climate change *This policy theme focuses on the resilience of the regional transport system to disruption and climate change impacts. Resilience problems have immediate costs to business and the economy and adapting our transport infrastructure and services to the impacts of climate change is important for the region's long-term growth and development.* *The RTS sets out three policies to support a more resilient transport system that is adapted to meet climate change impacts.*	
Transport Policy	**Relevant Options**
P.RA1 Climate Change Adaption *Facilitate and support adaptation of the regional transport system to the impacts and effects of climate change including regional roads, coastal rail lines, ferry*	▪ Option 53 - Enhanced resilience of ferry services for Arran and Cumbrae and peninsular communities on the Clyde ▪ Option 93 – Improved resilience and adaptation of rail

terminals and harbours, Subway, and flooding of rail, road and path networks. Adapt the transport system to protect the health and wellbeing of transport system users from climate change impacts including higher temperatures and heat stress. Ensure new transport investments including Clyde Metro are future proofed for impacts of climate change and a low carbon future.	▪ Option 102 - Improved resilience of local roads networks to flooding and other weather-related incidents ▪ Option N5 - Adapt public transport services, vehicles and hubs to effects of climate change for staff and passenger welfare
P.RA2 Resilience *Increase resilience of the regional transport system from disruption. Reduce adverse impacts of transport system disruption on people and business.*	▪ Option 53 - Enhanced resilience of ferry services for Arran and Cumbrae and peninsular communities on the Clyde ▪ Option 93 – Improved resilience and adaptation of rail ▪ Option 102 - Improved resilience of local roads networks to flooding and other weather-related incidents
P.RA3 Flood risk management and mitigation *Support increased integration of transport and flood risk planning. Encourage and develop opportunities to support flood risk management actions through transport projects and infrastructure, where appropriate.*	▪ Option 102 - Improved resilience of local roads networks to flooding and other weather-related incidents
Relevant Findings of Options STAG Appraisal	▪ Negligible to minor beneficial impacts from enhanced resilience contributing to more reliable public transport.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These policies are generally predicted to have a minor beneficial effect on the SEA objectives. Increasing resilience and adapting to climate change would have potential for some significant beneficial effects for health and productivity, some minor beneficial effects for the SEA topics of accessibility, material assets, climate change, water resources and air quality. Delivery of schemes to support transport infrastructure resilience should be sensitive to the natural and built environment and take opportunities to integrate with nature-based solutions.	+
Proposed Mitigation and Enhancement	▪ Any new infrastructure would be subject to appropriate level of environmental assessment and consenting, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided. ▪ 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.	

	▪ Where materials are required to develop transport infrastructure then priority should be given to the use of secondary, recycled and remanufactured materials and products before use of non-renewable resources ▪ 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.
Monitoring Indicators	Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: • Average CO_2 emissions – all licensed cars • CO_2 emissions estimates from road transport • Average CO_2 emissions – newly registered cars Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: • Habitat creation schemes (types / areas) and biodiversity net gain delivered as part of new resilience projects • Number and type of annual flood incidences affecting bus and rail services • Number of properties at risk of flooding • Number of roads affected by flooding

SEA Objective	P.RA1	P.RA2	P.RA3	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	++	+	0	▪ Implementation of policies to adapt to climate change are predicted to have beneficial effects on the SEA objective for health through contribution to protecting the health and wellbeing of transport users from climate change impacts including disruption to key journeys and related user stress.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	+	+	+	▪ The policies for increasing the resilience of the transport network and adapting to climate change are predicted to have minor beneficial effects on the SEA objective for accessibility through reducing the risk of disruption of access by all users to facilities and transport services.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural	+	+	+	▪ The policies are compatible with the SEA objective for material assets through increasing the resilience of infrastructure to adverse weather effects and the effects of climate change. Overall the effects on

SEA Objective	P.RA1	P.RA2	P.RA3	Commentary
resources, land and infrastructure to meet identified needs.				infrastructure of the policy are beneficial although transport resilience schemes may demand use of natural resources in their construction which should be planned and implemented sustainably.
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	++	+++	0	▪ The policies for increasing resilience and adapting the transport network to climate change are generally compatible with the SEA objective for productivity because they reduce adverse impacts of weather –related disruption and damage to the transport system on people and businesses. ▪
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	+	0	0	▪ Implementation of climate change adaption policies are not predicted to have any material effects on air quality and amenity (provided construction of new resilience schemes was managed in accordance with good environmental site practices).
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	+	0	+	▪ The policies for increasing resilience and adapting the transport network to climate changes are also compatible with the SEA objective for climate change mitigation. This includes facilitating and adapting the transport system to the impacts and effect of climate change on regional roads, coastal rail lines, ferry terminals and harbours.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	0	0	0	▪ The policies are predicted to have the potential for indirect beneficial effects on some aspects of this SEA objective where the adaption to climate change contributes to protecting of natural heritage. Although effects are not predicted to be significant. New works to support climate resilience of infrastructure should be delivered sensitively

SEA Objective	P.RA1	P.RA2	P.RA3	Commentary
				and take opportunities for natural heritage enhancement.
8. **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.	+	0	+	▪ Implementation of policies encouraging flood risk management and mitigation are inherently compatible with the SEA objective for water, flood risk and resilience.
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	▪ Implementation of the polices are not predicted to have significant effects on cultural heritage assets but may indirectly support the conservation of some built heritage features particularly where these form part of the transport system (e.g. listed stations and bridges).
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	0	0	0	▪ The policies are not predicted to result in a significant change to landscape resources or visual amenity provided any new works were design and implemented sensitively.

E.10 Protecting and enhancing natural and built environments

Protecting and enhancing natural and built environments *This policy theme focuses on the design and development of the transport system to protect and enhance natural and built environment. It is important that transport plans and projects are joined-up with natures strategies to help tackle ecosystem and biodiversity loss.* *The RTS sets out three policies that aim to protect and enhance natural and built environment, with key opportunities including integrating active travel and green networks where possible.*	
Transport Policy	**Relevant Options**
P.EV1 Biodiversity and green infrastructure	

Protect and enhance biodiversity where possible. Develop and implement green infrastructure and other nature-based solutions as part of transport plans and transport projects where appropriate.	
P.EV2 Green networks *Support and facilitate integration of green networks and active travel networks where appropriate particularly in built up areas.*	▪ Option N4 - Integrate active travel networks and green networks
P.EV3 Built environment and high-quality places *Protect and enhance the built environment where possible. Integrate placemaking and public realm plans and projects with transport plans and projects where appropriate.*	
Relevant Findings of Options STAG Appraisal	▪ Minor beneficial impacts predicted from measures to enhance active travel and encourage modal shift.
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These policies are generally predicted to have a minor beneficial effect on most of the SEA objectives. Protecting and enhancing natural and built environments would have significant potentially beneficial effects for biodiversity and some beneficial effects for SEA topics of health, material assets, productivity, air quality, climate change, water resources and landscape/townscape. Delivery of attractive green networks using nature based solutions would also complement other policies to promote active travel and therefore potentially reinforce cumulative health and environmental benefits for people using active travel networks.	+
Proposed Mitigation and Enhancement	▪ 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. ▪ Any new infrastructure would be subject to appropriate level of environmental assessment and consenting, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided.	
Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ Percentage of adults who rate their neighbourhood as a very good place to live ▪ Proportion of adults who live within a 5-minute walk of their local green or blue space ▪ Natural Capital Asset Index	

	▪ Healthy Life Expectancy ▪ Percentage of adults meeting physical activity recommendations ▪ Mental Wellbeing (Mean WEMWBS score) ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: ▪ Habitat creation schemes (types / areas) and biodiversity net gain delivered as part of new resilience projects

SEA Objective	P.EV1	P.EV2	P.EV3	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical and mental health and social wellbeing.	0	+	+	▪ Implementation of policies to integrate green networks and active travel, and improve the urban realm through placemaking, are predicted to have minor beneficial effects on the SEA objective for health as they facilitate active travel and contribute to having healthier and attractive public places for everyone.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	0	+	0	▪ Implementation of polices for protecting and enhancing natural and built environments is not predicted to have direct significant effects on the SEA for accessibility. The policy to enhance green networks with sustainable transport networks has some potential to contribute to accessibility enhancement where delivered to meet the needs of all users.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	+	?	0	▪ The policies for protecting and enhancing natural and built environment may have minor beneficial effects on the SEA objective for material assets through the implementation of green infrastructure to benefit natural systems. Some effects are uncertain, particularly where new infrastructure would involve a demand on new materials however significant adverse effects are not predicted.

4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	+	0	+	▪ Implementation of policies to protect and enhance the natural and built environment are predicted to have minor beneficial effects on the SEA objective for productivity through supporting the sustainable development, improvement and management of infrastructure assets including green spaces and the public realm. No significant effects are predicted.
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	0	+	0	▪ The policies may have the potential for indirect beneficial effects through encouraging active travel through placemaking schemes. However, the effects are not predicted to be significant as stand alone measures.
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	0	+	0	▪ The policies have may have the potential for indirect effects on the SEA objectives for climate change mitigation through supporting increased active travel using sustainable transport networks in preference to car-based journeys and a subsequent reduction in carbon emissions.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	++	+	0	▪ Implementation of policies protecting and enhancing biodiversity, where promoted at scale across the region, are inherently compatible with the SEA objective for biodiversity, geodiversity and soil.
8. **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.	+	0	0	▪ The policies are not predicted to have significant effects on water, flood risk and resilience. Enhanced use of nature based solutions for transport networks including sustainable drainage systems have some potential to support beneficial outcomes for

				local drainage and water quality management.
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	0	0	0	▪ Implementation of the polices are not predicted to have significant effects on cultural heritage assets. Where public realm projects are implemented sensitively they have some potential to support and enhance wider measures to protect and promote townscape and local heritage.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	+	0	+	▪ The implementation of policies to protect and enhance the built environment where possible is predicted to have beneficial effects on the SEA objective for landscape through contribution to townscape character and quality. Delivery of green infrastructure may also afford opportunities for local landscape improvements and potential screening of adverse views of the transport network e.g. through tree planting schemes.

E.11 Connecting Places

Connecting Places *This policy theme focuses on the region's strategic transport connectivity to support inclusive economic growth, facilitate development and increase attractiveness of the region as a place to live, work, invest and do business.* *The RTS sets out seven policies for connecting places in the region. The policies are organised in a hierarchy – international, inter-regional, intra-regional, town centre and rural, remote and island connectivity.*	
Transport Policy	**Relevant Options**
P.CP1 International connectivity *Improve, increase and enhance sustainable inter-national connectivity of the region for passenger and freight transport and ensure the transport system supports a sustainable, inclusive, competitive, resilient and productive regional economy. The*	The Connecting Places policy theme was influenced and developed by the iRSS's ensuring consistency with needs and development plans across the region.

region's international transport gateways and routes to be maintained, improved or enhanced include: *•Connections to Glasgow Airport and Prestwick Airport;* *•Connections to ports - Ocean Terminal, Hunterston, Ardrossan, Ayr, Troon, King George V Docks, Inchgreen, and connections to Cairnryan;* *•Connections to England – including Glasgow Central station, Motherwell station, West Coast Mainline, Glasgow and South Western line, A76, A71, A72 and M8/M77/M74 and High-Speed Rail* *•Connections to road and rail freight facilities – Mossend, Eurocentral, and connections to Grangemouth*	
P.CP2 Inter-regional connectivity *Improve, increase and enhance sustainable inter-regional connectivity of the region for passenger and freight transport and ensure the transport system enables a sustainable, competitive, resilient and productive regional economy. The region's inter-regional transport gateways and routes to be maintained, improved or enhanced include:* *•Connectivity to Argyll and Bute, Northwest and Western Isles* *•Connectivity to Loch Lomond and Trossachs National Park* *•Connectivity to Falkirk, Stirling and the North/Northeast* *•Connectivity to Edinburgh, West Lothian and Scottish Borders* *•Connectivity to Dumfries and Galloway* *•Connectivity of Arran – Argyll and Bute*	
P.CP3 Intra-regional connectivity *Improve, increase and enhance sustainable connectivity of regional strategic economic development and investment locations and intra-regional travel to work and freight corridors, and ensure the regional transport system enables sustainable development. Key strategic intra-regional connectivity priorities and corridors include:* *•HMNB Clyde / Faslane, Helensburgh Growth Area and Helensburgh/HMNB Clyde – Balloch/Dumbarton – Clydebank - Glasgow* *•Clyde Mission Clyde Corridor and Glasgow City Region City Deal investment locations* *•Ayrshire Growth Deal strategic economic development and investment locations* *•Glasgow - all cross-boundary radial corridors to/from Glasgow* *•Intra-urban Ayrshire (Kilmarnock/Irvine/Kilwinning/3 towns/Troon/Prestwick/Ayr)* *•South Lanarkshire – North Lanarkshire* *•East Renfrewshire – Renfrewshire – West Dunbartonshire* *•Inverclyde - Renfrewshire* *•Ayrshire – Renfrewshire - Glasgow* *•North Ayrshire – Inverclyde*	

•*East Dunbartonshire – North Lanarkshire* •*East Dunbartonshire – West Dunbartonshire* •*Ardrossan – Arran, Largs - Cumbrae and Rosneath Peninsula – Greenock*	
P.CP4 Town Centre connectivity and 20-minute neighbourhoods *Improve, increase and enhance active travel and public transport connectivity of the region's town centres to support town centre economies and delivery of 20-minute neighbourhoods.*	
P.CP5 Island, Rural and Remote Area Connectivity *Improve, increase and enhance transport connectivity for rural, remote and island communities particularly to nearest town centres and key transport hubs. Improve, increase and enhance transport connectivity for Arran, Cumbrae and Rosneath peninsula.*	
P.CP6 Regional Hospitals and Tertiary Education *Improve, increase and enhance sustainable connectivity of regional hospitals and tertiary education. Support development of active travel and public transport connectivity for new Monklands hospital and other future hospital and tertiary education development. .*	
P.CP7 Housing Development *Facilitate and support increased and enhanced active travel and public transport connectivity of major residential development and growth areas in the region.*	
Assumptions	▪ The environmental assessment presented in this table is based on as assumption that the ambition of each policy would be achieved in order to predict the likely significant effects of its implementation. ▪ Several policies imply improvements to higher carbon forms of transport such as air and road. In assessing this policy, emphasis is placed on the wording of 'sustainable' connectivity in each policy which has been interpreted to mean that policies and investment would follow the NTS sustainable investment and travel hierarchies which clearly prioritise active travel and public transport before investment in roads etc. ▪ Increased future public transport provision to support improved connectivity would be assumed to involve new low or zero emission vehicles and ferries.

Environmental Assessment of Policy / Package		
Commentary on Predicted Effects	▪ These policies are generally predicted to have a minor beneficial or neutral effect on most of the SEA objectives. Policies to better connect places would have potentially significant beneficial effects for the objectives relating to health, accessibility, material assets and productivity and some	+ / ?

	beneficial effects for SEA topics on air quality/amenity and climate change would be realised where the policies achieved reductions in overall levels of road traffic. Dependent on policy implementation there is some potential for adverse effects on natural and cultural heritage receptors from improved transport infrastructure. 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
Proposed Mitigation and Enhancement	▪ Any new or upgraded transport infrastructure would be subject to appropriate level of environmental assessment and consenting, this would involve development of designs, mitigation measures and sensitive construction environmental management to ensure that wherever possible significant adverse environmental effects were avoided. ▪ New transport infrastructure should be developed wherever possible through re-use and reallocation of existing transport assets / road space and where new facilities, or infrastructure are required these should be designed and constructed following circular economy principles to minimise use of primary resources ▪ Where materials are required to develop transport infrastructure then priority should be given to the use of secondary, recycled and remanufactured materials and products before use of non-renewable resources
Monitoring Indicators	▪ Monitoring and tracking indicators proposed in the Draft RTS of relevance to this policy theme include: ▪ Number of bus passenger journeys ▪ Level of service framework – accessibility & availability indicators ▪ Proportion of adults who use rail services at least 2 times per week ▪ Glasgow Airport: mode of surface transport used to arrive at airport ▪ Rail station usage ▪ Percentage of driver journeys delayed due to congestion ▪ Ferry passengers and cars ▪ Vehicle km – non-trunk ▪ Vehicle Km – trunk roads ▪ Modal share of all journeys ▪ CO_2 emission estimates from road transport ▪ Grammes CO_2 per passenger km by mode/vehicle type ▪ Supplementary SEA specific indicators for future consideration in RTS monitoring and evaluation framework include: ▪ A health based indicator such as reported incidences of respiratory disease or asthma

SEA Objective	P.CP1	P.CP2	P.CP3	P.CP4	P.CP5	P.CP6	P.CP7	Commentary
1. **Health:** Improve the health of the resident and workplace population, including with respect to physical	0	+	+	+	+	++	0	▪ The policies are predicted to supportive of the SEA objective on health, in particular through improved and enhanced

SEA Objective	P.CP1	P.CP2	P.CP3	P.CP4	P.CP5	P.CP6	P.CP7	Commentary
and mental health and social wellbeing.								connectivity to healthcare facilities and promotion of sustainable travel options.
2. **Accessibility:** Reduce the need to travel and ensure appropriate and affordable access for all to facilities, services, economic opportunities and social activities.	+	+	+	++	++	++	+	▪ The policies for connecting places are inherently compatible with the SEA objective for accessibility with improved access to key services across the region and beyond.
3. **Material Assets:** Manage, maintain and where possible improve the efficient and effective use of natural resources, land and infrastructure to meet identified needs.	0	0	0	+	0	0	+	▪ The policies may have some minor beneficial effects on the SEA objective for material assets. For example, through encouraging more efficient forms of transport and its integration with land-uses.
4. **Productivity, Competitiveness and Innovation**: Deliver an integrated and efficient transport system to increase economic prosperity, support the growth of key economic sectors and deliver increased and more inclusive employment.	++	++	++	++	+	+	+	▪ Implementation of the policies are predicted to have significant beneficial effects on the SEA objective for productivity through the efficient movement of people and freight and enabling access to employment opportunities and key economic centres.
5. **Air Quality and Amenity**: Tackle poor air quality, reduce concentrations of harmful atmospheric pollutants and minimise exposure to noise and vibration.	?	?	?	+	?	0	+	▪ Implementation of the policies improving connectivity have an uncertain effect on the SEA objective for air quality and amenity, in particular policies to improve international and regional connectivity which may increase traffic related emissions and/or noise dependent on how they are implemented. However, some policies are predicted to have minor beneficial effects through reducing the

SEA Objective	P.CP1	P.CP2	P.CP3	P.CP4	P.CP5	P.CP6	P.CP7	Commentary
								need to travel and subsequently potentially reducing emissions.
6. **Climate Change Mitigation**: Decarbonise the transport sector and support wider efforts to mitigate climate change.	?	?	?	+	?	0	+	▪ The policies which support connecting places have an uncertain effect on SEA objective of climate change mitigation as emissions would depend on the traffic types and patterns associated with potentially increased travel. Minor beneficial effects are predicted where policies reduce the need to travel resulting in potentially reduced emissions.
7. **Biodiversity, Geodiversity and Soil:** Conserve, protect and enhance biodiversity and geodiversity interests, including through safeguarding important sites, species, soil resources and habitats and by protecting green infrastructure.	?	?	?	0	0	0	0	▪ The policies are predicted to have the potential for indirect beneficial effects on some aspects of this SEA objective where they contribute to reduced traffic emissions. Although effects are not predicted to be significant. New infrastructure development has some potential for adverse natural heritage effects from changes in land use, habitat loss etc. but the impact of this is uncertain and would depend on the nature and location of any new infrastructure.
8. **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.	0	0	0	0	0	0	0	▪ Implementation of the policies is generally not predicted to have significant effects on water resources and flooding. new infrastructure, or infrastructure development, has some potential for adverse effects on the water environment, however, with sensitive design it is not predicted that these would be significant.

SEA Objective	P.CP1	P.CP2	P.CP3	P.CP4	P.CP5	P.CP6	P.CP7	Commentary
9. **Cultural Heritage:** Conserve, protect and enhance the historic environment and cultural assets.	?	?	?	0	0	0	0	▪ Implementation of the policies is not predicted to have significant effects on cultural heritage assets. There is some potential for improved services to provide opportunities for people to visit sites of cultural heritage interest more easily within the region.
10. **Landscape:** Protect and enhance the landscape character, townscape character and visual amenity.	/	?	?	0	0	0	0	▪ The policies are not predicted to result in significant change to landscape resources or visual amenity. There is some potential on key corridors where traffic levels were reduced for minor beneficial effects on visual amenity for some receptors. Proposals for new infrastructure to improve connectivity would need to be designed sympathetically with the local landscape or townscape character and visual effects carefully considered.