Appendix D: SEA Themes – Likely Evolution with and without the emerging Regional Transport Strategy 2024-2034

SEA Theme	Issues / Problems / Trends	Likely Evolution without the RTS	Possible Role of the RTS
Climate Change	Currently, transport accounts for 37% of total Scottish emissions. The largest contributor to transport emissions is the road sector, accounting for 68% of total transport emissions. The towns and cities serve large rural hinterlands. Whilst 62% of trips to work in Dundee are made by car, as the population becomes more rural this % increases: 69% in Stirling; 77% of trips in Angus; and 79% in Perth & Kinross For residents of Angus, Perth and Kinross and Stirling, whilst only 26%-29% of personal trips are over 10km, these trips account for 81%-84% of total km driven. In Dundee 93% of the trips are under 10km, where this accounts for 60% of km driven Approximately 4.5% of vehicles registered in the region were hybrid, electric or ULEV in 2023.	Without the RTS 2024-2034 and the respective policies and measures implemented through the new RTS, traffic levels may continue to increase and will result in increased levels of greenhouse gas emissions. Without a strong policy framework at a regional level implementation of cross border projects or implementing low emission vehicles or other new technologies may not happen. It should be noted that the majority of projects will be taken forward by the four local authorities through their Local Transport Strategies. However, a strategic approach to encouraging more people to travel more actively and sustainably more often is required. Other PPS will also affect climatic factors, particularly in terms of developments within the region. Without the RTS 2024-2034 and other complementary strategies, programmes would still be financed and delivered by Angus, Dundee City, Perth and Kinross and Striling Councils. However, there would be a significantly reduced level of co-	The RTS 2024-2034 supports land use development plans which are well served by sustainable modes of transport and promote design principles that encourage walking, cycling and public transport use to / from and within the site as well as enhanced provision of cycle parking, electric vehicle charging infrastructure and car parking standards. The RTS considers the greenhouse gas emissions impact of transport and support the roll out of low emission vehicles that are electric, and hydrogen powered. The RTS also promotes active travel including electric bikes and cargo bikes as a transport mode and for 'last mile' and local deliveries. Through its policies and projects, the RTS 2024-2034 also promotes the application of both the travel and investment hierarchy to reduce the reliance on private cars and encourage a modal shift towards walking, cycling and public transport.

		ordination between the four areas and the required cross-border work. Unnecessary duplication of work would also undermine effectiveness.	It is acknowledged that the RTS policies and projects can play a role in protecting carbon rich soils and peatland habitats when identifying potential locations for new infrastructure or routes. The RTS 2024-2034 will also help to support wider digital strategies that will enable a reduction in the need to travel for example online meetings or virtual health care appointments.
Biodiversity	Transport development involves land take, which can contribute to disturbance and fragmentation of habitats and result in pressure on, and even the loss of, vulnerable habitats and species. The presence of people and vehicles can create noise and artificial light, disturbing wildlife. Transport is a major contributor to air pollution, particularly oxides of nitrogen (NO_X), which can disturb or even lead to the loss of biodiversity of both land- and water-based ecosystems. Transport can contribute towards long-term water pollution through surface water run-off.	If the RTS 2024-2034 is not implemented and demand for motorised travel increases, there will likely be a requirement for new and significant transport infrastructure to cope with this demand. Construction of such infrastructure could put pressure on biodiversity, including the loss and fragmentation of habitats. Continued increases in traffic, and the pollution, noise and artificial light resulting from this, could continue to disturb sensitive species, potentially resulting in irreversible damage and loss.	The RTS 2024-2034 must limit the negative effects of transport on biodiversity, by: • Reducing land take from transport, thus reducing the likelihood of damage to or disturbance/severance of habitats and species; • Reducing road traffic and therefore the impact of traffic on biodiversity in terms of air and water pollution, noise, and light; and • Investigating methods of reducing surface water run-off.

			The RTS framework can also assist in the enhancement of biodiversity through the creation of new habitats and wildlife corridors. While limited in scope, the RTS 2024-2034 can also indirectly influence the condition of designated and protected sites through partnership working and ensuring appropriate environmental assessment is undertaken at project level. The RTS 2024-2034 will maximise the delivery of climate change mitigation and adaptation measures. For example, through asset management of infrastructure and easier access to greenspace all.
Landscape	Inappropriate transport development can reduce visual amenity.	If the RTS 2024-2034 is not implemented, it is likely that demand for motorised travel will increase and this will necessitate the construction of new transport facilities, such as roads and bridges, throughout the Borough which could significantly damage the character of the region's varied and distinctive landscapes.	The RTS 2024-2034 should protect the landscapes from the development of unsightly transport infrastructure. Delivery of the RTS will have largely positive impacts on the landscape in the long-term through a reduced need for construction of new roads etc. which may otherwise be inevitable with continually increasing car use and which could lead to an unsightly urban and rural landscape.

Cultural Heritage	Transport development contributes to land take which has the potential to put development pressure on (including loss of or damage to) known and undiscovered historical/heritage sites or features. Traffic increases and car parking in and around conservation areas can undermine the distinctive character of such areas. Street clutter, including inappropriate signing and materials, can cause negative visual impacts on areas noted for their beauty or distinctiveness. Air pollution and vibrations resulting from transport activities can cause deterioration of buildings and monuments.	If the RTS 2024-2034 is not implemented and demand for road transport and parking continues to increase, this may put development pressure on areas of historic and/or archaeological interest and, undermine the setting and character of conservation areas. Poor air quality and vibrations resulting from increased motor traffic will continue to affect historical buildings/monuments, potentially leading to irreparable damage.	The RTS 2024-2034 must protect the historic environment from transport development by reducing the need for construction of large-scale facilities. The RTS 2024-2034 must seek to reduce the impact of transport on protected areas through measures to reduce road traffic and street clutter.
Air Quality	Three AQMAs have been declared in the Tactran region, largely as a result of high volumes of road traffic. Exceedances of the annual mean limit for NO_2 and PM_{10} continue to be regularly exceeded at these locations. As well as impacting on human health (and even contributing towards premature death in some cases), air pollution, particularly NO_x, can disturb, or even lead to the loss of, biodiversity of both land- and water-based ecosystems.	If the RTS 2024-2034 is not implemented, it is likely that demand for, and use of, motorised forms of transport will increase as the wider Tactran region grows and develops, while opportunities to encourage modal shift to walking, cycling and public transport will be lost. Increasing car traffic will lead to a further deterioration of air quality and the potential implementation of more AQMAs. Deteriorating air quality could also:	The RTS 2023 - 2033 must identify measures to reduce transport's contribution to poor air quality, including: • Reducing the need to travel; • Reducing car dependency, through influencing land use planning policies and making it easier, safer and more pleasant to walk, cycle and use public transport for everyday journeys; and

	Environmental pollution can cause irreversible damage to buildings, especially old buildings which may be of cultural and/or historical interest.	• Continue to negatively impact on human health, leading to increases in respiratory illnesses and potentially an increase in the number of premature deaths attributable to unclean air; • Continue to negatively impact on biodiversity, potentially leading to irreversible damage and the loss of some species and their habitats; and • Cause irreversible damage to buildings and sites of historical and/or cultural importance.	• Encouraging responsible vehicle use through promoting and enabling the use of cleaner fuels and technologies.
Noise and Vibration	Although little information is available on noise and vibration generally across the region, it is estimated that levels of road traffic noise are the primary noise source in most parts of the region.	If the RTS 2024-2034 is not implemented, the actual level of noise and vibrations from traffic may continue to increase due to increasing levels of motorised traffic, subsequently exacerbating health inequalities due to low incomes and/or social deprivation. Increased noise levels may also impact on geographies, leading to an erosion of rural character through suburbanisation and the intrusion of noise and light pollution. Increased noise levels due to location near a major road or port, harbour or airport may also impact on local communities.	The RTS 2024-2034 has a role to play in reducing noise levels from transport which can be harmful to human health and in ensuring that transport does not contribute to a further deterioration in noise quality. Measures to reduce the levels of motorised traffic within the region along with a greater emphasis on active travel and public and shared transport will positively impact on noise levels. Seeking to support improvements to the public realm will also be aimed at encouraging a mode shift towards more active and sustainable modes of transport.

Human Health	Pollution and poor air quality resulting from transport can reduce life expectancy, causing or exacerbating a number of respiratory conditions such as asthma. Transport noise is a serious problem, potentially leading to mental health conditions resulting from stress and sleep disturbance. A transport system that favours sedentary over active forms of transport reduces opportunities for physical activity, which can lead to an increase in obesity and other life-threatening conditions including cancer and type 2 diabetes. Land take from transport development can reduce open space provision or reduce/sever access to open space which can have health implications in reducing opportunities for physical activity.	If the RTS 2024-2034 is not implemented and a significant switch to healthy and active modes of transport, such as walking and cycling, is not achieved, various health conditions, such as obesity and other complaints arising from inactivity, will continue to affect the population, while respiratory conditions resulting from pollution and poor air quality will also rise. Land take for new transport infrastructure to cope with demand for road traffic could see the loss of areas of open space, or the severing of access to such areas, reducing opportunities for physical activity and the mental wellbeing this can engender.	The RTS 2024-2034 must reduce transport-related pollution and emissions and reduce transport's contribution to noise, especially in noise-sensitive areas. This should be done through measures to reduce the need to travel, and to reduce car travel in particular, while promoting and facilitating the use of cleaner and quieter modes. The RTS 2024-2034 must improve conditions for pedestrians and cyclists to increase the number of journeys undertaken by active transport modes, and ensure that transport development does not reduce opportunities for active travel and outdoor recreation.
Population	The population of Tactran and the surrounding region is increasing, thus putting an ever more onerous burden on a transport network. An ageing population raises implications for mobility and accessibility.	If the RTS 2024-2034 is not implemented, as the population grows demand for transport could outstrip supply, leading to overcrowding of our roads and public transport facilities. If improvements are not made to walking, cycling and public transport facilities, it is likely that most of this demand will be for road transport, leading to increased congestion and pollution.	The RTS 2024-2034 should ensure that the transport network can cope with an increase in population, primarily through the development of a fit-for-purpose transport system that increases opportunities for walking, cycling and public transport use. This will ensure that increases in population are not matched with a

			commensurate increase in car travel, thus exacerbating congestion, pollution and noise. The RTS 2024-2034 must take account of the needs of an elderly population, ensuring that people can remain mobile into old age and able to access the services and facilities they need.
Geology and Soil	Transport development has the potential to cause: • a decline in soil quantity; • an increase in sealed surfaces, thus increasing flood risk; • soil contamination (direct or indirect) through, for instance, increased air pollutants and run-off of contaminated water; and • the loss of prime agricultural land.	If the RTS 2024-2034 is not implemented and demand for motorised transport increases, it may be necessary to construct new large-scale transport facilities, such as roads and bridges, to cope with increasing demand. Construction and use of such facilities could lead to land contamination and soil erosion. Pressure for the development of new transport facilities could also lead to the loss of any prime agricultural land remaining in the region. Increasing air pollution from traffic will also continue to negatively impact on soil.	The RTS 2024-2034 can reduce the negative impacts of transport on soil by reducing the need for development of large-scale transport facilities which could contribute towards a decline in soil quality and the loss of prime agricultural land, by reducing the volume of air pollutants and requiring SEAs to accompany all new transport schemes. It can do this by seeking to reduce the need to travel and reduce car dependency through the facilitation and promotion of active and sustainable modes of transport.
Water	Water quality, on average, is generally classed as 'moderate' in the region, river water quality is currently classed as 'moderate' to 'poor'.	If the RTS 2024-2034 is not implemented and demand for motorised transport increases, it may be necessary to construct further large-scale transport facilities, such as new roads and bridges, to cope with demand, potentially leading to the pollution of nearby watercourses.	The RTS 2024-2034 must contribute towards improving water quality by ensuring that measures are in place to reduce and prevent run-off from transport schemes, and by reducing the requirement for new large-scale transport facilities. The latter will be

	Run-off from roads and new transport infrastructure can negatively affect water or hydrological regimes.		achieved through reducing the need to travel and reducing car dependency and by the facilitation and promotion of sustainable transport modes.
Material assets	The Tactran region is distinctively rural and is characterised by high car ownership and usage, resulting in problems of congestion and pollution. There are currently a number of deficiencies in the region's transport network, resulting in a transport system operating below its capabilities. This leads to congested roads, roads in need of maintenance, a limited cycle network, and a limited (orbital) public transport and bus lane network.	Without the RTS 2024-2034 it is likely that a range of sustainable transport facilities (including walking and cycling routes, cycle parking, public transport hubs) will not be delivered, thus jeopardising Tactran's vision of a transport system that meets the needs of all those living in, working in and visiting the wider region.	The RTS 2024-2034 must contribute to the development of a transportation system, in particular improving opportunities for travel by sustainable modes of transport and reducing reliance on the private car. Measures should include: • Improving and increasing pedestrian and cycle infrastructure; • Improving and increasing public transport infrastructure; and • Encouraging responsible vehicle use, including car sharing and membership of Car Clubs.