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Non Technical Summary

Draft RTS

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1 Introduction

1.1 Background

- 1.1.1 SWestrans, the Regional Transport Partnership (RTP) for the south west of Scotland, has a statutory duty to produce and deliver a long term Regional Transport Strategy (RTS) for the region, which covers the area contiguous with the boundaries of Dumfries and Galloway Council. The RTS will set out a new long-term vision for transport across the region for the period up to 2042, setting out a clear framework for how transport and mobility will be provided, developed and improved in the region to meet the aspirations for a sustainable and economically active area over the next 20 years and beyond.
- 1.1.2 Strategic Environmental Assessment (SEA) has been undertaken in parallel with the development of the RTS in accordance with the Environmental Assessment (Scotland) Act 2005 ('the SEA Act'). The findings are documented in the SWestrans RTS SEA Environmental Report (the 'ER'). This report provides a Non-Technical Summary (NTS) of the full SWestrans draft RTS SEA ER.

1.2 Purpose and Objectives

- 1.2.1 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 also to enhance the environmental 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 where relevant to improve the overall performance of the plan or programme. As such, SEA is an integral part of good policy development.
- 1.2.2 The purpose of this NTS is to provide a summary of the findings of the SEA carried out for the SWestrans draft RTS to aid public consultation on both documents. This NTS and the associated full ER which accompanies the draft RTS respond to the relevant statutory requirements, consider the evolution of the draft RTS to date and present an assessment of the likely significant environmental effects from the draft RTS.

1.3 How to comment on this NTS and the Full Environmental Report

- 1.3.1 This NTS and the associated full ER 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 will be published by SWestrans and, in accordance with statutory requirements, will be published in a local newspaper inviting consultees views and stating where a copy of the relevant plans can be inspected.

2 Context

2.1 SWestrans Regional Transport Strategy

2.1.1 The draft RTS has been developed through an extensive process of transport planning in combination with policy development, stakeholder and public consultation, environmental and equalities appraisal and input. The plan development has also drawn on extensive baseline analysis and from consultation feedback as the Strategy has developed.

2.1.2 The draft RTS presents a Vision, outlining the ambition for Dumfries and Galloway and how transport can facilitate this. The vision states:

The South-West of Scotland will be an inclusive, prosperous and attractive place to live, work and visit supported by an integrated and sustainable transport system that is safe, affordable and accessible to all, resilient to climate change, allowing healthier lifestyles and supporting a contribution to net zero emissions targets reflecting the regional circumstances.

2.1.3 To implement this Vision, six Strategy Objectives are identified:

- **Strategy Objective 1** – To facilitate and encourage safe active travel for all by connecting communities and travel hubs.
- **Strategy Objective 2** – To improve the quality and sustainability of public transport within, and to / from the region.
- **Strategy Objective 3** – To widen access to, and improve connectivity by public transport within and to / from the region.
- **Strategy Objective 4** – To improve integration between all modes of travel and freight within and to / from the region.
- **Strategy Objective 5** – To provide improved, reliable, resilient, and safe road-based connectivity for the movement of people and goods within the region, and to key locations including Glasgow, Edinburgh, Carlisle and Cairnryan.
- **Strategy Objective 6** – To reduce the impact of transport on the people and environment of the region.

2.1.4 To implement these RTS Objectives, ten Themes are used as a framework for the RTS, each setting out a series of Priorities. The Priorities articulate the key policy focus and intention of the RTS and will be used to take forward more detailed and specific interventions in future stages of implementation of the Strategy.

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

2.2 Relevant Environmental Information

2.2.1 The identification of key environmental issues has been informed by consideration of the environmental topics prescribed within Schedule 3 of the SEA Act and from an evaluation of baseline environmental conditions, which is set out in more detailed in Section 3 and Appendix B of the full ER. These issues were analysed from an early stage in the SEA process and have been taken into account in the development of the emerging RTS and in the development and application of a framework for the environmental assessment.

2.3 Review of Plans and Programmes

- 2.3.1 In accordance with SEA statutory requirements a review of the relationship between the developing Draft RTS and other relevant plans and programmes (including current legislation, policies and strategies at national and regional levels) has been carried out. This review identified key requirements, objectives and priorities of relevant plans and their implications for both the emerging RTS and for the SEA. A review of these plans and programmes is set out in Appendix A of the full ER and relevant information from the review has been used in developing the RTS and in identifying key issues for the SEA.

3 The SEA Process

3.1 Previous SEA Reporting

3.1.1 SEA is multi-stage process which has been integrated with the key stages of development of the RTS. The two key SEA stages prior to the preparation of the full Environmental Report and this summary were:

- SEA Scoping; and
- SEA Case for Change.

3.1.2 The purpose of the SEA Scoping Report was to confirm the need to undertake an SEA and identify a proposed SEA Framework to assess in a systematic way the likely significant environmental effects from all components of the emerging RTS. This Framework comprises a series of sustainability objectives and guide questions regarding identified socio-economic and environmental issues of relevance to the SWestrans region which may affect (or be affected by) the emerging RTS.

3.1.3 The SEA Scoping Report was submitted to the Consultation Authorities¹ in February 2022. The overall approach to SEA was amended to take account of Scoping consultation responses, as detailed in Section 4.4 and Appendix D of the ER.

3.1.4 The SEA at the Case for Change stage 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. A compatibility assessment of the RTS Vision and Objectives with respect to each of the SEA objectives was carried out at this stage.

3.2 Approach to SEA

Key Stages of the SEA and Integration with the RTS

3.2.1 The SEA has been undertaken iteratively and in step with the development of the RTS. 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 assessment of the preliminary elements (or ‘strategic framework’) of the Draft RTS including the Vision, Transport Planning Objectives and RTS Objectives (which were presented initially in the RTS Case for Change report);
- environmental assessment of the long list of transport options generated in the transport planning analysis of problems and opportunities (which were presented in the Options Appraisal report); and
- environmental assessment of the RTS Priorities (as presented in the draft Strategy).

Assessment Methods

3.2.2 At the scoping stage, an SEA framework was prepared to provide the basis for comprehensive environmental assessment of the RTS components and a consistency of approach. This has been updated slightly in response to feedback from the SEA Consultation Authorities.

¹ Historic Environment Scotland (HES), NatureScot and the Scottish Environment Protection Agency (SEPA)

- 3.2.3 The framework is based around ten SEA Objectives, the potential effects of each RTS element is assessed against these SEA Objectives. The framework includes a series of guide questions and supporting criteria to inform the consideration in a consistent and objective manner. Due to the high level nature of the Strategy, the SEA team has applied professional judgement drawing from experience of assessing similar plans and programmes to determine the likelihood of significant environmental effects and to identify mitigation where appropriate.
- 3.2.4 The compatibility assessment followed a qualitative method where the potential for environmental effects from the key emerging RTS elements at that stage (the RTS Vision and Transport Planning Objectives and RTS Objectives) was considered by the SEA team with respect to each SEA Objective, and with reference to the guide questions in the SEA Framework. The findings of the initial compatibility appraisals were presented using simple tables with indicative environmental ‘compatibility scores’ and a supporting narrative. These appraisals were undertaken initially at the Case for Change stage and the findings presented in the Case for Change SEA ER. The appraisals have been reviewed and updated to reflect changes to the RTS elements (e.g., through changes to the wording of the RTS Objectives) following the consultation on the Case for Change in 2022.
- 3.2.5 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 overarching check that all reasonable alternative options had been identified and providing an appraisal of the environmental and climate change criteria required by STAG based on a seven-point scale² of impact criteria to assign an indication of significance of the predicted impact alongside the impact commentaries.
- 3.2.6 Following the options appraisal, the RTS process involved the development of 10 transport Themes, each containing a varying number of Priorities. The final key stage of the SEA environmental assessment involved the application of the SEA framework to assess the predicted environmental effects of these Priorities. These also drew on the findings of the appraisals of the relevant options (as linked to each theme) from the STAG-based work.
- 3.2.7 For each element of the RTS, the SEA topic/objective was considered in turn by the assessment team and environmental effects were predicted with reference to the guiding questions and criteria in the SEA Framework and drawing on the judgement and professional experience of the assessment team. The predicted environmental effects of the RTS elements were then evaluated with reference to a set of impact criteria to determine their likely significance.

Assumptions and Limitations

- 3.2.8 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.
- 3.2.9 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 20 years. There is some inherent uncertainty therefore in the accuracy of predictions made for the environmental assessment of long term policies where the detail of implementation is still to be worked up. Whilst the Strategy does not include any detail on specific spatial transport interventions, the process of identifying and appraising options and the subsequent linking of options with Priorities in the draft Strategy has allowed the environmental assessment team to better judge the types of intervention associated with each Priority through consideration of indicative (if generic) measures. 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

² The scale provides a range of predicted impact categories from major through moderate and minor beneficial or adverse and one for neutral/no effect.

sufficient prescription in the Priorities to allow for a competent strategic level assessment of potential significant effects of the draft Strategy.

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

3.3 Consideration of Alternatives

- 3.3.1 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

- 3.3.2 The first strategic alternative considered at the outset of the RTS process by SWestrans related to whether or not a new Strategy was required. The previous RTS was published in 2008 and 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 all RTPs concluded that it was necessary to develop new RTSs.

- 3.3.3 Alternatives and options have also been considered in the RTS development process. 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 SWestrans region and in taking account of consultee feedback and suggestions on their amendment.

- 3.3.4 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. The SWestrans RTS STAG Preliminary Options Appraisal report (Stantec, August 2022) sets out the initial option generation process, the packaging of those options and their appraisal using STAG criteria. The SEA considered if there were any reasonable alternatives that had been omitted within this initial option generation process.

- 3.3.5 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.

3.4 How the SEA informed the RTS

- 3.4.1 Integration of the SEA process 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.

- 3.4.2 The review and supporting 'compatibility appraisal' of the RTS Objectives made recommendations on how RTS Objectives should be further developed to set out clearer outcomes, more explicit coverage of some environmental issues and hence improve the environmental performance of the proposed RTS. The Draft RTS for consultation now incorporates four themes responding directly to over-arching policy priorities around responding to the climate emergency, health and contributing to sustainable and inclusive economic growth. These are Theme 1 (enabling more sustainable development), Theme 2 (connecting our communities), Theme 3 (transforming travel in our towns) and Theme 6 (sustainable and

extended local and regional public transport connectivity). The Strategy has therefore been developed following the Case for Change with very clear and explicit integration of environment related issues.

- 3.4.3 Within the Options Appraisal, an initial SEA 'coverage' assessment was also undertaken on the initial draft of the options long list. 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.
- 3.4.4 The Draft RTS Priorities have been reviewed using the SEA framework prior to publication, leading to some drafting improvements, such as:
- Increased emphasis on firstly locating new development sustainably, in proximity to services and facilities, to reduce the need to travel; before ensuring that development is serviced by more sustainable modes.
 - Amendments to the wording of Priorities to ensure environmental impacts are firstly avoided, prior to reduction and mitigation, such as through appropriate siting and design.
 - Increased emphasis within the Priorities on the scale of funding for active travel (50% of SWestrans capital budget).
 - Terms such as 'should be' and 'will be' within the Priorities were challenged. Where it was feasible, changes were made. In a number of instances, the ability to use more certain wording was limited by the varying responsibilities for implementing measures across the transport network
- 3.4.5 The STAG assessment of the options and the subsequent SEA framework based assessment of RTS Priorities 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.

4 Findings of the Environmental Assessment

4.1 Introduction

4.1.1 This section sets out the findings of the environmental assessment of each key component of the Draft RTS including the assessment of compatibility of the RTS and SEA Objectives, the key findings of the environmental appraisal of the RTS options and the assessment of the likely significant effects of the RTS Priorities. Full details of the assessments can be found in the Section 4 of the main ER.

4.2 Assessment of RTS Vision and Objectives

4.2.1 The Vision and Objectives were appraised against the SEA Objectives to inform identification of any clear inconsistencies between the two sets of objectives and to identify any potentially significant environmental effects. The findings of the assessment have been updated to reflect subsequent amendments to RTS Objectives and are set out in Section 4.2 of the full ER.

4.2.2 Overall, the Vision and 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. There is an element of uncertainty in the relationship of some of the RTS Objectives with the SEA Objectives. Whilst the effects would generally be considered to be beneficial, there is some uncertainty in how they would be implemented which will be addressed as the RTS is delivered and monitored.

4.2.3 The assessment has identified some areas of potential conflict between objectives to promote accessibility with requirements to meet emissions reductions targets. This may be particularly apparent due to the rural nature of the region where it is recognised that road-based travel will remain important as part of an integrated transport system in the area.

4.3 Assessment of Transport Options

4.3.1 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, is presented in the form of a range of predicted impact ‘scores’ in Table 4.1. The full findings of the environmental and climate appraisals of each individual option are set out in the options assessment table in the full ER and 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.

Table 4.1 Assessment of transport options

Option Group	Predicted Environmental Impact
1. Enabling more sustainable development <i>Options: 6 & 7 relating to sustainable transport and ancillary facilities for new and existing developments</i>	<i>Overall, significant positive impacts are predicted (prior to mitigation):</i> ✓✓
2. Connecting our communities <i>Options: 2 & 4 on incremental improvements to existing active travel routes and new greenfield routes</i>	<i>Overall, minor negative to significant positive impacts are predicted (prior to mitigation):</i> x - ✓✓

<p>3. Transforming travel in our towns</p> <p><i>Options: 3 & 23 addressing reallocation of roadspace for active travel and bus priority measures</i></p>	<p>Overall, minor to significant positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">✓ - ✓✓</p>
<p>4. Reducing the impact of transport on our communities</p> <p><i>Options: 44, 45 & 53 car, taxi and commercial fleet decarbonisation and infrastructure measures including new bypasses</i></p>	<p>Overall, significant negative to significant positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">xx - ✓✓</p>
<p>5. Enhancing access to transport services</p> <p><i>Options: 1, 11 & 37, covering active travel route signing and information, wider bicycle availability and improved routes to (and accessibility of) railway stations</i></p>	<p>Overall, minor positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">✓</p>
<p>6. Sustainable and extended local and regional public transport connectivity</p> <p><i>Options: 21, 22, 24, 25, 26, 27, 28, 29, 38, 39, 40, 41, 42 & 43 various bus service and infrastructure improvements (such as provision of a bus station in Dumfries and regional mobility hubs), DRT, and rail measures including upgrades and new stations and lines (such as reopening stations, relocating Stranraer Station, reinstating a closed line, extending a rial line, upgrading existing lines)</i></p>	<p>Overall, significant negative to significant positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">xx - ✓✓✓</p>
<p>7. Improving the quality of our public transport offer</p> <p><i>Options: 12, 13, 14, 15, 16, 17, 18, 19, 20, 30, 31, 32, 33, 34, 36 & 47 on ticketing, information, concessionary schemes & fares, multi-modal integration, rail rolling stock and electrification and station improvements</i></p>	<p>Overall, negligible to significant positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">0 - ✓✓✓</p>
<p>8. Supporting safe and effective connections to Loch Ryan and other strategic sites</p> <p><i>Options: 35, 46, 50, 51, 52, 54, 55 & 56 including increased connectivity to Lockerbie Station, road/rail freight integration, rest areas, strategic road and junction improvements and road safety measures</i></p>	<p>Overall, significant negative to significant positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">xx - ✓✓</p>
<p>9. Managing our car traffic</p> <p><i>Options: 5 & 49 with measures to reduce impacts of traffic on active travel users, and parking management measures</i></p>	<p>Overall, minor negative to minor positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">x - ✓</p>
<p>10. Making the most of new opportunities</p> <p><i>Options: 8, 9, 10 & 48 on Mobility-as-a-Service (MaaS), shared mobility, micro mobility and in journey information on the road network</i></p>	<p>Overall, negligible to significant positive impacts are predicted (prior to mitigation):</p> <p style="text-align: center;">0 - ✓✓</p>

4.4 Assessment of Priorities

- 4.4.1 This section summarises the findings of the environmental assessment of the Priorities within each of the ten RTS Themes. The scoring of each individual Priority is set out in the tables in Appendix E of the full ER.
- 4.4.2 The assessment shown within this section is two-fold. An overall summary of the environmental assessment of each RTS Theme is presented in Table 4.2 drawing on the consideration of the predicted environmental effects of the Priorities within each Theme. Following this, a summary of the assessment of the combined environmental effects of the RTS priorities is presented for each of the SEA Objectives in turn. This approach has allowed for understanding and presentation of the predicted environmental effects of the Draft RTS from both the perspective of each RTS Theme, and for each SEA topic.

Table 4.2 Summary of Environmental Assessment by RTS Theme

RTS Theme	Overall Score	Commentary
Theme 1: Enabling More Sustainable Development	++	<p>The Priorities are either supportive or generally compatible with the SEA Objectives and in a number of cases significant beneficial effects are predicted for climate change, air quality and amenity, access and connectivity and material assets. The Priorities 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.</p> <p>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 lower levels of car travel. The uptake of active travel is strongly influenced by distance, compact neighbourhoods with diverse and connected land uses, support its uptake. Inclusion of the Priority to carefully site and design transport interventions to prevent and minimise negative environmental impacts assesses positively across all SEA Objectives.</p>
Theme 2: Connecting Our Communities	++	<p>These Priorities are generally compatible with the SEA Objectives and in a number of cases significant beneficial effects are predicted for climate change, air quality and amenity, access and connectivity and human health. Improving active travel infrastructure may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment, while reducing emissions through reduced vehicle-based travel.</p> <p>Where delivered at scale the Priorities could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts.</p> <p>Active travel routes provide an opportunity to provide benefit to biodiversity (through biodiversity improvements and access to nature), water and flood risk (through incorporation of sustainable drainage and green/blue infrastructure) and heritage, landscape/townscape (through appropriate design and enhanced access to areas of interest).</p>
Theme 3: Transforming Travel in Our Towns	++	<p>These Priorities support the transition to more sustainable modes of transport and are generally compatible with the SEA Objectives and in a number of cases significant beneficial effects are predicted for climate change, air quality and amenity, access and connectivity and human health. Improving active travel infrastructure may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment, while reducing emissions through reduced vehicle-based travel.</p> <p>Reallocation of roadspace provides an opportunity to provide benefit to biodiversity (through biodiversity improvements and access to nature), water and flood risk (through incorporation of sustainable drainage) and heritage, landscape/townscape (through appropriate design and enhanced access to areas of interest).</p>

RTS Theme	Overall Score	Commentary
Theme 4: Reducing the Impact of Transport on Our Communities	+	<p>These Priorities are predicted to have a varied effect on the SEA Objectives, from positive to potentially negative. Overall, reducing the impact of transport on communities assesses positively for those communities for SEA topics on air quality and amenity, access and connectivity (through reduced congestion and supporting modal shift within those communities) and the potential for benefits to townscape and heritage.</p> <p>New bypasses would impact on the environment, temporarily during construction and permanently during operation. The nature and significance of the impacts will vary based on the location and extent of the works and local sensitivities and will include impacts to biodiversity, soils, water, flood risk, cultural heritage, landscape and material assets. Such schemes may induce increased road traffic, counter to the climate change SEA Objective. The overall effect on air quality and greenhouse gas emissions will depend on the balance between improved traffic flow and increased traffic movements. They may also support increased access, including for freight.</p> <p>New freight hubs would enable modal shift, reducing the high level of commercial vehicles on strategic roads within Dumfries & Galloway, providing benefits to traffic flows (including through urban areas), reduced emissions from road traffic (offset to some extent by increased rail emissions), reduced noise and accidents. This priority may reduce or eliminate the need for improvements to some parts of the road network.</p> <p>Decarbonising vehicles would have significant beneficial effects on climate change mitigation and air quality and some beneficial effects for SEA topics of biodiversity, access and connectivity, growth and human health are also predicted. The Priorities are generally not predicted to have a significant effect on the other SEA Objectives.</p> <p>Dependent on implementation of the Priorities, there is 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.</p>
Theme 5: Enhancing Access to Transport Services	+	<p>These Priorities support an enhanced positive customer experience when using public and active transport, including journey planning, increased accessibility to public transport, increased access to bikes, increased taxi-user safety. As such, collectively they support the transition to public transport and active travel, supporting a modal shift. They are compatible with the SEA Objectives, with beneficial effects predicted including for climate change, air quality and amenity, access and connectivity, growth, human health and material assets. Where delivered at scale, collectively the Priorities could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts. Enhanced access to public transport may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment.</p>

RTS Theme	Overall Score	Commentary
Theme 6: Sustainable and Extended Local and Regional Public Transport Connectivity	++	<p>These public transport enhancement Priorities are generally compatible with the SEA Objectives and in a number of cases significant beneficial effects are predicted including for access and connectivity and inclusive growth; further significant beneficial effects are predicted for climate change particularly if implemented in conjunction with the decarbonisation of public transport (Themes 4 and 7). The Priorities on sustainable and extended public transport are also predicted to have some beneficial effects for SEA topics of air quality and amenity, human health, and material assets. Where delivered at scale the Priorities could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts. Enhanced public transport networks and services may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment.</p> <p>The potential development of new or extended transport infrastructure such as the relocation of Stranraer Station and quadrupling of track on the West Coast Main Line 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.</p>
Theme 7: Improving the Quality and Affordability of Our Public Transport Offer	+	<p>These Priorities to improve the quality and affordability of public transport are generally compatible with the SEA Objectives and significant beneficial effects are predicted including for access and connectivity. The Priorities are also predicted to have some beneficial effects for SEA topics of climate change, air quality and amenity, human health, and material assets. If implemented in conjunction with the decarbonisation of public transport (both within this Theme, and Theme 4), the beneficial effects on the causes of climate change would have potential to be significant.</p> <p>Where delivered at scale the Priorities could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts. Enhanced public transport networks and services may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment.</p>
Theme 8: Supporting Safe, Effective and Resilient Connections to Loch Ryan and Other Strategic Sites	0	<p>These Priorities are predicted to have a varied effect on most of the SEA Objectives, from positive to negative. Overall, improved connections to Loch Ryan and other strategic sites assesses positively for access and connectivity, inclusive growth and human health.</p> <p>Enhancements to the strategic road network would impact on the environment, temporarily during construction and permanently during operation. The nature and significance of the impacts will vary based on the location and extent of the works and local sensitivities and will include impacts to biodiversity, soils, water, flood risk, cultural heritage, landscape and material assets. Such schemes may also induce increased road traffic, counter to the climate change SEA Objective. The overall effect on air quality and greenhouse gas emissions will depend on the</p>

RTS Theme	Overall Score	Commentary
		<p>balance between improved traffic flow and increased traffic movements. They may support increased access, including for freight.</p> <p>New freight hubs would enable modal shift, reducing the high level of commercial vehicles on strategic roads within Dumfries & Galloway, providing benefits to traffic flows (including through urban areas), reduced emissions from road traffic, reduced noise and accidents. This option may reduce or eliminate the need for improvements to some parts of the road network.</p> <p>Improving road safety would have significant beneficial effects for health through safer conditions on the region's roads and some minor beneficial effects are predicted for the SEA topics of access and connectivity and inclusive growth.</p> <p>Dependent on implementation of the Priorities, there is potential for adverse effects on natural and cultural heritage receptors from improved transport infrastructure such as enhancements to the road network. At this stage it is assumed that with appropriate design, assessment, mitigation and enhancement any new works could be delivered without significant adverse environmental effects.</p>
Theme 9: Managing Our Car Traffic	+	<p>The Priorities on managing car traffic are supportive of the SEA Objectives and significant beneficial effects are predicted including for climate change and air quality and amenity. The Priorities are also predicted to have beneficial effects for SEA topics of access and connectivity, inclusive growth and biodiversity where they result in supporting modal shift.</p> <p>Enhancing and integrating active travel, public transport, shared mobility and digital infrastructure has the potential to give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment, while reducing emissions through car travel.</p>
Theme 10: Making the Most of New Opportunities	+	<p>These Priorities to make the most of new opportunities are generally compatible with the SEA Objectives, with beneficial effects predicted for climate change, air quality and amenity, access and connectivity, inclusive growth and material assets.</p> <p>Enhanced micro mobility and mobility hubs may give rise to some beneficial changes for people accessing and enjoying facilities, services and the wider environment. Where delivered at scale the Priorities could contribute significantly to achievement of regional and national net zero targets and would support other policies to reduce road traffic and its environmental, accessibility, health and safety impacts.</p>

- 4.4.3 Overall, the assessment has identified that no significant adverse environmental effects would be predicted from implementation of the Draft RTS Priorities. All of the Themes are predicted to have some beneficial environmental effects, typically where the implementation of the Priorities would give rise to increased levels of active travel, improved public transport accessibility and reduced emissions from road transport in particular.
- 4.4.4 A number of Priorities are predicted to have significant beneficial effects where implementation of supporting measures would deliver positive impacts and in particular for the Themes which have the potential to achieve a step change in active travel and public transport. These include:
- Themes 1 (enabling more sustainable development), 2 (connecting our communities), 3 (transforming travel in our towns) and 9 (managing our car traffic) incorporate multiple sets of transport Priorities which are predicted to have significant beneficial effects on the SEA Objectives for climate change, and air quality and amenity. Individual Priorities relating to decarbonisation within Themes 4 (reducing the impact of transport on our communities) and 7 (improving the quality and affordability of our public transport offer) also offer these significant beneficial effects.
 - Themes 2 (connecting our communities) and 3 (transforming travel in our towns) are predicted to have significant beneficial effects on human health through their support for active travel.
 - Themes 1 (enabling more sustainable development), 2 (connecting our communities), 3 (transforming travel in our towns), 6 (sustainable and extended local and regional public transport connectivity) and 7 (improving the quality and affordability of our public transport offer) are predicted to have significant beneficial effects on the access and connectivity SEA Objective through their support for active and public transport.
- 4.4.5 There is potential for significant adverse effects through the support for further work on provision of road bypasses (within Theme 4) and enhancements to the strategic road network (within Theme 8), however there is some uncertainty on the likely effects at this strategic level as the extent, location and design of any future works is currently unknown. The high level nature of the Draft RTS does not allow for specific prediction of effects of these measures on the SEA topics. With a clear commitment 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 necessarily 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. The potential for road improvements to generate additional vehicle kilometres would need to be carefully considered in the context of regional and national commitments to reduce emissions from transport.
- 4.4.6 The other Priorities 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 Priorities which seek to deliver enhanced networks for active travel.
- 4.4.7 There is some uncertainty associated with the effects of the delivery of rail infrastructure within Themes 6 (sustainable and extended local and regional public transport connectivity) and 8 (supporting safe, effective and resilient connections to Loch Ryan and other strategic sites).

SEA Objective 1 – Climate Change

- 4.4.8 The Draft RTS Priorities are predicted to have a range of beneficial and some negative effects on the Climate Change SEA Objective. Priorities 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.

- 4.4.9 Of particular note, Themes 1 (enabling more sustainable development), 2 (connecting our communities), 3 (transforming travel in our towns), 6 (sustainable and extended local and regional public transport connectivity) and 9 (managing our car traffic) are predicted to have significant beneficial effects on climate change mitigation through reducing the need to travel, achieving mode shift from road to public transport, supporting sustainable modes for development, active travel, extended public transport, and reallocation of roadspace for more sustainable modes.
- 4.4.10 Priorities within Theme 4 (reducing the impact of transport on our communities) provide some support for the decarbonisation of transport modes, from cars to commercial vehicles, buses and trains, providing significant beneficial effects to this SEA Objective. Measures include support for EV charging points, increasing access to EVs, introduction of Low Emission Zones, exploring opportunities to electrify rail lines, and the replacement of rail rolling stock and the bus fleet with low emission vehicles.
- 4.4.11 Theme 6 (sustainable and extended local and regional public transport connectivity) includes a new tiered public transport model, bus infrastructure and service improvements, mobility hubs, train infrastructure extensions and improvements. Taken as a whole, these Priorities offer the opportunity for modal shift, supporting this SEA Objective. This is further supported through Theme 7 (improving the quality and affordability of our public transport offer). Theme 6 also supports provision of additional railway routes and rail network upgrades, which would increase resilience to adverse weather and climate change.
- 4.4.12 Theme 8 (supporting safe, effective and resilient connections to Loch Ryan and other strategic sites) includes a Priority seeking opportunities to shift goods from HGVs onto the rail network by the creation of new freight hubs. This is predicted to have significant beneficial effects on climate change mitigation through their potential to contribute to modal shift and reduced emissions from more efficient freight management. Adaptation to climate change is supported through enhancements to the strategic road network, such as provision of diversionary routes.
- 4.4.13 Within Theme 4 (reducing the impact of transport on our communities) and Theme 8 (supporting safe, effective and resilient connections to Loch Ryan and other strategic sites), there is some uncertainty around Priorities to investigate the feasibility of bypasses and enhancements to the strategic road network, in terms of the extent of works which may arise and their effect on levels of road based transport. These Priorities are likely to increase road based transport, the increase may be offset to some extent by more efficient journeys and the decarbonisation of vehicles, however an overall increase in emissions of greenhouse gases may occur. These measures and associated increases are partly associated with longer-distance travel through the region, such as to the ports, as well as providing connectivity through the region.
- 4.4.14 When considered collectively, the Priorities of the Draft RTS are predicted to have the potential for significant beneficial effects on climate change mitigation and adaptation.

SEA Objective 2 – Air Quality and Amenity

- 4.4.15 The Draft RTS Priorities are predicted to have a range of beneficial effects on the Air Quality and Amenity SEA Objective and some uncertain/potentially negative effects. Priorities 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 emissions to air 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 emissions to air.

- 4.4.16 Other Priorities within Theme 4 (reducing the impact of transport on our communities) include support for the decarbonisation of transport modes, from cars to commercial vehicles, buses and trains, providing significant beneficial effects to this SEA Objective. Measures include support for EV charging points, increasing access to EVs, introduction of Low Emission Zones, exploring opportunities to electrify rail lines, and the replacement of rail rolling stock and the bus fleet with low emission vehicles.
- 4.4.17 Theme 8 (supporting safe, effective and resilient connections to Loch Ryan and other strategic sites) has varying effects on this SEA Objective. The effect of enhancements to the strategic road network on air quality and amenity are uncertain at this strategic level, however 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. This Theme also includes for modal shift of goods from HGVs onto the rail network, offering significant potential to improve air quality and amenity, particularly for those communities along the route of the trunk roads.
- 4.4.18 Within Theme 4 (reducing the impact of transport on our communities) and Theme 8 (supporting safe, effective and resilient connections to Loch Ryan and other strategic sites), there is some uncertainty around Priorities to investigate the feasibility of bypasses and enhancements to the strategic road network, in terms of the extent of works which may arise and their effect on levels of road based transport. These Priorities are likely to increase road based transport, the increase may be offset to some extent by more efficient journeys and the decarbonisation of vehicles, however an overall increase in emissions of pollutants to the atmosphere may occur, impacting air quality (and subsequently human health and biodiversity). These measures and associated increases are partly associated with longer-distance travel through the region, such as to the ports, as well as providing connectivity through this predominantly rural region. Investigating the feasibility of bypasses within Theme 4 would consider several communities through which A-roads currently pass. Whilst there are no Air Quality Management Areas within the SWestrans area, bypasses would be likely to reduce the emissions to air within proximity to these communities (although potentially increase emissions to air in total within the region). Further, bypasses would be likely to reduce the amenity impact of the roads (such as congestion, noise, vibration) within these communities, potentially allowing increased uptake of active travel within them.
- 4.4.19 Other Priorities within Theme 4 (reducing the impact of transport on our communities) provide support for the decarbonisation of transport modes, from cars to commercial vehicles, buses and trains, providing beneficial effects to this SEA Objective both in terms of air quality and amenity.
- 4.4.20 Themes 1 (enabling more sustainable development), 2 (connecting our communities), 3 (transforming travel in our towns), 6 (sustainable and extended local and regional public transport connectivity) and 9 (managing our car traffic) are predicted to have significant beneficial effects on air quality and amenity through reducing the need to travel, supporting sustainable modes for development, active travel, extended public transport, and reallocation of roadspace for more sustainable modes.
- 4.4.21 Taken as a whole, the extension of local and regional public transport through Theme 6 (sustainable and extended local and regional public transport connectivity), including a new tiered public transport model, bus infrastructure and service improvements, mobility hubs, railway infrastructure improvements and extensions offer the opportunity for modal shift, supporting this SEA Objective. This is further supported through Theme 7 (improving the quality and affordability of our public transport offer).
- 4.4.22 When considered collectively, the Priorities of the Draft RTS are predicted to have the potential for significant beneficial effects on air quality and amenity.

SEA Objective 3 – Biodiversity, Geodiversity and Soil

- 4.4.23 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 strategy.
- 4.4.24 The predicted beneficial effects have been identified for a number of the Priorities which would work to deliver a transport network that is less reliant on private car journeys and HGVs for freight and, instead, support an uptake of active travel and public transport and modal shift to rail for freight resulting in a reduction in air pollutant emissions which can be harmful to biodiversity, geodiversity and soils. These beneficial effects are not predicted to be significant at the regional scale.
- 4.4.25 There is some predicted uncertainty around the implementation of new or upgraded transport infrastructure which has the potential for adverse effects on biodiversity, geodiversity and soil 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 and connectivity 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.
- 4.4.26 When considered collectively, the Priorities 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 these receptors has been reduced through identification of important mitigation principles which the assessment has assumed would be committed to in the later stages of Strategy delivery. There are opportunities for local biodiversity enhancement in delivering new transport measures particularly through the adoption of nature-based solutions as part of transport and active travel networks.

SEA Objective 4 – Water, Flood Risk and Resilience

- 4.4.27 Generally, the Priorities in the draft Strategy are predicted to have minor (and non-significant) effects on the SEA Objective for Water, Flood Risk and Resilience. The enhanced use of nature based solutions for (new and upgraded) 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 as re-naturalisation of watercourses and establishment of wetlands).
- 4.4.28 Priorities that may result in significant new transport infrastructure, such as enhancements to the strategic road network and creation of freight hubs, 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 avoidance and mitigation measures implemented, these effects are not predicted to be significant adverse at this stage.
- 4.4.29 When considered collectively, the Priorities 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 5 – Cultural Heritage

- 4.4.30 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 Priorities 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.
- 4.4.31 Where new and extended infrastructure (such as bypasses, road enhancements, freight hubs, railway extensions, etc) are 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. Similarly, new, reinstated, extended and improved infrastructure has potential to impact on built heritage, both within the infrastructure itself (such as heritage assets within stations, and closed railway lines), and in proximity to the infrastructure. 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.
- 4.4.32 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.
- 4.4.33 None of the Priorities 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 6 – Landscape

- 4.4.34 Overall, the Priorities in the Draft RTS are not predicted to have significant effects on the Landscape SEA Objective. Priorities 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.
- 4.4.35 Implementation of Priorities 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 access them, particularly in deprived urban communities.
- 4.4.36 Any new infrastructure to enhance transport connections and improve connectivity has the potential for adverse effects if not located and designed sympathetically with the local landscape or townscape character. Siting of transport infrastructure will be a key consideration as the RTS is implemented, given the presence of National Scenic Areas, 'wild land' noted for its tranquillity and the valued 'Dark Sky Park' status of Galloway Forest Park. 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.
- 4.4.37 None of the Priorities in the RTS has been predicted to have significant effects on landscape and when considered collectively, the Priorities 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 Priorities for land use changes and transport integration such as 20 minute neighbourhoods also provide new opportunities for the development of attractive and healthy communities.

SEA Objective 7 – Accessibility and Connectivity

- 4.4.38 The Accessibility and Connectivity Objective receives good coverage across all Themes which are largely predicted to have a beneficial effect on accessibility for all groups. The Priorities 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.
- 4.4.39 There is some predicted uncertainty around the implementation of demand management Priorities (e.g., on parking and pricing measures) (within Theme 9) and low emissions zones (within Theme 4) 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.
- 4.4.40 When considered collectively, the Priorities of the Draft RTS are predicted to have the potential for significant beneficial effects on accessibility.

SEA Objective 8 – Inclusive Growth

- 4.4.41 Overall, the Inclusive Growth SEA Objective is covered well by the Strategy's Themes and their associated Priorities. Many of the Themes support improved access to services, including employment opportunities, and enhanced regional connectivity, including through low user-cost measures such as active travel. Where it is delivered, a step change in accessibility and regional transport quality would also be beneficial to the regional economy and business efficiencies. For example, improved access to opportunities for residents, 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.
- 4.4.42 It is considered that the policies and actions will allow industry to improve efficiency in transporting goods, with more direct routes to market (such as through new bypasses and strategic road network enhancements), new freight hubs and other facilities.
- 4.4.43 Theme 4 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 growth.
- 4.4.44 When considered collectively, the Priorities of the Draft RTS are predicted to have the potential for significant beneficial effects on inclusive growth.

SEA Objective 9 – Human Health

- 4.4.45 The majority of Themes assessed are predicted to have a beneficial effect on this objective. A large proportion of the Priorities 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 Priorities 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.

- 4.4.46 The proposed actions and Priorities to decarbonise public transport and private vehicles and to move freight onto the railways, 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.
- 4.4.47 When considered collectively, the Priorities of the Draft RTS are predicted to have the potential for significant beneficial effects on human health.

SEA Objective 10 – Material Assets

- 4.4.48 The majority of 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 Priorities are implemented at scale across all key transport corridors in the region, the effects have the potential to be significant.
- 4.4.49 Theme 1 (enabling more sustainable development), Theme 2 (connecting our communities) and Theme 3 (transforming travel in our towns) are predicted to have a significant beneficial effect on this objective through reduced resource use. Priorities within these Themes include sustainably locating development to reduce the need to travel first and foremost, locating development so that it is / can be served by active and public transport, improving and integrating the active travel network.
- 4.4.50 Priorities which deliver improvements to public transport to make it more attractive and accessible are likely to result in greater uptake of public transport. Collectively, with Themes 1, 2 and 3, these measures are likely to contribute to reduced car use which would reduce congestion and allow transport infrastructure to operate more efficiently. 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.
- 4.4.51 There is some predicted uncertainty around the effects of implementation of Priorities which could promote new or upgraded infrastructure from the resultant demand on new materials. Promotion of a circular economy in the SWestrans 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. 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.
- 4.4.52 When considered collectively, the Priorities 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.

4.5 Cumulative Effects

- 4.5.1 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 in two ways:
- In-combination effects: 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.

- Cumulative 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 SWestrans region.

In-Combination Effects of the RTS

- 4.5.2 At the scale of the SWestrans 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, important habitats, 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. People and local communities value a wide range of sites, beyond those which are designated, for a range of attributes that they provide which can contribute to quality of life, health, education and supporting local businesses and the economy.
- 4.5.3 The SEA has not predicted any significant adverse environmental effects in relation to the ten topic-based themes and objectives (provided adverse effects are avoided or effectively mitigated) 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.
- 4.5.4 The main potential for the RTS to have in-combination effects is on human receptors, primarily people in communities who would benefit from the potential for multiple effects on health, accessibility and socio-economic outcomes. The region includes 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.
- 4.5.5 The potential for significant beneficial in-combination effects of the Draft RTS is therefore predicted in areas where a step-change in accessibility and mobility is delivered from its implementation contributing to improved health, amenity, accessibility to key services and improved socio-economic prospects (including productivity).

Cumulative Effects of the RTS

- 4.5.6 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 and connectivity, material assets and inclusive growth).

- 4.5.7 Taken together with these strategies, and with other complementary regional level programmes and interventions, it is predicted that the RTS would have significant beneficial cumulative environmental effects on climate, air quality, human health, accessibility and productivity.
- 4.5.8 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 4.4). The principal Priorities 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 construction of freight hubs and road bypasses and the reinstatement of closed railways lines and stations.
- 4.5.9 There are no specific locations or designs for any of these interventions at this stage of the Draft RTS. To ensure that significant adverse cumulative effects with other similar or linked transport plans and programmes are avoided in future, the implementation of future projects should be taken forward in collaboration with other key delivery agencies including Dumfries and Galloway Council, 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 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.
- 4.5.10 It is considered that an integrated approach together with implementation of the other environmental mitigation principles set out in this SEA (see Section 5) would avoid the potential for significant adverse cumulative environmental effects with other key plans and programmes in the region.

5 Mitigation and Monitoring

5.1 SEA Mitigation

5.1.1 A series of environmental mitigation measures in the form of high-level principles have been defined through the SEA process, particularly following initial options appraisal and in the assessment of the draft RTS policies. Mitigation in the SEA has been presented in the form of principles and general commitments which reflects the level of detail of the draft Strategy .

5.1.2 The key mitigation principles, as presented in Table 6.1 in the full ER, include:

- The mitigation principles outlined in the SEA ER 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.
- The need for, nature of and scope of new / extended / improved transport infrastructure should be considered within the context of the reasonable alternatives, including alternative modes of transport. Consideration of alternatives should include embedded and operational carbon. For example, the need for and scale of improvements to the strategic road network should be reviewed in combination with the potential for freight hubs and new railway lines which offer the potential for reduced HGV traffic on the road network.
- Any new, extended or upgraded transport infrastructure would be subject to appropriate levels of environmental assessment and consenting, this would involve development of environmental baseline information specific to the key transport corridor(s) where transport measures are being considered. Sensitive construction environmental management will be implemented to ensure that wherever possible significant adverse environmental effects were avoided.
- The implementation of future RTS projects will be taken forward in collaboration with other key delivery agencies including Dumfries and Galloway Council, 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.
- Transport infrastructure should be developed as part of a holistic network, integrated with other travel options (e.g., connections to a transport interchange) to enable the more sustainable modes of transport becoming a more viable and attractive option.
- 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 Hierarchy³) and where new facilities or infrastructure are required these should be located, designed and constructed to avoid sensitive receptors, including (but not limited to) peat and other carbon rich soils, biodiversity and archaeology.
- As the RTS develops through to the Delivery Plan and implementation, the potential for likely significant effects (LSE) on European Sites under the Habitats Regulations shall be kept under review. An HRA Screening will be completed if SWestrans considers, in line with the precautionary principle, that there is any potential for LSE from implementation of the RTS.

³ 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/>

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

5.2 Monitoring Framework

5.2.1 Monitoring the RTS is important to evaluate the extent to which it is achieving the Strategy Objectives and Vision. A series of Key Performance Indicators (KPIs) have been identified in the Draft RTS. Throughout the lifetime of the strategy monitoring reports will be prepared every two years. These will outline the key regional transport and behavioural trends based upon the KPIs.

5.2.2 SWestrans must also monitor the significant environmental effects of the implementation of the Strategy with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action. It should be noted that the SEA Act only requires significant environmental effects to be monitored.

5.2.3 Analysis of the distribution of RTS indicators in Table 5.1 suggests that there is a good level of consistency with monitoring for the SEA Objectives. Many of the KPIs proposed for the RTS itself are considered to be suitable to help track progress in the delivery of the Strategy with respect to environmental outcomes, where this is the case, the KPIs are noted in the table.

Table 5.1 Indicators for Monitoring RTS Environmental Effects

SEA Objective	Relevant Draft RTS KPIs
1. Climate Change	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ Transport related CO₂ emissions (Department for Business, Energy & Industrial Strategy) ▪ Main purpose of travel (Scottish Household Survey Travel Diary)
2. Air Quality and Amenity	Draft RTS KPIs <ul style="list-style-type: none"> ▪ Number of AQMAs (Scottish Transport Statistics) ▪ Roads causing severance due to high traffic flows (Transport Scotland / Department for Transport ATCs) ▪ Average Annual Daily Traffic through Settlements (Transport Scotland / Department for Transport ATCs)
3. Biodiversity, Geodiversity and Soil	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ N/A
4. Water, Flood Risk and Resilience	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ N/A
5. Cultural Heritage	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ N/A
6. Landscape	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ N/A
7. Accessibility and Connectivity	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ Main mode of travel – bus (Scottish Household Survey Travel Diary) ▪ Main mode of travel – rail (Scottish Household Survey Travel Diary / Transport Focus Surveys) ▪ Main mode of travel – Walking (Scottish Household Survey Travel Diary) ▪ Main mode of travel – Bicycle (Scottish Household Survey Travel Diary)

SEA Objective	Relevant Draft RTS KPIs
	<ul style="list-style-type: none"> ▪ Frequency of walking in previous 7 days (Scottish Household Survey Travel Diary)
8. Inclusive Growth	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ Employed adults method of travel to work, and whether they could use public transport (Scottish Household Survey Travel Diary) ▪ Connectivity and deprivation analysis for key healthcare, education, and employment destinations (TRACC) ▪ Public transport labour market catchments of largest employment sites (Business Register and Employment Survey / TRACC)
9. Human Health	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ Number of Air Quality Management Areas (Scottish Transport Statistics) ▪ Reported road collisions on strategic road network (Scottish Transport Statistics) ▪ Average Annual Daily Traffic through Settlements (Transport Scotland / Department for Transport ATCs)
10. Material Assets	Draft RTS KPIs: <ul style="list-style-type: none"> ▪ N/A

6 Next Steps

6.1 Consultation on this Environmental Report

- 6.1.1 The SEA Environmental Report and this Non-Technical Summary have been published for consultation alongside the Draft RTS which has been prepared by SWestrans (with support from Stantec UK) together with supporting reports including the Equalities Duties Report.
- 6.1.2 The Draft RTS and supporting assessment reports, including this environmental assessment, will be published for consultation (of at least 12 weeks) in Autumn 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 the SWestran RTS consultation website ([SWestrans RTS](#)). The documents will also be made available in hard copy for inspection, should this be requested, at the principal offices of SWestrans.
- 6.1.3 Details of how to participate in the consultation will be published by SWestrans 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 [SWestrans RTS](#).
- 6.1.4 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.

6.2 Next Stages of RTS Preparation and SEA

- 6.2.1 This Report will be consulted on in tandem with the Draft RTS. All representation received regarding both documents will then be analysed by SWestrans 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).
- 6.2.2 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, SWestrans will formally adopt and publicise the Strategy. At this time, an SEA Post Adoption Statement (PAS) will be prepared to explain how the SEA process has closely informed the development of the finalised RTS and how the feedback from consultation has been taken into account in finalising the Strategy. The PAS will also set out proposals for future monitoring of the environmental effects of the RTS.