Strategic Environmental Assessment
Tayside and Central Scotland Transport Partnership: Regional Transport Strategy 2023 – 2033

This report sets out the Strategic Environmental Assessment (SEA) of the emerging Tayside and Central Scotland Transport Partnerships Regional Transport Strategy 2023 – 2033 (RTS3) against a current evidence base. It will be augmented by a comprehensive Integrated People Impact Assessment (IIA) integrating the Equalities and Fairer Scotland Duty Impact Assessment[1] (EqIA), Children's Rights and Wellbeing Impact Assessment (CRWIA), and Health Inequality Impact Assessment (HIIA).

During the identification of the main issues pertinent to the region, TACTRAN consulted on issues to be scoped into both the respective peoples and place assessments.

The development of the emerging RTS must follow the principles of Scottish Transport Appraisal Guidance (STAG) and there is a requirement to appraise each option identified to identify their impacts against both the RTS objectives and the STAG criteria. Both the SEA and the IIA will inform this appraisal.

SEA ENVIRONMENTAL REPORT (27th April 2023)

1. Introduction

The Environmental Assessment (Scotland) Act 2005 requires the preparation of a Strategic Environmental Assessment (SEA) for a wide range of plans, programmes and strategies (PPS), with a view to:

- Provide a high level of protection for the environment;
- Integrate environmental considerations into the preparation and adoption of plans;
- Promote sustainable development; and
- Increase public participation in environmental decision-making.

The key stages of the SEA process are:

- **Screening** – determining whether the plan, programme or strategy (PPS) is likely to have significant environmental effects and whether SEA is required[2];
- **Scoping** – deciding on the scope and level of detail to be included in the Environmental Report and determining the required consultation period;
- **Environmental Report** – publishing and consulting upon an Environmental Report on the plan and its anticipated environmental effects;

[1] Comprising the Human Rights and Equalities Impact Assessment as well as the Fairer Scotland Duty.
[2] It was agreed prior to this that a SEA would be necessary, so the SEA process went straight to scoping and skipped the screening stage.

- **Adoption** – providing information on the adopted plan, including how consultation outcomes have been taken into account, and identifying a monitoring framework; and
- **Monitoring** – monitoring significant environmental effects and taking appropriate remedial action for any unforeseen significant environmental effects.

This document comprises the Environmental Report for the Tayside and Central Scotland Transport Partnership's Regional Transport Strategy 2023 – 2033, in accordance with Section 5 Paragraph 3 of the Environmental Assessment (Scotland) Act. It takes into account the responses received by the consultation authorities – Historic Scotland, Scottish Environment Protection Agency (SEPA) and Scottish Natural Heritage (SNH) – during scoping and consultation on the draft Environmental Report. The Environmental Report provides an objective account of the anticipated environmental impacts of the implementation of the RTS3.

2. TACTRAN's Regional Transport Strategy 2023 - 2033

The Transport (Act) 2005 places a duty on Regional Transport Partnerships to draw up a strategy for transport in their region. The Act calls for the strategy to make provision for the following matters:

i. The respects in which transport in the region needs to be provided, developed or improved having regard to, among other things:

   - Future needs including those occasioned by demographic and land use changes.
   - What can be done, taking account of cost, funding and practicability.

ii. Meeting the needs of all inhabited places, in particular, those which the Partnership considers different from the remainder of the region by reason of their remoteness or the sparsity of their populations.

iii. Meeting the need for efficient transport links between heavily populated places

iv. How transport in the region will be provided, developed, improved and operated so as:

   - to enhance social and economic well-being.
   - to promote public safety, including road safety and the safety of users of public transport.
   - to be consistent with the principle of sustainable development and to conserve and enhance the environment.
   - to promote social inclusion.
   - to encourage equal opportunities and, in particular, the observance of the equal opportunities' requirements.

- to facilitate access to hospitals, clinics, surgeries and other places where a health service is provided.
- to integrate with transport elsewhere.

The TACTRAN Regional Transport Strategy 2023 – 2033 sets out the Partnership's aims and objectives for transport in the region (the local authority areas of Angus, Dundee, Perth and Kinross, and Stirling) in support of Scotland's Second National Transport Strategy (NTS2) to provide a sustainable, inclusive, safe and accessible transport system that helps to deliver a healthier, fairer and more prosperous Scotland, taking into account the specific challenges and opportunities pertinent to the region. In addition, the emerging document identifies a concluding set of actions for implementation during the RTS 2023 – 2033 period, including their funding requirements and prioritisation.

Key facts relating to the emerging RTS3 are set out in Table 2.1 below:

Name of Authority	Tayside and Central Scotland Transport Partnership (TACTRAN)
Title of PPS	TACTRAN Regional Transport Strategy 2023 - 2033
What prompted the PPS	Under Transport (Scotland) Act 2005 Regional Transport Partnerships are statutorily required to develop, implement and keep up to date a Regional Transport Strategy, setting out how the Partnership will deliver against the aims and objectives of NTS2 at regional level. Tactran committed to renewing the RTS following the adoption of NTS2 in February 2020. The emerging RTS also needs to support the implementation of both the Tay Cities and Stirling and Clackmannanshire City Region Deals.
Subject	Transportation
Period covered by PPS	2023 - 2033
Frequency of updates	The current RTS 2015 – 2036 was refreshed in 2015
Area covered by PPS	Angus, Dundee, Perth & Kinross and Stirling Council areas

A Regional Transport Strategy, as prepared by a Regional Transport Partnership, is expected to conform to Scotland's National Transport Strategy and, should identify policies and actions to be delivered and implemented regionally to meet the Scottish Government's shared vision for transport in Scotland, as articulated in NTS2.

In addition, the RTS3 will inform and influence subsequent local strategies and action plans to be delivered by the Local Authorities and its partners, such as Local Transport Strategies and complementary Strategies.

22 strategic policies as set out in NTS2 underpin the regional outcomes and objectives of the emerging RTS 2023-2033, including:

To reduce inequalities:

- Ensure active, public, and sustainable travel access to employment, education, and training locations
- Ensure transport in Scotland is accessible for all
- Remove barriers to public transport connectivity and accessibility within Scotland
- Minimise the connectivity and cost disadvantages faced by island communities and those in remote rural and rural areas, including safeguarding of lifeline services
- Improve sustainable access to healthcare facilities for staff, patients, and visitors

To take climate action:

- Reduce emissions generated by the transport system to mitigate climate change and improve air quality
- Support management of demand to encourage more sustainable transport choices
- Facilitate a shift to more sustainable and space-efficient modes of transport for people and goods
- Ensure the transport system adapts to the projected climate change impacts
- Improve the quality and availability of information to enable all to make more sustainable transport choices

To help deliver inclusive economic growth:

- Increase resilience of Scotland's transport system from disruption and promote a culture of shared responsibility
- Increase the use of asset management across the transport system
- Provide a transport system which enables businesses to be competitive domestically, within the UK and internationally
- Ensure gateways to and from international markets are resilient and integrated into the wider transport networks to encourage people to live, study, visit and invest in Scotland
- Support Scotland to become a market leader in the development and early adoption of beneficial transport innovations
- Meet the changing employment and skills demands of the transport industry and upskill workers
- Integrate transport and wider infrastructure policies and investments, including digital and energy, to unlock greater benefits

To improve health and wellbeing:

- Provide a transport system that promotes and facilitates active travel choices which help to improve people's health and wellbeing across mainland Scotland and the Islands
- Increase safety of the transport system and meet casualty reduction targets
- Implement measures that will improve perceived and actual security of Scotland's transport system
- Continue to ensure that transport assets and services adopt the Place Principle Reduce the negative impacts which transport has on the safety, health, and wellbeing of people
- Embed the implications for transport in spatial planning and land use decision-making

The Tayside and Central Transport Partnership have developed the outcomes and objectives of the emerging RTS 2023-2033 to address regional issues by adapting the emphasis of each of the above NTS2 outcomes and associated policies and placing them in the distinctive context of the TACTRAN region.

TACTRAN's primary and secondary outcomes are shown in Table 2.2 below.

Table 2.2: Objectives and outcomes	
To reduce inequalities	
Primary Outcome (Draft)	Secondary Outcome (Draft)
Improved ability for young and vulnerable to access jobs, education, and services	Improve ability of 16–24-year-olds to access jobs and further education
	Improve ability of all in the lowest SIMD data zones (all domains) targeted by the respective Councils to access jobs, education, and services
	Improve ability of families targeted in local Child Poverty Action Plans to access jobs, education, and services
	Improve ability of rural communities to access jobs, education, and services
	Improve ability of people with disabilities to access jobs, education, and services
	Perception of safety and security of vulnerable and protected characteristic groups walking / on public transport
To take climate action	
Reduced greenhouse gas emissions	Increase Electric Vehicle (EV) and (Ultra Low Emission Vehicles (ULEV) use
	Reduce estimated CO_2 emissions from transport in the TACTRAN region
Modal shift to more sustainable modes of travel	Reduce need to travel by reducing number and/or the length of trips
	Personal travel: Reduce the need to travel by car
	Reduce freight mileage by road
Reduced car mileage	Reduce the number and/or length of trips contributing to car mileage and CO_2 emissions
Ensure our transport networks are resilient	Ensure strategic and lifeline routes (and services) are resilient to climate change and emergencies
To help deliver inclusive economic growth	
Reliable inter- and intra-regional journey times	Improve journey times and journey time reliability on strategic road and rail routes for public transport to key destinations (e.g., major centres and economic locations)

Table 2.2: Objectives and outcomes	
	Improve journey time reliability for freight and business to key destinations (e.g., major centres and economic locations / air and seaports)
Improved ability for young and disadvantaged communities to access jobs, education, and training	Improve ability of 16–24-year-olds to access jobs, and further education
	Improve ability of all in the lowest SIMD data zones (all domains) targeted by the respective Council to access jobs and further education
	Improve ability of families targeted in local child poverty action plans to access jobs and further education
	Improve ability of working age population in rural communities to access jobs and further education
To improve health and well-being	
Reduced fatalities and injuries	Reduce the impact of traffic on communities on strategic routes
	Improve road safety for vulnerable users (pedestrians, cyclists, children, disabled and elderly)
Improved air quality	Improve air quality in declared Air Quality Management Areas (AQMAs)
Improved ability for old and disadvantaged communities to access health care	Improve the ability of over 65s to access healthcare (Primary health care /Hospitals)
	Ability of all in the lowest SIMD data zones (health domain) targeted by the respective Council to access healthcare
	Ability of rural communities to access healthcare
Improved ability for the most vulnerable to access socially necessary activities	Ability of elderly and those in lowest SIMD data zones (health domain) targeted by the respective Council to access socially necessary services
Increased levels of physical activity	Levels of walking and cycling in the lowest SIMD data zones (health domain) targeted by the respective Council
	Improved ability to access active leisure facilities and green space

Potential interventions have been identified and these are grouped under nine headings. They are shown in Table 2.3 below.

Table 2.3: Policies and Proposals in relation to the RTS3 2023 - 2033	
Improving safety	
Reduce speeds	Reduce speeds in settlements • Expansion of 20mph limits and zones

Table 2.3: Policies and Proposals in relation to the RTS3 2023 - 2033	
	• Review speed limits in residential and neighbourhood environments focusing on areas with road safety concerns. • Other localised safety schemes such as traffic calming measures and road / junction realignments and redesigns.
	Addressing network blackspots • Review speed limits • Road / junction realignments and redesigns
	Road safety enforcement, including enforcement of speed restrictions via camera technology
Provide Road Safety Education	Education measures, which include training and publicity, aiming to provide road users with the knowledge and skills needed to use the roads safely. Focused on: • Road safety education pre-school, primary and secondary schools • Road safety education for adults, such as drivers • Road safety education for 17-25yr olds
Improve Rest and Welfare Facilities for Hauliers	Increase the range of rest facilities within the region available to drivers. Freight is still predominantly road-based with most drivers regularly traveling long distances. Without sufficient rest, drivers can experience fatigue which can be dangerous for themselves and other road users.
Influencing travel choices and behaviour	
Promoting Smarter Choices	Campaigns to promote active and sustainable travel in Travel to Work Areas
	Develop and deliver Travel Plans and School Travel Plans
	Promoting LiftShare / Ride Sharing schemes
Parking Controls, Road Space Re-Allocation and Traffic Management	Workplace Parking Levy / Congestion Zone Charging
	Public parking charges
	Reallocation / Reduction of the numbers of both on-street and off-street parking spaces within town centres
	Reallocation of carriageway, giving more space to active and sustainable modes
	Re-routing motorised traffic on longer and/or less direct routes for the benefit of the wider network
Road user charging	Road users could be charged either for the length of trip made or for entering a specific area, such as a city centre,

Table 2.3: Policies and Proposals in relation to the RTS3 2023 - 2033	
	to encourage the use of sustainable modes to make the trip
Improving access to public transport	
Improved Public Transport Interchange	Strategic Park and Ride sites to transfer to coach or rail those long-distance car trips heading to Scotland's cities outwith the region.
	Local Park and Choose sites to provide interchange facilities at railway stations, bus stations and on public transport corridors serving towns to enable transfer to train, bus or bike into our larger towns and cities.
	Mobility Hubs link a number of transport services within a community to improve access via different modes to enable your onward journey. This usually means improving the ability to access bus services by, e.g. car and bicycle parking; bike hire; walking and cycling links; demand responsive bus services. But they could also help accessing car club & car sharing facilities.
	Passenger facilities along strategic bus corridors: ensuring accessible waiting facilities with information along strategic bus corridors. Campaigns to promote active and sustainable travel in Travel to Work Areas.
New and Improved Rail and Bus Stations	New and improved bus stations
	New and improved rail stations on existing lines
Easier Planning and Booking of Journeys	Journey planning tools to help people be aware of all the choices they have to make a journey
	Smart and integrated ticketing whereby tickets are stored electronically, usually on a smart card or other forms of smart media, enabling a person to use a single 'ticket' on different modes of transportation, such as bus and rail, or across different operators.
	MaaS products can provide both improved journey planning and provide smart, integrated ticketing
Improving sustainable travel opportunities	
Reduced fatalities and injuries	Connected neighbourhoods, enabling people to access local facilities by walking and cycling
	Active freeways, cycle priority routes into our town and city centres
	Strategic active travel network, providing village-town active travel connections; connecting towns by active travel; and supporting the long-distance active travel network

Table 2.3: Policies and Proposals in relation to the RTS3 2023 - 2033	
	Ensuring secure cycle parking at homes, workplaces, schools, interchanges and other destinations
	Cycle hire schemes, increasing the number of conventional and electric cycle hire scheme
Promoting Active and Sustainable Travel to School	Safer routes to schools - improving walking and cycling routes to schools, including reducing traffic speeds around schools
	School exclusion zones - limiting traffic around schools at peak times to improve safety and air quality for children
	Cycle parking; cycle training and improving access to bikes
Improved Public Transport	Strategic Bus Priority Corridors, improving journey time and reliability through bus priority measures, traffic management etc.
	Increasing Bus Services, improving the frequency and coverage of public transport through fixed routes and feeder services (including DRT and Community Transport)
	Improved rail services
Demand Responsive, Community and Shared Transport Services	Demand Responsive Transport (DRT): on demand (rather than timetabled services) to link to existing traditional fixed route bus services, and to cover areas where fixed route services are not viable
	Community Transport Services: Support for community and volunteer transport services
	Car Clubs to provide access to a car without the need to own one
Promote Fair Fares	Fare structures are typically set in a way to make travel during peak times more expensive, with off-peak travel fares offered at lower rates.
	Encourage and support public transport providers to review fares to: • Enhance social inclusion by providing a realistic alternative to a wider range of people, including disadvantaged communities. • Help balance demand for public transport throughout the day and reduce pressure on services at peak times.
Decarbonising transport and a just transition	
Promoting and Enabling Electric and Low Emission Vehicles for Individuals,	
	Supporting electric vehicle uptake through adoption of Ultra Low Emission Vehicles (ULEV) in public sector,

Table 2.3: Policies and Proposals in relation to the RTS3 2023 - 2033	
Public Sector, Business and Bus Fleets	business and bus fleets; and supporting a just transition through the availability of electric vehicles through car clubs and parking and charging tariffs
	Developing charging infrastructure through deployment and maintenance of public infrastructure; home charging and fleet charging
	Promoting electric mobility, communicating the benefits of low emission vehicles
Rail Decarbonisation	Support the decarbonisation of the rail network by 2035 through: • Electrification of Dunblane to Perth / Dundee / Aberdeen • Battery Electric Trains from Edinburgh to Perth / Dundee (short term) • Electrification from Edinburgh to Perth / Dundee (long term) • Electrification from Perth to Inverness (cp. proposals contained in STPR2) • Battery Electric Trains on the West Highland Line
Behaviour Change and Modal Shift for Freight	Freight transfer and consolidation hubs within the region to reduce road freight and also allow freight to be moved by rail and water. • Freight hubs • Timber transfer facilities • Consolidation centres • First and last mile distribution services, such as vans, drones, cargo bikes etc.
Improving the accessibility and security of our transport networks	
Improved Accessibility and Security of the Street Environment	This option seeks to make our settlements places where everyone, especially people with mobility difficulties, can confidently and easily walk, cycle or wheel around. • Step free routes and appropriate crossing facilities, informed by accessibility audits around the 20min neighbourhoods • Seating • Lighting and reviewing the design of the public realm to improve security • Signage and wayfinding • Number and location of disabled car parking spaces • Reducing severance and improving active travel on trunk roads through communities • Promoting changes to our transport networks to people with learning difficulties

Table 2.3: Policies and Proposals in relation to the RTS3 2023 - 2033	
Improved Accessibility and Security for All across Public Transport	Improving access for all public transport users and particularly for those who are mobility impaired, including: • Improvements at interchanges, step free access, improved seating, improved lighting, security improvements. • Improved accessibility of buses and trains. • Improved information provision for people with mobility issues/passes. • Assistance to public transport users.
Reducing the need to travel by car through the location of development and services	
Reduce car dependency of new developments	Development plans promoting land use patterns that reduce the need to travel, and enable travel by sustainable modes
	Development management processes ensuring that new development is realistically accessible by a range of modes
Locate new and existing services within communities	Locate new and existing services within communities - all public services to work together to improve the range of local services that can be available at a neighbourhood level to support the 20min / liveable neighbourhood principle.
Measures in neighbouring authorities that reduce car use	The ease and ability to make many trips will be influenced by the sticks and carrots being applied in neighbouring areas. Where applicable we will work with neighbouring authorities on measures that can reduce the number of vehicular trips.
Improving strategic connectivity	
Address pinch points on strategic roads	Measures focused on road improvements on the key strategic network within the region, focussed on improving journey time reliability and road safety. • Kingsway Dundee A90/A972 • Broxden and Inveralmond, A9 Perth • Craigforth, M9 Stirling • Grade separation of the A9 between Kier and Inverness (Kier, Auchterader) • Dualling of the A9 north of Perth • A82 Inverannan – Tarbert
Improve Rail Connectivity	Physical and operational improvements to reduce journey times and improve resilience of routes from and through the region to/from Edinburgh; Glasgow; Aberdeen; Inverness; including • Highland Mainline rail corridor enhancements

Table 2.3: Policies and Proposals in relation to the RTS3 2023 - 2033	
	• Perth – Dundee – Aberdeen rail corridor enhancements • Edinburgh/Glasgow – Perth/Dundee rail corridor enhancements
	Improved frequency and capacity of services to Edinburgh and Glasgow, including consideration of intermediate stations
	Improved resilience of West Highland line
Improve Connectivity to Freight Destinations	Improving journey time reliability to major freight destinations
	Improving freight capacity on the rail network
Improve Access to Airports	Promoting sustainable access between the region and Scotland's airports
Improving network resilience	
Improving Network Resilience	To maintain a transport network within the region which is resilient to disruptive events resulting from the increased risk of extreme weather and flooding, maintaining access for people and resources. • Winter maintenance • Diversion routes • Protection of vulnerable sites to flooding / landslips • Meet environmental standards in construction and maintenance • Blue-Green Infrastructure • Strategic road renewal for reliability, resilience and safety

3. SEA Process to Date

Table 3.1 below summaries the actions to date in the SEA process to develop this SEA Environmental Report.

Table 3.1: Steps in the SEA Process		
SEA Action	**Date**	**Comments**
Screening of the Tayside and Central Scotland Transport Partnership's Regional Transport Strategy 2023 -2033		Requirement for SEA agreed with all consultation authorities.
Scoping of the Tayside and Central Scotland Transport Partnership's Regional Transport Strategy 2023 - 2033, including consultation periods and detail to be included in the SEA Environmental Report.	Sep 2021 to Jan 2022	Responses received from all consultation authorities.
Environmental baseline established	Sep 2021 to Mar 2023	Updated content using suggestions from all consultation authorities and internal conversations. Based on the suggested methodology as set out in the SEA Scoping Report.
Relationships with other PPS and environmental objectives		
Environmental problems within the region established		
Assessment of likely evolution of the environment without PPS		
Alternatives considered. Selection of alternatives to be included in SEA assessment		
Assessment framework established		
Assessment of environmental impacts. Identification of negative impacts along with measures to mitigate any significant adverse impact.		
Monitoring framework established		

Preparation and consultation on the draft Regional Transport Strategy	Mar 2023 – Sep 2023	Responses received from all consultation authorities and a range of interested stakeholders. Members of the public also commented on the draft SEA Environmental Report.
Regional Transport Strategy finalised	tbc	
SEA Environmental Report prepared	tbc	Updated to take consultation responses into account and to reflect agreed content and structure of the final RTS.

Comments received from the Consultation Authorities on the Draft SEA Environmental Report are shown in Table 3.2 below, along with information on how these comments have been taken into account in the development of this final SEA Environmental Report.

INSERT TABLE 3.2 after close of consultation.

4. Environmental Context

4.1. Other Policies, Plans, Programmes and Sustainability Objectives

There are a number of plans, programmes, strategies and environmental protection objectives at international, national, regional and local level that set the wider policy context of the emerging RTS. These are listed in Table 4.1 below, with a more detailed analysis of the implications of each of these on the emerging RTS included in Appendix A, along with an identification of any constraints and/or targets that these impose on the emerging strategy.

Table 4.1 Relevant Environmental Policies, Plans and Programmes	
Plans, programmes, strategies, or environmental protection objectives at international level	
1	Kyoto Protocol to the United Nations Framework Convention on Climate Change (1992)
2	European Habitats Directive (92/43/EEC)
3	United Nations Framework Convention on Climate Change (1994)
4	UNECE (United Nations Economic Commission for Europe) Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-Level Ozone (1999)
5	European Emissions Standards for Vehicles
6	WHO Air Quality Guidelines (2005)
7	European Ambient Air Quality Directive (2008/50/EC)

Table 4.1 Relevant Environmental Policies, Plans and Programmes	
8	European Wild Birds Directive (2009/147/EC)
9	European Environmental Noise Directive (2000/14/EC)
10	Water Framework Directive (2000/60/EC)
11	European Biodiversity Strategy (2011)
12	EU White Paper, Roadmap to a Single European Transport Area – Towards a Competitive and Resource Efficient Transport System (2011)
13	United Nations Framework on Climate Change COP21 (2015) – Paris Agreement
14	National Emission Ceilings Directive (2016/2284/EU)
15	WHO Global Action Plan on Physical Activity - More Active People for a Healthier World (2018)
16	United Nations Framework on Climate Change COP26 (2021) – Glasgow Agreement
Plans, programmes, strategies, or environmental protection objectives at national level	
1	Wildlife and Countryside Act 1981 (as amended)
2	Conservation (Natural Habitats, &c.) Regulations 1994
3	Planning (Listed Buildings and Conservation Areas) Act (1997)
4	Air Quality (Scotland) Regulations (2000)
5	Air Quality (Scotland) Amendment Regulations (2002)
6	Water Environment and Water Services (Scotland) Act (2003)
7	Nature Conservation (Scotland) Act (2004)
8	Groundwater Protection Policy for Scotland: Environmental Policy 2004 (as amended)
9	Water Environment (Controlled Activities) (Scotland) Regulations (2005)
10	Choosing our Future: Scotland's Sustainable Development Strategy (2005)
11	Scottish Landscape Forum – Scotland's Living Landscapes. Report to Scottish Ministers (2007)
12	All Our Futures. Planning for a Scotland with an Ageing Population (2007)
13	Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007)
14	Scotland's Strategic Transport Projects Review (STPR[3]) (2008)
15	Scottish Soil Framework (2009)
16	Our Seas - A Shared Resource High Level Marine Objectives (2009)
17	Making the Links: Greenspace for a More Successful and Sustainable Scotland (2009)
18	Flood Risk Management (Scotland) Act (2009)
19	Scotland's Road Safety Framework to 2020 (2009)
20	Climate Change (Scotland) Act (2009)
21	Scotland's Zero Waste Plan (2010)
22	Marine (Scotland) Act (2010)
23	Designing Streets (2010)

[3] Scotland's Strategic Transport Projects Review 2 (STPR2) is currently being prepared by the Scottish Government. STPR2 is due to be published in 2022.

Table 4.1 Relevant Environmental Policies, Plans and Programmes	
24	Preventing Overweight and Obesity in Scotland: A Route Map Towards Healthy Weight (2010)
25	Air Quality Standards (Scotland) Regulations (2010)
26	Green Infrastructure: Design and Placemaking (2011)
27	Better Places for People and Nature (2012)
28	Creating Places: A Policy Statement on Architecture and Place for Scotland
29	Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles (2013)
30	Scottish Planning Policy (SPP) (2014)
31	Our Place in Time – Historic Environment Strategy for Scotland (2014)
32	Let's Get Scotland Walking - National Walking Strategy (2014)
33	National Planning Framework for Scotland 3 (NPF3[4]) (2014)
34	A Long-Term Vision for Active Travel in Scotland 2030 (2014)
35	Scottish Biodiversity Strategy (2015)
36	Scotland's Economic Strategy (2015)
37	Air Quality (Scotland) Amendment Regulations (2016)
38	Going Further: Scotland's Accessible Travel Framework (2016)
39	Scotland Route Study (2016)
40	Cycling Action Plan for Scotland 3 (2017-2020)
41	Clean Growth Strategy: Leading the Way to a Low Carbon Future (2017)
42	Scotland's 2018-2032 Climate Change Plan (2018)
43	A More Active Scotland – Scotland's Physical Activity Delivery Plan (2018)
44	National Low Emission Framework (NLEF) (2019)
45	Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations (2019)
46	Climate Change (Emissions Reduction Targets) (Scotland) Act (2019)
47	A Fairer Scotland for Older People: A Framework for Action (2019)
48	Transport (Scotland) Act (2019)
49	Scottish Government / COSLA - The Place Principle (2019)
50	Update to Scotland's 2018-2032 Climate Change Plan (2020)
51	Scotland's National Transport Strategy 2 (2020)
52	Connected & Autonomous Vehicles (CAVs) – A CAV Roadmap for Scotland (2020)
53	Scottish Government: The Big Climate Conversation - Findings from a Programme of Public Engagement on Climate Change (2020)
54	Scottish Government Infrastructure Investment Plan (IIP) 2021/22 to 2025/26
55	Cleaner Air for Scotland 2 – The Road to a Healthier Future (CAFS 2) (2021)
56	A Scotland for the Future: Opportunities and Challenges of Scotland's Changing Population
Plans, programmes, strategies, or environmental protection objectives at regional level	
1	Tay Cities Region Economic Strategy
2	Tay Cities Region Deal (CRD)

[4] The Fourth National Planning Framework for Scotland (NPF4) is currently being prepared by the Scottish Government. NPF4 is due to be published in 2022.

Table 4.1 Relevant Environmental Policies, Plans and Programmes	
3	Clackmannanshire and Stirling Cities Region Deal
4	TAYplan Strategic Development Plan
5	Interim Regional Spatial Strategies
6	Angus Local Development Plan
7	Dundee Local Development Plan
8	Perth and Kinross Local Development Plan
9	Stirling Local Development Plan
10	Ensuring a Choice in Access to New Development – Stirling's Supplementary Planning Guidance
11	Tactran Regional Transport Strategy 2015-2036
12	Angus Local Transport Strategy
13	Dundee Local Transport Strategy
14	Perth Transport Future
15	Stirling Local Transport Strategy
16	Tactran Regional Electric Vehicles (EV) Strategy
17	Tactran Regional Bus Information Strategy
18	Tactran Bus Strategy and Action Plan
19	Tactran Transport Carbon Assessment (Parts I and II)
20	Tactran Park and Ride Strategy
21	Stirling Parking Policy
22	Tactran Travel Information Strategy
23	Tactran Walking and Cycling Strategy
24	Angus Active Travel Strategy
25	Dundee Cycling Strategy
26	Stirling Active Travel Action Plan
27	Stirling Road Safety Plan
28	Stirling Towns, Villages and Rural Areas Transport Plan
29	Angus Core Paths Plan
30	Dundee Core Paths Plan
31	Perth and Kinross Core Paths Plan
32	Stirling Core Paths Plan

Following analysis of these various plans, policies, strategies and environmental protection objectives, it is clear that the emerging RTS 2023 - 2033 should:

- Seek to reduce inequalities and social exclusion
- Seek to improve road safety
- Improve the accessibility to the transport network, improving access to services and opportunities, ensuring residents benefit from a range of transport modes appropriate to their needs;
- Support sustainable development, including the development of a low carbon society;
- Reduce the emissions of carbon and greenhouse gases
- Suggest ways that the transport network should become more resilient to and able to adapt to the effects of climate change;

- Minimise the impact of transport on biodiversity, particularly on European-protected sites and species;
- Seek to improve air quality, in particularly with regards to the three declared Air Quality Management Areas (AQMs) in Crieff, Dundee and Perth and, support the Dundee LEZ;
- Ensure transport does not contribute to a further deterioration in noise quality in protected areas;
- Encourage measures that reduce the need to travel;
- Encourage densification of developments along public transport corridors and, around existing and proposed public transport stations and interchanges
- Ensure that conditions are in place to allow a widespread uptake of active and sustainable modes of transport, including walking, cycling, public transport, car sharing and the adoption of cleaner fuel vehicles, and promote the use of such modes to the people across the region;
- Seek to minimise the impacts of transport on the historic environment;
- Look to improve journey times and connectivity to, from and within the region by all modes of transport, enabling the efficient movement of freight throughout the region; and
- Support sustainable economic growth.

4.2. Relevant Current Environmental Context

The Environmental Assessment (Scotland) Act 2005 requires an outline of "the relevant aspects of the current state of the environment and the likely evolution thereof without the implementation of the Plan or Programme", and "the environmental characteristics of areas likely to be significantly affected" as this will provide the relevant environmental context within which the emerging RTS will operate, as well as the aims and objectives this context imposes on the Tayside and Central Scotland Regional Transport Strategy 2023 - 2033.

The detailed analysis of the baseline environmental data is presented in Appendix B. Key points to note are:

- There is the potential for habitat fragmentation resulting from roads and rail infrastructure schemes;
- Carbon dioxide (CO_2) emissions are fluctuating year on year despite the Scottish Government's reduction targets. Transport, however, remains a significant contributor to CO_2 emissions;
    - Angus' Carbon Footprint in 2017 was 5.6 tonnes CO2/capita. This compared to the Scottish average of 5.2 tonnes CO_2/capita. Dundee's Carbon Footprint was 4.5 tonnes CO_2/capita, Perth and Kinross' Carbon Footprint was 6.1 tonnes CO_2/capita and Stirling's Carbon Footprint was 5.5 tonnes CO_2/capita respectively. Transport was a significant contributor;

- There is a need for the transport network to become more resilient to, and able to adapt to the effects of, climate change;
- Parts of the region suffer from poor air quality. Three Air Quality Management Areas (AQMAs) have been declared in Crieff, Dundee and Perth, where regular exceedances of the annual mean limit value for nitrogen dioxide (NO_2) and particulate matter (PM_{10}) occur. A Low Emission Zone (LEZ) is being implemented in Dundee. While buses and HGVs contribute most to NO_2 emissions, cars and taxis contribute most to PM_{10};
- Water quality in the Tactran region is generally moderate, with, on average, quality of rivers being also classed as 'moderate';
- The Tactran region has a considerable network of sites important for biodiversity, cultural heritage and landscape which must be protected and, where possible, enhanced;
- Life expectancy is increasing across the region. An ageing population raises implications for maintaining mobility and accessibility into old age;
- The population of the region is projected to increase, putting increasing pressure on transport networks;
- Car ownership as well as car mileage across the region is increasing continuously, exacerbating pressure on the network and contributing to poor health in terms of pollution, air quality, noise and physical inactivity;
- Public road lengths have remained static in recent years despite the growing population and rising car ownership, thus contributing to congestion; and
- There have been limited improvements to public transport infrastructure, although this is forecast to change over the period of the emerging RTS.

The above, therefore, forms the context and baseline within which the Tayside and Central Regional Transport Strategy is being developed to address the issues pertinent to the region that are predominantly due to the distinctive urban-rural split and geography with geographic features presenting a barrier to movements of both people and goods.

The analysis of the baseline information indicates that the emerging RTS is likely to have more significant environmental effects on certain areas than others. This is due to the sensitivity of those areas in terms of international, national and local designation. Although other areas may not be designated the effects on those sites from the strategy could be cumulative. Appendix C contains information relating to the type and number of sites which are likely to be significantly affected.

4.3. Environmental problems, likely evolution of the environment without the emerging RTS and the possible role of the RTS in addressing those

The SEA Environmental Report is required to identify the environmental issues, trends or problems in the Tactran area, the likely evolution of the environment

without the emerging RTS, and the potential role of Tactran's new Regional Transport Strategy in addressing these. Environmental problems were identified through the above analysis of baseline data. The strategic environmental themes relevant to the emerging RTS3 and, the likely evolution with and without the Tayside and Central Regional Transport Strategy are summarised in Appendix D.

While many of the problems emerging from the analysis of baseline data are being addressed through Local Transport Strategies and other related plans, strategies and projects, and discussions would be ongoing at local level, there would be a significantly reduced level of coordination and cooperation between Angus, Dundee City, Perth and Kinross and Stirling on strategic transport issues without the Tayside and Central Scotland Regional Transport Strategy.

5. Assessment

5.1. Alternative RTS 'strategies'

The Environmental Assessment (Scotland) Act 2005 requires the identification of reasonable alternatives to the proposals presented in the Draft RTS and, meaningful comparisons made of the environmental implications of each.

It is envisaged that in the context of Regional Transport Strategies delivering the policies and proposals already identified in the Scottish Government's NTS2, it can be assumed that the only real reasonable alternative to the proposals within the emerging RTS is the Do-Nothing strategy.

On this basis, the Tayside and Central Scotland Transport Partnership does not propose to manufacture other alternatives simply for comparison in this Environmental Report but to consider the below two scenarios for the purposes of this assessment:

1. With RTS 2023 - 2033 scenario, which is the preferred option; and
2. Without RTS 2023 – 2033 scenario

This will allow to identify the impacts that the adoption and delivery of the emerging Regional Transport Strategy will have, compared to the current baseline.

5.2. Scoping In / Scoping Out of SEA Themes

In identifying the intended scope for the SEA assessment, the Tayside and Central Scotland Transport Partnership concluded that all SEA themes except for the Population and Human Health themes should remain 'scoped in' as part

of the SEA as transport has the potential to impact upon all of these[5]. The Consultation Authorities recommended to scope in all SEA themes and, subsequently, all SEA themes have been assessed in this Environmental Report.

5.3. SEA Assessment Framework

To assist in the assessment objectives / outcomes were identified for each SEA theme, along with questions to be considered when seeking to reach a conclusion on the environmental impact of each strand of the emerging RTS.

These objectives and questions were identified through an analysis of the environmental problems, baseline data and other relevant plans, programmes and environmental protection objectives, and finalised through consultation on the main issues with the relevant stakeholders.

The objectives against which the proposals set out in the emerging RTS will be assessed are presented in Table 5.1 below.

SEA Theme	Objective
Biodiversity, Flora and Fauna	• To protect, maintain and enhance biodiversity and ecosystem services, avoiding damage to or loss of designated and undesignated wildlife sites and protected species
Landscape	• To safeguard and enhance the character and diversity of the landscape and areas of valuable landscape
Cultural Heritage	• To protect and enhance historic and archaeological sites and other culturally and historically important features, landscapes and their settings.
Climate Change	• To reduce greenhouse gas emissions from transport • To adapt the transport network to the predicted effects of climate change
Air Quality	• To reduce all forms of transport related air pollution and improve air quality
Noise and Vibration	• Reduce noise and vibration associated with the transport network
Population, Human Health	• To improve quality of life and human health by promoting active lifestyles and increasing sustainable access for all to essential services (including healthcare), employment and the natural environment • To promote, invest in, build and maintain infrastructure to support the development of high-quality places

[5] Both the SEA themes 'Population' and 'Human Health' will be considered via the Integrated People Impact Assessment. However, the main issues relating to those will be presented within the identified relevant aspects of the current state of the environment in Appendix B.

Population	• To improve quality of life and human health by promoting active lifestyles and increasing sustainable access for all to essential services (including healthcare), employment and the natural environment
Geology and Soil	• To safeguard and improve soil quality, particularly high value agricultural land and carbon rich soil • To protect sites designated for their geological interest
Water	• To protect, maintain and improve the quality of water bodies and wetlands that could be directly or indirectly affected by transport infrastructure and protect against the risk of flooding
Material assets	• To promote and improve the sustainable use and management of the transport network • To reduce the use of natural resources

To assess the impacts of the proposals identified within the emerging RTS, the Tayside and Central Transport Partnership will use the scale as set out in Table 5.2.

Scale of Impact		Definition
++	Major positive impact	RTS contributes greatly towards achieving the objective
+	Minor positive impact	RTS contributes to achieving the objective
0	Neutral or no effect	RTS does not impact upon the achievement of the objective
-	Minor negative impact	RTS conflicts with the objective
--	Major negative impact	RTS greatly hinders / prevents the achievement of the objective
?	Uncertain	RTS can have a positive or negative impact but the level of information available at the time of assessment does not allow a clear judgement to be made

Tactran will use the SEA assessment matrix as illustrated in Table 5.3 below.

SEA Theme	**SEA Objective**	**Guiding Assessment Questions**
Biodiversity, Flora and Fauna	To protect, maintain and enhance biodiversity and ecosystem	Will the proposal cause disturbance or damage to any protected species or habitat?
		Will the proposal protect and enhance the quality and extent of

SEA Theme	SEA Objective	Guiding Assessment Questions
	services, avoiding damage to or loss of designated and undesignated wildlife sites and protected species	designated and undesignated sites?
		Will the proposal result in a greener public realm, resulting in a net gain of biodiversity?
Landscape	To safeguard and enhance the character and diversity of the landscape and areas of valuable landscape	Will the proposal protect and enhance the character and integrity of the distinctive landscapes and areas of valuable landscapes?
Cultural Heritage	To protect and enhance historic and archaeological sites and other culturally and historically important features, landscapes and their settings.	Will the proposal protect and enhance sites, features and areas of historical, archaeological and cultural value?
		Will the proposal help to improve the wider historic environment and sense of place?
		Will the proposal improve access to sites of historic and/or cultural interest?
Climate Change	To reduce greenhouse gas emissions from transport	Will the proposal help to reduce emissions of greenhouse gases and, help Scotland meet its emission targets?
	To adapt the transport network to the predicted effects of climate change	Will the proposal protect the Tactran region from climate change impacts and help the region function during extreme weather events?
		Will the proposal improve access to services during severe weather events?
		Will the proposal help those communities at risk during severe weather to recover?
Air Quality	To reduce all forms of transport related air pollution and improve air quality	Will the proposal help to reduce emissions of priority pollutants in line with Scottish and European standards (e.g., PM_{10}, NO_X, NO_2)?

SEA Theme	SEA Objective	Guiding Assessment Questions
		Will the proposal reduce the number of people exposed to poor air quality, particularly those in deprived / vulnerable communities and those groups at risk?
Noise and Vibration	Reduce noise and vibration associated with the transport network	Will the proposal reduce the levels of noise generated?
		Will the proposal reduce inequalities in exposure to ambient noise?
		Will the proposal reduce the number of people exposed to high levels of noise and vibration with the potential to cause health problems, particularly those in deprived / vulnerable communities and those groups at risk?
Human Health	To improve quality of life and human health by promoting active lifestyles and increasing sustainable access for all to essential services (including healthcare), employment and the natural environment	Will the proposal promote social inclusion and improve access to services, including healthcare, and opportunities, especially for those without a private car?
		Will the proposal reduce the likelihood of transport-related road accidents and casualties?
	To promote, invest in, build and maintain infrastructure to support the development of high-quality places	Will the proposal protect and enhance the character, integrity and liveability of the towns and villages and, rural communities across the region?
		Will the proposal improve the public realm by improving the public realm and access?
Population	To improve quality of life and human health by promoting active lifestyles and	Will the proposal promote social inclusion and improve access to key services and opportunities, especially for those without a private car?

SEA Theme	SEA Objective	Guiding Assessment Questions
	increasing sustainable access for all to essential services (including healthcare), employment and the natural environment	Will the proposal help to improve access to greenspaces both for recreational and health benefits?
		Will the proposal help to support an ageing population by providing appropriate transport choices to meet their needs?
Geology and Soil	To safeguard and improve soil quality, particularly high value agricultural land and carbon rich soil	Does the proposal cause soil sealing and compaction?
		Does the proposal result in the release of substances that could potentially contaminate the soil?
		Does the proposal ensure that possible contamination will be properly remediated and not impact upon on sensitive receptors, such as surface water and groundwater?
	To protect sites designated for their geological interest	Will the proposal protect and enhance sites, designated for their geological interest?
Water	To protect, maintain and improve the quality of water bodies and wetlands that could be directly or indirectly affected by transport infrastructure and protect against the risk of flooding	Does the proposal result in the release of water-borne pollution into watercourses, groundwater or reservoirs?
		Does the proposal increase the amount of surface water run-off into water bodies?
		Does the proposal physically impact on a watercourse?
Material assets	To promote and improve the sustainable use and management of the transport network	Will the proposal provide adequate transport choices that meet the needs of the people within the Tactran region?
	To reduce the use of natural resources	Does the proposal allow for the sustainable use of natural resources?

6. Assessment of Environmental Impacts

6.1. Assessment Summary

The objectives and policies developed for the Tayside and Central Scotland Transport Partnership 2023 – 2033 have been assessed against the SEA themes and the above questions that have been identified to conclude whether the impacts of these will be positive, negative, uncertain, mixed or neutral. Also considered were the reversibility or irreversibility of impacts, risks, and whether identified impacts are considered permanent or temporary, long-term, short-term or medium-term.

The objectives and policies set out for the preferred strategy were also assessed against a 'without LTS' scenario to compare the difference between the proposed approach against the current baseline.

The assessment does differ from the framework outlined in the Scoping Report. Firstly, when undertaking the assessments, it was judged too onerous and time consuming to separate objectives, policies and each proposal and to assess each of those separately.

Most policies have subsequently, been assessed along with full sets of proposals for the delivery of the Regional Transport Strategy, considering the impact of potential interventions for each proposal. If the potential interventions under one proposal were deemed to have the potential for different environmental impacts, they were assessed separately.

Although this differs from the approach outlined in the Scoping Report, it has not affected the integrity of the process. Assessments of the objectives and accompanying actions are robust and detailed, while also resulting in an assessment of a more manageable length.

It should be noted that much of the assessments are subjective as, in many cases, it proves difficult to predict the full spectrum of potential impacts of some interventions at this stage. Subsequently, the Environmental Report considers the likely impacts of achieving the objectives of policies, proposals and potential initiatives of the Regional Transport Strategy.

Potential negative impacts have been identified irrespective of whether the risks are relatively minor. They have been noted and mitigation measures have been proposed in Chapter 7.

Full assessment tables are included in Appendix E.

6.2. Cumulative Assessment

The Environmental Assessment (Scotland) Act 2005 requires that a cumulative effect assessment is undertaken. Such an assessment has subsequently been undertaken against each of the SEA themes.

The cumulative impacts have been assessed against the further development of the environment without the Tayside and Central Transport Partnership's Regional Transport Strategy 2023-2033 and, the net effects have been identified and reported in this Environmental Report.

Paragraph 6 of Schedule 3, of the Environmental Assessment (Scotland) Act 2005 requires that a cumulative effect assessment is undertaken. Such an assessment has therefore been undertaken against each of the SEA themes. The detailed assessment is presented in Appendix F.

The below provides a summary of the main points of the cumulative assessment, including:

- Delivery of the Regional Transport Strategy will have largely positive impacts on biodiversity, primarily seeking to reduce the number of indiscriminate car trips within the region and an increase in the use of sustainable modes of transport.
- Delivery of the Regional Transport Strategy 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 usage and which could lead to an unsightly urban and rural landscape.
- Delivery of the Regional Transport Strategy will have largely positive impacts on cultural heritage. Less car dominated public realms around historically and culturally important sites will result in improved setting of such sites, ensuring views are not blighted by parked cars, traffic or congestion. Proposals will also reduce emissions and pollution, which are known to cause deterioration and damage to ancient buildings and monuments, around such sites.
- Delivery of the Regional Transport Strategy will have largely positive impacts on both climate change and air quality, resulting from proposals to reduce the need to travel, to reduce reliance on the private car, to reduce the indiscriminate use of the car within the region in a shift to sustainable modes of transport. It aims to encourage more responsible car use.
- Delivery of the Regional Transport Strategy will have large positive impacts on noise and vibration due to the reduction in both car and HGV trips, with reduced noise levels due to reduced traffic levels.
- Delivery of the Regional Transport Strategy will have largely positive impacts on human health, resulting from proposals to enable and encourage more active travel and to reduce car use which will facilitate an increase in physical activity, improve air quality and reduce noise, thus improving the health and wellbeing of the population.

- Delivery of the Regional Transport Strategy will have largely positive impacts on the population, particularly in relation to accessibility and social inclusion. Proposals will raise awareness of, and enable travel by active travel and public transport, complemented by community and demand responsive transport services, car sharing and car clubs to ensure that all people can access the destinations and services and opportunities they need, and ensure that transport is convenient, safe and affordable.
- A largely neutral impact on soil and water, with some positive and negative impacts anticipated.
- Delivery of the Regional Transport Strategy will have largely positive impacts on material assets. This is largely due to proposed improvements and additions to the regional transport network which will encourage a more efficient use of the assets and will support the development of a fit-for-purpose, safe and sustainable transport network.

The Strategic Environmental Assessment, subsequently, anticipates that the environmental impact of delivering the Tayside and Central Scotland Transport Partnership's Regional Transport Strategy will be largely positive, in contrast to the 'without RTS' scenario which predicted the continued degradation of almost all environmental conditions represented in SEA, although some elements of the preferred option are anticipated to have negative impacts and will require mitigation and monitoring.

Positive impacts are predominantly permanent and long-term. Some of the negative impacts identified are temporary, others are more long-term and will require more thorough mitigation.

Proposed mitigation measures are detailed in Chapter 7 below.

None of the identified impacts have been judged as irreversible. Therefore, if the Regional Transport Strategy does not perform as anticipated due to any unforeseen circumstances, it will be possible in most instances to apply corrective measures to reverse undesirable transport trends within the Tactran region.

6.3. Compatibility Assessment

In addition to the cumulative assessment, a compatibility assessment was undertaken to make sure the objectives and policies of the Regional Transport Strategy are consistent and complementary.

The compatibility assessment is shown in Appendix G.

The compatibility assessment concluded that the objectives and policies are compatible with one another and are unlikely to result in conflict.

7. Mitigation Measures

The SEA Directive requires that, through mitigation measures, recommendations are made to prevent, reduce or compensate for any negative effects of implementing the PPS.

Table 7.1 below sets out the identified impacts arising from the delivery of the Regional Transport Strategy requiring mitigation and, summarises the proposed measures to mitigate the significant adverse effects.

SEA Theme	Impact requiring Mitigation	Proposed Mitigation Measures
Biodiversity	An increase in waterborne freight and shipping activities in Dundee, Montrose and Perth could cause disruption to aquatic habitats and species.	Continued monitoring of the conservation status of protected water habitats and species and corrective action applied should this be seen to be at risk.
	Works related to road construction and maintenance can result in temporary increased noise levels as well as other pollution. This can disrupt habitats and species.	Contractors will be required to ensure that they are completed in line with respective regulations. They will be required to complete the works swiftly, keep noise to a minimum and to make every effort to minimise the risk of pollution and any other adverse impacts on habitats and species resulting from such works.
	Potential disruption to habitats and species through an increase in cycle routes and increased number of people walking and cycling through such areas.	Any proposals running past or through areas known for protected or vulnerable species and habitats will be required to demonstrate how disruption will be minimised and to identify compensation measures to enhance biodiversity as part of scheme implementation.
Landscape	Unsightly traffic management and speed reduction infrastructure can lead to a more and more cluttered (urban) environments.	Tactran will encourage its constituent Councils and other relevant partners to keep signage and traffic management infrastructure to a minimum and to ensure they are sensitively sited. The Partnership will also encourage

		use of innovative designs where possible so that such infrastructure complements and integrates with the landscape rather than detracting from it.
	Flood defence infrastructure can impact on the appeal of streetscapes, townscapes and landscapes	Tactran will encourage its four constituent Councils to keep such infrastructure to a minimum and to ensure they are sensitively sited. The Partnership will also encourage use innovative designs where possible so that such infrastructure complements and integrates with the landscape rather than detracting from it.
Cultural Heritage	An increase in traffic management infrastructure can impact on the setting of such sites.	Tactran will encourage its four constituent Councils to keep such infrastructure to a minimum and to ensure they are sensitively sited. The Partnership will also encourage use innovative designs where possible so that such infrastructure complements and integrates with the landscape rather than detracting from it, especially in conservation areas and regarding buildings, monuments and structures of cultural and historical importance.
	Sites of cultural and historical importance within the region may suffer from unsightly surroundings and vibrations because of transport infrastructure improvement and maintenance works.	Contractors will be required to make every effort to preserve the setting of, and maintain access to, such sites. Contractors will be required to complete the works as soon as possible to minimise disruption while adhering to industry standards.
Climate Change	An increase in waterborne freight and subsequent shipping and activity around the harbours within the region could see an increase in relevant emissions.	The Regional Transport Strategy aims to offset any increase in shipping related emissions by a significant reduction in road freight movements within and through

		the region to ensure no net increase in carbon emissions. Tactran will continue to work with its constituent Councils and the freight industry through the Freight Quality Partnership as well as ports and harbours to identify ways of minimising the environmental impact of freight movements.
	Congestion and traffic displacement resulting from infrastructure improvement and maintenance schemes can result in increased emissions.	Contractors will be required to ensure that any works are completed as timely as possible. Diversionary signage will be used to signpost the most appropriate alternative routes.
Air Quality	An increase in waterborne freight and a respective increase in shipping and subsequent traffic around the Port of Dundee, currently within an AQMA.	Tactran will continue to work with Dundee and Forth Port Authority and the freight industry through the Freight Quality Partnership to identify ways of minimising the environmental impact of freight movements.
	Congestion and traffic displacement resulting from road improvement and maintenance schemes can result in increased pollution levels.	Contractors will be required to ensure that any works are completed as timely as possible. Diversionary signage will be used to signpost the most appropriate alternative routes.
Noise and Vibration	Increased noise and vibration resulting from an increased number of freight trains on the railway lines within the region.	Tactran will continue to work with Network Rail and the freight industry through the Freight Quality Partnership to identify ways of minimising the impact of freight movements.
	Increased noise and vibration resulting from road infrastructure improvement and maintenance schemes, albeit these are only short-short term.	Contractors will be required to ensure that any works are completed as timely as possible. Diversionary signage will be used to signpost the most appropriate alternative routes.
Human Health	A decline in air quality in the areas adjacent to Dundee, Montrose and Perth harbours,	The Regional Transport Strategy aims to offset any increase in shipping related

	resulting from increased waterborne freight and shipping.	emissions by a significant reduction in road freight movements within and through the region to ensure no net increase in carbon emissions. Tactran will continue to work with its constituent Councils and the freight industry through the Freight Quality Partnership to identify ways of minimising the environmental impact of freight movements.
	Increased congestion levels during road infrastructure maintenance works and the displacement of traffic in adjacent neighbourhoods, with road safety and health implications.	Contractors will be required to ensure that any works are completed as timely as possible. Diversionary signage will be used to signpost the most appropriate alternative routes.
Population	Delays and congestion resulting from improvement and maintenance schemes, albeit these are temporary term.	Contractors will be required to ensure that any works are completed as timely as possible. Diversionary signage will be used to signpost the most appropriate alternative routes.
Geology and Soil	Potentially negative impacts relate to the anticipated increase in ULEVs within the region and the subsequent need for charging infrastructure. ULEVs have a disproportionate negative impact on land use, both with regards to the materials used in ULEV making and to refuelling.	Tactran will continue to work with its constituent Councils through the Regional EV Steering Group to identify ways of minimising the environmental impact of the charging infrastructure.
Water	An increase in the volume of waterborne freight could lead to an increase in water pollution.	Continued monitoring. Water quality will be monitored, and mitigation measures applied if necessary.
	Road infrastructure maintenance and improvement works, and flood prevention schemes could result in the release of	Contractors will be required to adhere to industry standards to ensure that efforts are being made to minimise the risk of pollution resulting from such works.

	pollutants into watercourses during the construction phase.	

It is, subsequently, anticipated that any potential negative impacts resulting from the delivery of the Regional Transport Strategy can be successfully mitigated or offset by the means outlined above.

8. Monitoring

Following adoption of the Regional Transport Strategy and the Action and Delivery Plan and as delivery commences, Tactran will monitor the significant environmental impacts of the Regional Transport Strategy.

Monitoring will be undertaken biennially, and the results reported to the Tactran Board and published on the Partnership's website.

Monitoring of relevant indicators will help the Partnership assess:

- Whether the Regional Transport Strategy is achieving the set targets in terms of minimising the impact of transport on the environment;
- Whether there are any unintended impacts from delivering the Regional Transport Strategy that will require to be addressed; and
- Whether any other social or environmental changes are taking place that the Regional Transport Strategy may need to address or respond to, either now or in the coming years.

If the Regional Transport Strategy is not performing as anticipated, the Tayside and Central Scotland Transport Partnership will review the policies and identify policies that may require relaxing or strengthening.

Monitoring mechanisms in respect of likely environmental effects will relate to the SEA Framework provided in this Environmental Report and will be detailed within the Tactran Regional Transport Strategy SEA Post Adoption Statement.