

SEA Environmental Report: PART 1	
To: SEA_gateway@scotland.gsi.gov.uk or SEA Gateway Scottish Government Area 2 H (South) Victoria Quay Edinburgh EH6 6QQ	

SEA Environmental Report: PART 2	
An SEA Scoping Report is attached for:	Local Transport Strategy for Fife
The Responsible Authority is:	Fife Council

Please tick (✓) either Part 3 or 4 which relates directly to the specific PPS

SEA Environmental Report: PART 3	
Information on the scope of the environmental report is required by the Environmental Assessment (Scotland) Act 2005	✓
SEA Environmental Report: PART 4	
The PPS does not require an SEA under the Act. However, we wish to carry out an SEA on a voluntary basis. We accept that, because this SEA is voluntary, the statutory 28-day timescale for views from the Consultation Authorities cannot be guaranteed.	

SEA Environmental Report: PART 5	
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STRATEGIC ENVIRONMENTAL ASSESSMENT
ENVIRONMENTAL REPORT
Local Transport Strategy for Fife

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1 Introduction

1.1. Background

1.1.1. The Local Transport Strategy (LTS) for Fife (2006) is being reviewed and updated by Fife Council. Since 2006, there has been significant change and development across the economic, environmental, transportation and land-use sectors. Despite tightened resources available to deliver and maintain existing services, these changes call for transformational change.

1.1.2. The LTS is being developed following the recent publication of National Transport Strategy 2 and the enactment of the Transport (Scotland) Act 2019. It is also being developed in parallel with SESTRAN 2035 Regional Transport Strategy and the new Fife Council Local Development Plan.

1.1.3. The LTS will manage uncertainty of future transport issues by including scenario planning in the programme appraisal. It will comprise a vision, objectives and a programme of policies and projects to support the management of Fife's transport system. The Fife LTS has undertaken public consultation to gather feedback on people's transport challenges and opportunities.

1.1.4. This Strategic Environmental Assessment (SEA) has been undertaken to understand the potential environmental effects of the Fife LTS. This SEA Environmental Report documents the findings of the assessment and sets out the proposed next steps as the Fife LTS policy and options are developed.

1.2. Strategic Environmental Assessment (SEA)

1.2.1. SEA is a means for public bodies to judge the likely impact of plans, programmes and strategies (PPS) on the environment and to seek ways to minimise significant adverse effects and enhance potential benefits.

1.2.2. The Environmental Assessment (Scotland) Act 2005 (hereafter referred to as 'the Act') came into force on 20 February 2006. The Act delivers on the Partnership Agreement commitment to apply Strategic Environmental Assessment (SEA) to all public plans, programmes and strategies (PPS) in Scotland. The Act requires Fife Council to undertake a SEA of the Fife LTS, as concluded in the SEA Screening Letter.

1.2.3. A SEA seeks to identify potentially significant environmental effects at an early stage in the development of the PPS. Furthermore, it informs key decision makers at the earliest possible stage, in turn helping to design and implement focused and bespoke PPS.

1.2.4. Further to the identification of potentially significant environmental effects, a SEA seeks to highlight possible opportunities for enhancement. This helps to improve the overall effectiveness of the design and implementation of a PPS.

1.2.5. The SEA process also enhances the understanding of a plan's effect on the environment for decision-makers, stakeholders and the public, so they are better informed. Reporting requirements improve the transparency of decision making and potentially greater appreciation of the reasoning behind decisions.

1.2.6. A SEA Screening Letter was submitted 16 December 2021 to the Consultation Authorities, concluding a full SEA in accordance with the Act was to be undertaken. This view was agreed by the Consultation Authorities and submitted in writing in the SEA Screening Determination (26 January 2022).

1.2.7. The Scoping Report was submitted to the SEA Gateway on 28 April 2022 to provide sufficient information about the Fife LTS and its potential environmental effects to allow the Consultation Authorities to provide an informed view. Scoping Determination was received on 1 June 2022.

1.3. Purpose of the Environmental Report

1.3.1. The principal function of the SEA Environmental Report is to outline the findings from the environmental assessment.

1.3.2. The environmental assessment establishes the likely significant (positive and negative) environmental effects of the Fife LTS and potential reasonable alternatives.

1.3.3. The option development process is iterative by nature and evolves with new information and understanding of the environment. The SEA process is a means to inform key decision makers at the earliest possible stage of likely impacts on the environment. As part of this process, the assessment seeks to identify ways to minimise adverse effects and promote enhancement opportunities.

1.3.4. The Environmental Report is an opportunity to explain the journey of the SEA to date and the intended next steps, including:

- methodology for establishing baseline and assessment criteria
- objectives
- options
- consultation
- recommendations
- monitoring

1.3.5. This level of detail provides transparency for statutory consultees, stakeholders and the wider public, and gives greater appreciation of the reasoning behind decisions made by Fife Council.

2 Key Facts

Table 2.1: Key facts relating to the Fife LTS.

Responsible Authority	Fife Council
Title of PPS	Local Transport Strategy for Fife
Purpose of PPS	The Local Transport Strategy is a non-statutory document which provides strategic direction to improve transport outcomes in Fife. It comprises of objectives and a programme of interventions, providing a point of reference to guide the users, operators and managers of Fife’s transport system.
What prompted the PPS	<p>Fife Council is reviewing the LTS, which was last updated in 2006. The LTS is being developed following the recent publication of <i>National Transport Strategy 2</i> and the enactment of the <i>Transport (Scotland) Act 2019</i>. It is being developed in parallel with <i>SEStran 2035 Regional Transport Strategy and Local Development Plan 2</i>. There are opportunities to integrate with and influence these related projects.</p> <p>Transportation is a critical aspect in connecting people, businesses and communities. The identification of sustainable and effective measures which will help support short and long-term regeneration and recovery are critical to future proofing decisions making with regard to Fife’s transport network.</p>
Subject	Transport
Period covered by PPS	2023 - 2033
Frequency of updates	Ongoing
Area covered by PPS	Local Authority area of Fife
Summary of nature / Content of the PPS	<p>The previous Local Transport Strategy for Fife (2006-2026) was published in 2006 with a time horizon of 20 years. A number of measures identified within the document have been developed, including the Halbeath Park and Ride and the commitment to reopen the Leven Rail Link, which is now under-development.</p> <p>The LTS comprises a vision, objectives and a programme of policies and projects to support the management of Fife’s transport system.</p> <p>The new Local Transport Strategy considers the entire transport system, including walking, cycling, wheeling, public transport, private vehicles, placemaking, technology and behaviour change. It critically reviews the operational needs and maintenance of the existing transport system to ensure that it is suitably funded and fit for purpose as well as the opportunity for evolving change in line with policy and strategy.</p> <p>Engagement with local communities, stakeholders, partners, and transport providers is underway through a range of measures. Bus operators, including Stagecoach, Moffat and Williamson and others; ScotRail; Network Rail; Freight and Taxi Operators are key in providing input. Town centre, enterprise and business organisations are also helping to provide critical input to direct the Strategy.</p> <p>The Strategy will be crucial in supporting bids for external funding in areas of transformational change. It provides a key linkage to the</p>

	<p>climate change agenda; promotes active travel and other sectors attracting high levels of investment; and focuses on helping to regenerate mid-Fife and the major ongoing projects including the Leven Rail Link and Levenmouth Reconnected Programme.</p>
<p>Proposed/draft outcomes</p>	<p>In accordance with the Scottish Transport Appraisal Guidance, Fife Council has developed Transport Planning Objectives linked to outcomes, policies and actions, during the strategy development.</p> <p>The Fife LTS includes four priorities:</p> <ul style="list-style-type: none"> • Fair access to daily activities - Access to work, education, healthcare and leisure is crucial for our wellbeing and our economy. We will provide opportunities for all by focussing on walking, cycling, wheeling and public transport; supporting town centres; and integrating our built environment. • Safe and secure travel for all - Our transport network should be accessible and safe for all members of the community. We will focus on improving safety, security and access for all protected characteristics, especially disabled people and all genders. • Just transition to net zero - Fife Council has declared a climate emergency and has committed to a just transition to net zero by 2045. We will support the decarbonisation of the transport sector by encouraging sustainable travel and facilitating the roll-out of zero emission vehicles. • Transport network resilience - Safe and effective operation of our transport network is crucial to keeping Fife moving. We will focus on proactive maintenance and resilience in the face of supply chain disruption and extreme weather caused by climate change. <p>The vision for the Fife LTS is: <i>'Fife's transport system supports our communities with affordable, adaptable, seamless and sustainable access to all aspects of our daily life'.</i></p>

3 Strategic Action Context

3.1. Relationship with other Plans, Programmes and Strategies

3.1.1. There are a number of other strategies and plans internationally, nationally and regionally that the Fife LTS needs to be integrated with or will influence. The following lists indicate the primary related legislation and [Figure 3.1](#) shows a diagrammatic representation, although it does not include every one of the plans listed. [Appendix A](#) gives greater detail on the relevant policies.

International

- Gothenburg Protocol 1990
- Johannesburg Declaration 2002
- Kyoto Protocol 1997
- Paris Agreement 2015
- Rio Declaration 1992

National

- Cleaner Air for Scotland 2 2021
- Climate Change (Emissions Reduction Targets) (Scotland) Act 2019
- Climate Change Plan: Third Report on Proposals and Policies 2018 – 2032 (RPP3)
- Climate Change (Scotland) Act 2009
- Flood Risk Management (Scotland) Act 2009
- Historic Environment Policy for Scotland 2019
- Infrastructure Investment Plan for Scotland 2021-22 to 2025-26
- Land Reform (Scotland) Act 2016
- Land Use Strategy for Scotland 2021
- National Air Quality Strategy
- National Planning Framework 3 2014
- National Planning Framework 4 2022 (Draft)
- National Transport Strategy 2020
- Nature Conservation (Scotland) Act 2004
- Planning etc. (Scotland) Act 2006
- Reforming the Planning System
- Scottish Biodiversity Strategy 2004
- Scottish Canals Heritage Strategy 2013-38
- Scotland's Economic Strategy 2015
- Scotland's Forestry Strategy 2019 – 2029
- Scotland's Zero Waste Plan (2010)
- Scottish Government National Outcomes 2018
- Scottish Government Update to the Climate Change Plan 2018 - 32
- Scottish Planning Policy (SPP) 2020

- SEPA Scotland River Basin Management Plan 2
- Strategic Transport Projects Review 2 2022
- The Environmental Noise (Scotland) Regulations 2006
- The Government's Programme for Scotland 2020-21
- The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997
- Town & Country Planning (Scotland) Act 1997
- Transport (Scotland) Act 2019
- Water Environment Water Services (Scotland) Act 2003

Regional

- SEStran 2035 Regional Transport Strategy 2021 (currently in draft)

Local

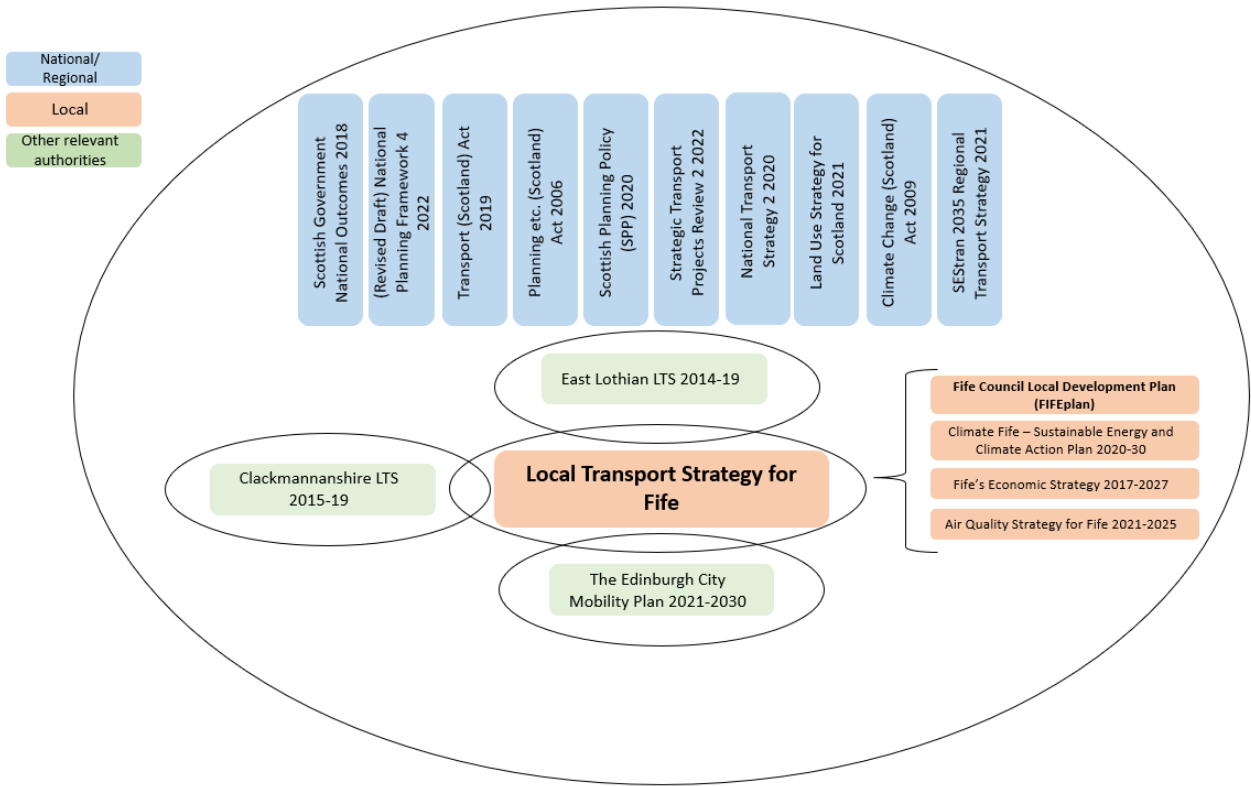
- Active Fife: A Strategy for Physical Activity and Sport 2021-2024
- Air Quality Strategy for Fife 2021-2025
- Climate Fife – Sustainable Energy and Climate Action Plan 2020-30
- Community Learning and Development Plan 2021-24
- Draft Local Housing Strategy 2022-2027
- Fairer Health for Fife: Fife's Health Inequalities Strategy 2015-20
- Fife Alcohol and Drug Partnership Delivery Plan 2020-2023
- Fife Child Poverty Action Report 2021/22
- Fife Children's Services Plan 2021-23
- Fife Community Justice Outcome Improvement Plan 2021-2022
- Fife Council's Contaminated Land Inspection Strategy 2019
- Fife Council Local Development Plan (FIFEplan) 2017
- Fife's Economic Strategy 2017-2027
- Fife Health and Social Care Strategic Plan 2019-2022
- Fife Local Biodiversity Action Plan 2013-18
- Fife's Shoreline Management Plan 2011
- Fife Structure Plan 2006-2026
- Plan for Fife 2017-2027
- Zero Waste Fife: Resource Strategy & Action Plan 2018 - 2028

Other relevant authorities

- Clackmannanshire Local Transport Strategy 2015-2019
- Dundee Local Transport Strategy 2000
- East Lothian Local Transport Strategy 2018-24
- The Edinburgh City Mobility Plan 2021-2030

3.1.2. [Appendix A](#) gives an overview of the key legislation, plans, programmes, policies and strategies listed above. Their content, where appropriate, has been used to inform the environmental objectives for the SEA of the Fife LTS. [Figure 3.1](#) illustrates the link between some of the strategic documents noted above and those contained within [Appendix A](#).

Figure 3.1: Interrelationship of the Fife LTS with Other Plans, Programmes and Strategies



4 Methodology

4.1. Introduction

4.1.1. This section outlines the methodology for the assessment and data gathering, as well as consultation and optioneering undertaken as part of the SEA process for the Fife LTS.

4.2. SEA

4.2.1. The Act requires the SEA Environmental Report to assess and evaluate the likely significant effects on the environment when implementing:

- The plan or programme
- Reasonable alternatives to the plan or programme

4.3. SEA Objectives for the Fife LTS

4.3.1. The SEA objectives (shown in [Appendix B](#)) were defined in consultation with the wider Fife Council environmental team and with statutory stakeholders including: the Scottish Environment Protection Agency (SEPA), Nature Scot and Historic Environment Scotland (HES). Both elements of consultation helped to produce an agreed set of focused and proportionate objectives that could be carried through the assessment process.

4.3.2. The SEA objectives and associated questions and indicators have been used to assess what, if any, effects (positive, negative or neutral) the Fife LTS will have on the environment in the context of what Fife Council are seeking to achieve.

4.3.3. The SEA objectives relate to the specific SEA environmental receptors and the evaluation will relate solely to the environmental issues that were felt to have the potential to significantly impact on the environment.

4.3.4. There is no statutory definition of 'significance' in the context of SEA. However, the Council considered the following issues in determining the significance of impacts (both positive and negative) on the environmental factors:

- Scale of impact (geographic)
- Duration of impact (short, medium or long term)
- Reversibility of impact
- Sensitivity of environment
- Potential for significant cumulative effect

4.4. Environmental Assessment

4.4.1. The environmental assessment has adopted a multi-stage approach that focuses on informing decision-makers. This methodology allows the SEA process to have an integral role in the options development through proportionate assessment and informed decisions. This included the following steps:

- Compatibility Assessment
A full SEA compatibility appraisal of the policy and options proposed against the environmental topics has been completed ([Appendix C](#)).
- Policy and Options Assessment
In addition to the compatibility appraisals, the SEA Objectives ([Appendix B](#))

have been used to assess the Fife LTS as a whole and include high level commentary on the likely effects, gaps and recommendations. Scores have then been updated based on the assumption that recommendations are adopted to inform decision makers.

For options such as new rail / road / ferry infrastructure, Fife Council have provided more detail on the scale, type and location. **Section 8** outlines the likely environmental impacts and recommendations have been included.

4.4.2. This SEA Environmental Report has considered and addressed the Scoping Opinion comments made by the Statutory Consultation Authorities.

4.5. Recommendations

4.5.1. Following the assessment of the policy and options, this report will set out a series of recommendation ‘packages’ for Fife Council to consider / action as part of the Fife LTS to meet their wider policy goals and environmental targets.

4.5.2. The ‘packages’ will consist of measures and recommendations to mitigate identified adverse impacts / gaps and enhancement interventions to improve the Fife LTS. The recommendations seek to deliver a diverse range of improvements that benefit the environment and communities that are directly and indirectly impacted by transport.

4.5.3. This approach is based on professional experience to best inform the decision makers when considering a local transport strategy.

4.6. Compatibility Matrix

4.6.1. The SEA matrix-based scoring system was used to assess the options against the SEA objectives and assess their overall compatibility as per the Scottish Government SEA guidance.

4.6.2. The guidance states that matrices are a reliable, systematic means of recording decisions and are often best positioned when assessing objectives, questions, or environmental criteria.

4.6.3. The scoring system adopted is shown in **Table 4.1**.

4.6.4. The types of effects are defined in **Table 4.2**.

Table 4.1: Compatibility Assessment Methodology

Rating	Meaning	Explanation
++	Very positive effect	The option will strongly contribute to the achievement of the objective.
+	Positive effect	The option will contribute to the achievement of the objective.
0	Neutral effect	The option will have no impact on the achievement of the objective.
-	Negative effect	The option will have a negative impact on the achievement of the objective.
--	Very negative effect	The option will have a strong negative impact on the achievement of the objective.
U	Unknown / dependent upon implementation	The effect of the option on the achievement of the objective is unknown or dependent upon implementation.

Table 4.2: Type of effects considered in the assessment

Type of Effect	Definition
Direct	Effects that occur as a direct result of a PPS implementation.
Secondary (or indirect)	Effects that do not occur as a direct result of a PPS implementation but rather secondary impacts that can reasonably be attributed to the plan.
Intra-cumulative (combined)	These occur where a single receptor is affected by more than one source of effect arising from different aspects of the Project.
Inter-cumulative	These effects occur because of a number of past, present or reasonably foreseeable proposed developments, which individually might not be significant, but when considered together could create a significant cumulative effect on a shared receptor and could include developments separate from and related to the Project.
Synergistic	Synergistic effects occur when two or more effects identified within an assessment, are capable of working together to create a new or greater effect or a significance of effect which does not arise from the individual effects.

4.7. SEA Activity to Date

Screening Report

- 4.7.1. The screening process identified the potential for significant effects as a result of potential infrastructure and behavioural changes from the Fife LTS. It was concluded that a full SEA should be undertaken.
- 4.7.2. This conclusion was supported by the statutory consultees and recorded in the SEA Screening Determination.

Scoping Report

- 4.7.3. A SEA Scoping Report sets out the current understanding of the baseline and the proposed methodology for assessment. This document was circulated to the statutory consultees and they were able to formally comment via a Scoping Opinion. This then shaped the approach to the assessment as reported in the SEA Environmental Report.
- 4.7.4. A SEA Scoping Report was submitted by Fife Council in April 2022.
- 4.7.5. A SEA Scoping Opinion from was received in June 2022.

4.8. Integration of Ecosystem Services

The Scottish Government SEA Guidance defines ecosystem services as a “strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way”. This concept is intrinsically linked to SEA and these principles have been adopted into the assessment of the Fife LTS to inform decision-makers about the interrelationships / interactions between people and the environment ([Figure 4.1](#)).

4.8.1. The principles of ecosystem services integrate and inform the environmental topics listed in the Act (2005) and provide greater understanding for decision-makers. Mitigation and enhancement measures using this approach will have a greater influence and inherently more sustainable when the design:

- considers natural systems
- accounts for services that ecosystems provide
- includes communities and people
- is proportionate and focused



Figure 4.1: Ecosystem Services Categories

4.8.2. To help identify ecosystem services specific to the Fife LTS, The Economics of Ecosystems and Biodiversity (TEEB) classification of ecosystem services has been used to inform potential significant effects of the Fife LTS. The classification system is based on the UN's Millennium Ecosystem Assessment, published in 2006, which assessed the consequences of ecosystem change for human well-being and created classifications of ecosystem services.

4.8.3. The classification can be divided into four Main Service Categories:

- **Provisioning Services:** (ecosystem services that describe the material or energy outputs from ecosystems)
- **Regulating Services:** (the services that ecosystems provide by regulating the quality of air and soil or providing flood and disease controls)
- **Habitat or Supporting Services:** (ecosystems providing living space and diversity of plants and animals)
- **Cultural Services:** (non-material benefits people obtain from contact with ecosystem services i.e. recreation, cultural, education, mental health, tourism)

4.8.4. Within the compatibility assessment, ecosystem services informed the assessment methodology and subsequent recommendations to reflect the main service categories (as described above) in the context of the baseline and the proposed future use.

4.8.5. Recommendations for the Fife LTS included in this report, employ the principles of ecosystem services in order to best meet the aims of the SEA. This included consideration of the following:

- where are the key areas where the service exists today?
- how are benefits created from this service?
- who benefits (directly or indirectly) from this service?
- is the services threatened and if so by who / what?
- what other services does the service interact or rely on (synergies)?

4.8.6. With this understanding, decision-makers will be better informed to pursue design solutions that have environmental, social and economic interrelating benefits.

4.9. Environmental Topics

4.9.1. The Scoping Report for the Fife LTS identified that all environmental topics under the Act were to be included in the environmental assessment:

- Population and Human Health
- Cultural Heritage
- Biodiversity, Flora and Fauna
- Soil and Geology
- Landscape
- Water Environment
- Air Quality
- Climatic Factors
- Material Assets

4.9.2. In addition to this list, noise and vibration has also been included in the environmental assessment. While not mentioned specifically in the Act, professional experience has shown that this is a pertinent topic for the local community and wider environment and deemed proportionate to the type and scale of the proposed Fife LTS.

4.10. Baseline

4.10.1. The following section outlines the main baseline environmental features and the overall objectives for the assessment. Where data was available, comparisons have been made to nearby regions and the national level. This is to help to inform the decision makers and stakeholders with comparable regional and national data to provide better context of the existing baseline of Fife.

4.10.2. An element of professional judgement has been used to ensure that the information provided is both relevant and representative to best inform decision makers.

Population and Human Health

4.10.3. This desk-based study gained an understanding of the community potentially impacted by the Fife LTS and potential future users of the transport network. Neighbouring statistics were included where possible to provide context to the statistical information, as well as national averages.

Scottish Index of Multiple Deprivation

4.10.4. Scotland is split into 6,976 small areas called data zones with roughly equal populations. Indicators to measure the different sides of deprivation in each data zone are looked at, like pupil performance, travel times to GP, crime, unemployment and many others. These 38 indicators of deprivation are grouped into seven types, called domains. The seven domains ([Figure 4.2](#) and [Table 4.3](#)) are combined into one SIMD, ranking each data zone from 1 (most deprived) to 6,976 (least deprived). This provides a measure of relative deprivation at data zone level and shows that one data zone is relatively more deprived than another but not how much more deprived. SIMD can be analysed by looking at data zones below a certain rank, such as the 10%, 15% or 25% most deprived data zones in Scotland.

Figure 4.2: SIMD Scale and Domains

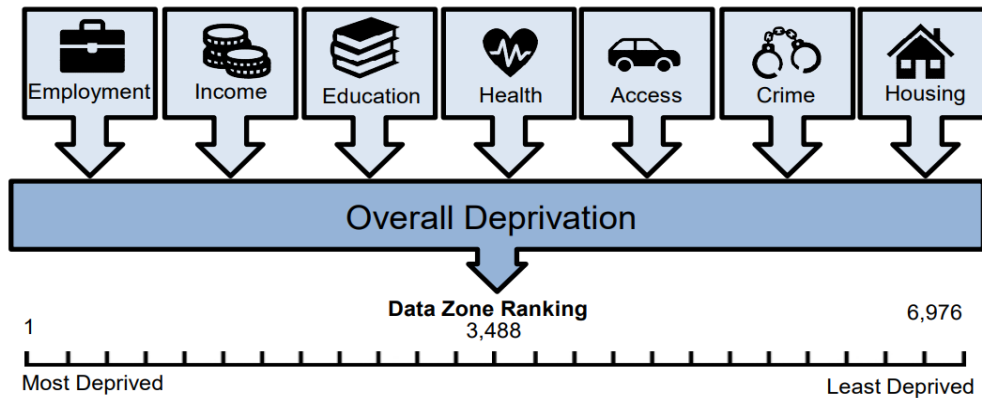


Table 4.3: SIMD Domain Categories and Related indicators

SIMD Domain	Related indicators
Employment	Percentage of working age people who are employment deprived and receive certain benefit.
Income	Percentage of people who are income deprived and receive certain benefits.
Education	School pupil attendance, attainment of school leavers, working age people with no qualifications, proportion of people aged 16-19 not in full time education, employment or training, proportion of 17-21 year olds entering full time education.
Health	Hospital stays related to alcohol and drug misuse, standardised mortality ration, emergency stays in hospital, proportion of population prescribed drugs for anxiety, depression or psychosis, proportion of live singleton births at low birth weight, comparative illness factor.
Access to Services	Average drive time to a petrol station, GP surgery, post office, primary school, secondary school and retail centre. Public transport travel time to a GP surgery, post office and retail centre.
Crime	Recorded crimes of violence, sexual offences, domestic housebreaking, vandalism, drugs offences and common assault per 10,000 people.
Housing	Percentage of people living in households that are overcrowded, percentage of people living in households with no central heating.

4.10.5. Population receptors considered include:

- private property and housing
- community land and assets
- development land and businesses
- agricultural land holdings
- walkers, cyclists and horse-riders (WCH)

Cultural Heritage

4.10.6. Designated built heritage assets were included in the baseline assessment in Fife. This approach informs the environmental assessment for both potential direct impacts (demolition / partial demolition) and indirect impacts (setting).

4.10.7. Key receptors included:

- Scheduled monuments
- World Heritage sites
- Listed buildings

Biodiversity, Flora and Fauna

- 4.10.8. The baseline was informed by a desk-based study to collect information on designated sites and records of protected and / or notable species within Fife.
- 4.10.9. The Fife Local Biodiversity Action Plan (LBAP) was reviewed to identify priority sites and species. This is separated into the following ecosystems:
- Upland habitats
 - Freshwater and wetland habitats
 - Lowland and farmland habitats
 - Woodland habitats
 - Marine and coastal habitats

Soils and Geology

- 4.10.10. Study area for relevant receptors and constraints within the extents of Fife and considered the following:
- geology designations and geological composition
 - contaminated land
 - historic coal mining sites
 - agricultural soil
 - peat and carbon rich soils

Landscape

- 4.10.11. The desk-based study considered Landscape Character Types and local landscape designations, the topography of Fife, and networks which may be of landscape and visual value.

Waste and Material Assets

- 4.10.12. The Zero Waste Fife: Resource Strategy and Action Plan was used to identify key waste management assets, including landfill sites in Fife. This exercise also informed how waste is managed in Fife.
- 4.10.13. Material assets were considered within Fife and this included key buildings and road infrastructure.

Water Environment

- 4.10.14. Watercourses within Fife were included in the baseline. Pluvial and fluvial flooding was investigated using the Scottish Environment Protection Agency (SEPA) Flood Hazard and Flood Risk Information maps.

Air Quality

- 4.10.15. Air Quality Management Areas (AQMA's) were considered within Fife.
- 4.10.16. In accordance with the Scottish Air Quality Objectives (AQO) data on existing NO₂, PM₁₀ and PM_{2.5} levels was collated using the Air Quality in Scotland database and

Scottish Transport Statistics. The information obtained from these sources is gathered from Cupar, Dunfermline, Kirkcaldy and Rosyth.

- 4.10.17. Existing sensitive receptors, including residential properties, schools and retirement homes, in proximity to the likely affected road network were considered qualitatively to help inform potential effects.

Climate

- 4.10.18. This section is considered in two subtopics:

- **Carbon**

Focused on the emissions and net zero targets of Fife Council

- **Climate Resilience and Adaptation**

Considers the climatic conditions and systems (e.g. flooding, heatwaves, etc) as well as the behavioural changes needed to take place in both natural and human systems to tackle the challenges of climate change

Carbon

- 4.10.19. Emissions figures were collated for Fife Council. This baseline was then compared to the UK government targets using the Tyndall Carbon Budget Tool. This tool was produced by the Tyndall Centre for Climate Change Research to help local authorities with their transition to net zero and beyond. More specifically, the Tyndall Carbon Budget Tool presents climate change targets across all the UK local authorities based on the commitments made at the UN Paris Agreement.
- 4.10.20. The Tyndall Carbon Budget Tool outlines Fife Council's current trajectory through calculating a percentage of what is considered to be Fife's 'fair' contribution to the UK's carbon budgets using existing carbon budgets (excluding aviation and shipping). This trajectory cannot be exceeded if aiming for net zero by 2045.
- 4.10.21. Emissions figures were collated for Fife Council. This baseline was then compared to other regions such as Edinburgh, Glasgow, Dundee and Aberdeen.

Climate Resilience and Adaptation

- 4.10.22. In line with the Intergovernmental Panel on Climate Change (IPCC) definitions of Climate resilience and adaptation, a policy review was conducted to assess how Fife Council is addressing the impacts of climate change moving forward, particularly through the provision of new developments.
- 4.10.23. The IPCC has recently defined climate resilience as the ability of social, economic and environmental systems to "maintain essential function, identity and structure, but also the capacity for transformation". With increasing pressure on existing resources and ecosystems from the impacts of climate change (temperature increases, flooding etc.) it is vital that all future developments / projects incorporate climate resilience measures within the planning and design phases. Climate adaptation is defined by the IPCC as "adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities".
- 4.10.24. Fife Council declared a Climate Emergency in 2019; Fife Council developed the "*Climate Fife: Sustainable Energy and Climate Action Plan*" to set out Fife's response to the climate emergency and the strategy for Fife. Fife Council set out action plans as they recognised that to "achieve the transformation needed over the next decade to tackle the climate emergency, a step-change needs to occur in attitudes, processes

and business as usual priorities across Fife Council and other community planning partners”.

4.10.25. Fife's Climate Action Plans detail mitigation and adaptation from 2021 to 2030 and are grouped into eight themes:

- Innovation & coordination
- Energy efficiency
- Low carbon energy
- Move, store & transform energy
- Sustainable transport
- Resource efficiency
- Carbon sequestration
- Adaptation

Noise and Vibration

4.10.26. Desk based study to identify Noise Management Areas or Candidate Noise Management Areas around Fife in line with the latest legislation; The Environmental Noise (Scotland) Regulations 2006, in response to the Directive 2002/49/EC of the European Parliament and of the Council on 25 June 2002.

4.10.27. Existing sensitive receptors, including residential properties, schools and retirement homes, in proximity to the likely affected road network were considered qualitatively to help inform potential effects.

Ecosystem Services

4.10.28. Baseline for ecosystem services has been informed by the environmental topics included above, in alignment with the SEA Scoping Opinion.

Assumptions and Limitations

4.10.29. A number of assumptions have been made during the SEA process, including that:

- information provided by third parties, including publicly available information, databases, and the planning policy context are correct at the time of publication
- an element of professional judgement has been used when comparing statistics / figures against one another leading to some minor inferences being made
- Specific locations have not been provided for majority of the policies and options so there has been a level of difficulty to interpret the likely significant effects on environmental receptors





5 Baseline Environmental Data

- 5.1.1. For the purposes of this SEA Environmental Report, a summary of baseline environmental information has been collated to inform the Strategic Environmental Assessment. **Table 5.1** summarises the main baseline environmental features and the overall objectives for the assessment.
- 5.1.2. An element of professional judgement has been used to ensure that the information provided is both relevant and representative.

Table 5.1: Proposed Environmental Baseline Data

Summary of baseline Environmental Data	Source of Data Collected
Population and Human Health	
<p>Fife has a total population of 374,130 (2020). Population projections forecast that the population of Fife will decrease between 2018 and 2028 to 371,430 (-0.1%).</p> <p>Key challenges faced in Fife include (as evidenced in the Plan for Fife 2017-2027¹):</p> <ul style="list-style-type: none"> National and international crisis' are having a greater than usual impact on local issues in Fife. This includes: the 2008 financial crisis, UK recession, welfare reform, Brexit and the uncertainty surrounding Scottish independence Demographic changes shows an ageing population and a declining population of working age people who support older generations; Population projections forecast Fife's 75+ population will increase by 31.1% by 2038 and there is projected to be a population change of -9.1% of under 16 age group in comparison to the 2018 population Progress in achieving community planning outcomes is in line with national averages rather than exceeding these numbers (such as jobs, income and health) Mid-Fife presents a number of challenges with some of the poorer outcomes in Scotland in regard to jobs, health and deprivation. This area generally has poorer connections with the rest of Fife and Scotland Population groups such as those in rural areas and those living in hard-pressed circumstances aren't doing as well as expected Inequality continues to be increasing and is a major risk Welfare reform is proving to be an impact on people in Fife and the local economy Fife faces economic challenges such as lower gross value added (GVA) than expected, very high unemployment in some areas and an expected challenging future economic climate Climate change and risks from flooding is the main major environmental concern / challenge <p>The Plan for Fife identified four priority themes for Fife and highlighted the main challenges faced:</p>	<p>Population, health and employment statistics</p> <ul style="list-style-type: none"> National Records for Scotland 2011 Scottish Census Nomis 2020 Local Authority Labour Market Profile <p>SIMD 2020</p> <p>Fife Council Allotment Strategy (2018-2023)</p> <p>Annual Cycling Monitoring Report 2020</p> <p>Central Scotland Green Network</p> <p>National Walking and Cycling Network (NWCN)</p> <p>Transport and Travel in Scotland</p> <p>Transport Scotland Covid-19 Transport Trend Data August-September 2021</p> <p>Fife Greenspace Audit Report 2010</p>

¹ https://our.fife.scot/_data/assets/pdf_file/0017/183320/Plan_for_Fife_2017_2027_June19-1.pdf

Summary of baseline Environmental Data	Source of Data Collected												
<p><i>Plan for Fife: Four priority themes.</i></p> <div style="display: flex; justify-content: space-around; text-align: center;"> <div data-bbox="239 380 351 537">  <p>Opportunities for All</p> <ol style="list-style-type: none"> 1. Fife has lower levels of poverty in line with national targets. 2. Educational attainment continues to improve for all groups. 3. Fife has reduced levels of preventable ill health and premature mortality across all communities. </div> <div data-bbox="446 380 558 537">  <p>Thriving Places</p> <ol style="list-style-type: none"> 4. Everyone has access to affordable housing options. 5. Fife's main town centres stand out as attractive places to live, work and visit. 6. All our communities benefit from low levels of crime and anti-social behaviour. 7. Every community has access to high quality outdoor, cultural and leisure opportunities. </div> <div data-bbox="654 380 766 537">  <p>Inclusive Growth and Jobs</p> <ol style="list-style-type: none"> 8. Economic activity and employment in Fife is improving faster than in the rest of Scotland. 9. Economic activity and employment in Mid-Fife is catching up with the rest of Fife and Scotland. 10. Fife has year on year increases in visitor numbers and tourism spend. </div> <div data-bbox="861 380 973 537">  <p>Community Led Services</p> <ol style="list-style-type: none"> 11. Our public services are more joined up and acting 'one step sooner'. 12. Fife's communities and individuals are more involved in local decision making and in helping to plan and deliver local services. </div> </div> <p>The Fife Strategic Assessment 2020 noted: <i>Fife's change in its population structure over the next 20 years will bring with it challenges and will have a negative impact on resources and service provision. Fife's reducing proportion of working age people, and rising numbers of older people (particularly over 75s) will have economic, financial and social implications in future years, and will see its dependency ratio increase from 60.4 in 2018, to 74.1 in 2038. This means that over the next 20 years, for every 100 people of working age, they will have to support another 14 mainly older people, than they do at present².</i></p> <p>The Fife Strategic Assessment also mentioned that the demand for social care services has been found to be one of the greatest challenges in Fife.</p> <p>19.8% of Fife's data zones are in the 20% most deprived for Scotland and 15.8% in the 15% most deprived for Scotland³ (SIMD 2020).</p> <p>Dunfermline and Levenmouth are two areas where deprivation has increased from 2016 to 2020.</p> <p>The statistics records indicate that Fife's deprived areas are becoming more deprived, with increasing concentrations of deprivation in 5% and 10% from 15% and 20% most deprived¹.</p> <p>General health statistics are in line with the national levels. See table: <i>Fife general health statistics.</i></p> <table border="1" data-bbox="239 1635 1053 1780"> <thead> <tr> <th>General Health</th> <th>Fife</th> <th>Scotland</th> </tr> </thead> <tbody> <tr> <td>Good and above</td> <td>81.8%</td> <td>82.2%</td> </tr> <tr> <td>Fair</td> <td>12.8%</td> <td>12.3%</td> </tr> <tr> <td>Bad and below</td> <td>5.4%</td> <td>5.5%</td> </tr> </tbody> </table> <p>The Annual Cycling Monitoring Report 2020⁴ showed the following trends in Fife:</p>	General Health	Fife	Scotland	Good and above	81.8%	82.2%	Fair	12.8%	12.3%	Bad and below	5.4%	5.5%	<p>Community wealth building in Fife – January 2021</p> <p>Fife Council</p> <p>Fife Strategic Assessment 2020</p> <p>Plan for Fife 2017 - 2027</p>
General Health	Fife	Scotland											
Good and above	81.8%	82.2%											
Fair	12.8%	12.3%											
Bad and below	5.4%	5.5%											

² https://know.fife.scot/__data/assets/pdf_file/0009/301311/Fife-Strategic-Assessment-2020.pdf

³ https://know.fife.scot/__data/assets/pdf_file/0026/177650/SIMD2020-KnowFife-Quick-Brief.pdf

⁴ <https://www.cycling.scot/mediaLibrary/other/english/8674.pdf>

Summary of baseline Environmental Data	Source of Data Collected								
<ul style="list-style-type: none"> • 55% of journeys were under 5km; 53.1% of all journeys in Scotland were under 5km • 34% of households have access to one or more bikes for private use; compared with 34.7% nationally • 28% of households have no access to a car for private use; this is a greater number than other typical Scottish regions with no city (Angus and West Lothian, circa 20%) but substantially smaller than adjacent areas with cities (Dundee and Edinburgh, over 40%) • 4.8% of employees cycle to work regularly; compared to 5.3% nationally • 3.9% of primary school and 0.5% of secondary school students cycle to school (2018); compared with 5.2% of primary school and 1.4% of secondary school pupils nationally <p>The percentage of economically active people living in Fife is 76.3% (July 2020-Jun 2021) with approximately 5.1% of the population being unemployed. This is compared with the Scotland average of economically active and unemployed which is 75.9% and 4.7% respectively. Of this total in Fife, 78.7% of men and 73.7% of females are economically active.</p> <ul style="list-style-type: none"> • The number of licensed vehicles in Fife at the end of 2019 was the second highest in Scotland with 213,500 vehicles (0.57 per capita); this is a greater number than other typical Scottish regions with no city (Angus: 0.65 per capita and West Lothian: 0.8 per capita) • 18,999 blue badges were issued in 2020; Fife had a greater number and percentage than neighbouring Scottish regions • 106,031 Concessionary fare passes issued to older and disabled people were issued in 2020; this is a greater number and percentage of the population than neighbouring Scottish regions <p>There are currently 222 Vacant and Derelict Land (VDL) sites within Fife with a total area of 730.37 hectares. Scotland has almost 11,000 hectares of vacant and derelict land⁵.</p> <p>Fife Greenspace Audit Key Findings:</p> <ul style="list-style-type: none"> • 41% of the Fife population had below average access to quality greenspace • 34% of the population were living in settlements with below average quantity of publicly useable greenspace • 40% of the 454 sites assessed were below reasonable quality with results linking this with deprivation (concentrations of poor-quality sites were in settlements of high deprivation) • 38% of the population living in settlements had below average access to neighbourhood greenspace • Of those visiting greenspaces, 46% visited on foot and 49% by car • The state of greenspace (accounting for quantity, quality and access to greenspace) is shown in the table below: <p><i>State of greenspace in Fife.</i></p> <table border="1"> <thead> <tr> <th>Area</th> <th>Quantity</th> <th>Quality</th> <th>Access</th> </tr> </thead> <tbody> <tr> <td>Glenrothes</td> <td>Very Good</td> <td>Good</td> <td>Good</td> </tr> </tbody> </table>	Area	Quantity	Quality	Access	Glenrothes	Very Good	Good	Good	
Area	Quantity	Quality	Access						
Glenrothes	Very Good	Good	Good						

⁵ <https://thinkhouse.org.uk/site/assets/files/2234/scot1020.pdf>

Summary of baseline Environmental Data				Source of Data Collected
SW Fife	Below average	Poor	Below average	
NE Fife	Below average	Good	Below average	
Cowdenbeath	Average	Very poor	Average	
Levenmouth	Average	Poor	Average	
Kirkcaldy	Good	Below average	Average	
Dunfermline	Average	Below average	Below average	
<p>The Community wealth building in Fife report⁶ is a people centred approach to local economic development by placing control of wealth into the hands of local people, communities, businesses and organisations. By encouraging the use of money, employment, land, property and financial assets in the right way, they can be used to generate wealth, jobs and opportunity for local people and give as many people as possible a stake in the local economy.</p> <p>The key topics related to this SEA are:</p> <ul style="list-style-type: none"> • Progressive procurement of goods and services • Socially productive use of land and assets <p>The Fife Core Paths Network has 400 paths throughout Fife including the coastal path⁷. The Fife Coastal path has an estimated 500,000 annual visits including 35,000 end to end users.</p> <p>Fife, alongside Highland and Glasgow, have the highest number of health walks available⁸ – in terms of health walk provision, the density tends to be higher in more deprived areas.</p>				
Cultural Heritage				
<p>1 UNESCO World Heritage Site; the Forth Bridge. The Forth Bridge is listed at Category 'A' as a building of special architectural or historic interest, giving the property the highest level of statutory protection. Its immediate surroundings are also protected by means of a suite of cultural and natural heritage designations.</p> <p>239 Scheduled Monuments across North East Fife, Mid Fife and Glenrothes, Kirkcaldy, Cowdenbeath and Dunfermline</p> <p>4,878 Listed Buildings</p> <p>48 Conservation Areas</p> <p>29 areas recognised as national Garden and Designed Landscape</p> <p>1 Historic Marine Protected Area: Campania Historic MPA</p> <p>1 Historic Battlefield: Battle of Inverkeithing II</p> <p>The historic environment provides elements of the transport infrastructure from bridges and stations to historic routes, canals and former branch railway lines</p>				<p>Historic Environment Scotland</p> <p>Fife Council</p> <p>United Nations Educational, Scientific and Cultural Organisation – World Heritage Site Designation</p> <p>Buildings at Risk register for Scotland</p>

⁶ <https://www.inclusivegrowth.scot/wp-content/uploads/2021/07/Community-Wealth-Building-in-Fife-Final-report-%E2%80%93-January-2021.pdf>

⁷ <https://scottishwildlifetrust.org.uk/news/fife-core-paths-network/>

⁸ "A health walk is a free, short, local walk and is suitable for most people, even if you have a long term health condition such as Dementia or Cancer" - <https://active.fife.scot/activities/activity-pages/fitness-and-wellbeing/walking>

Summary of baseline Environmental Data	Source of Data Collected
<p>that contribute to the active travel network. This includes the UNESCO World Heritage Site, the Forth Bridge, which acts as a highly significant, working element of transport infrastructure, connecting Fife and Edinburgh.</p>	
<p>Biodiversity, Flora and Fauna</p>	
<p>Special Areas of Conservation and Special Protection Areas are sited of European importance:</p> <p>2 Special Area of Conservation: Firth of Tay and Eden Estuary</p> <p>4 Special Protection Areas: Firth of Tay and Eden Estuary, Outer Firth of Forth and St Andrews Bay Complex, Cameron Reservoir and Firth of Forth.</p> <p>47 Sites of Special Scientific Interest (SSSI). This includes biological, geological and mixed SSSI types.</p> <p>3 Ramsar sites.</p> <p>133 Tree Preservation Order (TPO) Sites (consisting of approximately 2254 trees)</p> <p>7 Local Nature Reserves (LNR) which include Eden Estuary, Birnie and Gaddon Lochs, Coul Den, Gillingshill Reservoir, Dalbeath Marsh, Cullaloe, Torry Bay</p> <p>Fife had the following woodland statistics in 2013:</p> <ul style="list-style-type: none"> • The area of native woodland in Fife is 3,391ha, which is 18.2% of the total woodland area or 2.6% of the total land area of Fife • 478ha (3%) is classed as nearly native woodland • There are 403ha of woodland present on ancient woodland sites, of which 19% is native woodland 	<p>Regionally and locally designated sites.</p> <p>Registers of Scotland</p> <p>Scottish Ancient Woodland Inventory</p> <p>Native Woodland Survey of Scotland – Fife 2013</p> <p>Fife Council</p>
<p>Soil and Geology</p>	
<p>At present Fife Council has not designated any areas of land as contaminated land (no sites listed in the Contaminated Land Register) as defined in the Environmental Protection Act 1990. For the purposes of this SEA, brownfield sites, railway lines and yards, and industrial sites are assumed to be potential contaminated land sites.</p> <p>Fife has a rich industrial history. As a result of Fife Council's Contaminated Land Inspection Strategy, a number of former industrial sites have been remediated. The inspection strategy details:</p> <ul style="list-style-type: none"> • How Fife Council identified and prioritised which sites to investigate • Information about who is responsible for contaminated land and for making it safe • The contacts Fife Council uses for specialist advice <p><i>“Our Inspection Strategy not only fulfils the statutory duty on the Council to inspect our area for historical contamination: it also seeks to complement and enhance Fife Council’s wider policies aimed at regeneration and sustainability for people who live in, work in, or choose to visit, Fife.”</i></p> <p>There are 17 Geological Conservation Review (GCR) sites. These are sites that contain geological and geomorphological features of national and international importance.</p>	<p>Fife Vacant and Derelict Land Audit 2020</p> <p>NatureScot</p> <p>Fife Council</p> <p>British Geological Survey</p> <p>Fife’s Contaminated Land Inspection Strategy 2019</p>

Summary of baseline Environmental Data	Source of Data Collected
<p>Prime agricultural land is classed as 1,2 or 3.1 on the Agricultural Land Classification (ALC). The Scottish Government National scale land capability for agriculture map provides information on the ALC of Fife. Trends show that towards the coast of Fife, more prime agricultural land is present, with some prime agricultural land present in central Fife.</p> <p>Peatland and carbon rich soils are identified in Fife; the three largest peatland sites being located in Lomond Hills, Moss Morran (South of Cowdenbeath), Star Moss (North East of Glenrothes).</p>	
Landscape	
<p>There are 21 Local Landscape Areas (LLA) within Fife including: Tay Coast, Tents Muir Coast, The Links, St Andrews to Fife Ness, Craigtoun, Dura Den, Tarvit and Ceres, Largo Law, East Neuk, Lomond Hills, Loch Leven and Lomond Hills, Loch Ore and Benarty, Cleish Hills, Wemyss Coast, Cullaloe Hills and Coast, Letham Hill, Ferry Hills, Inchkeith, Inchcolm, Southwest Dunfermline, Upper Forth.</p> <p>The topography of Fife is generally low lying, with exception to areas of: Lomond Hills, Ballingry (Loch Ore and Benarty) and Cleish Hills ⁹.</p> <p>The Landscape Character Assessment identified Fife to consist of predominantly “Lowland” and “Upland and Hills” landscape types; some areas are classified as “Valleys / Straths / Glens /Voes”.</p> <p>Fife has the “Fife Coastal Route” which has: “<i>show-stopping scenery and unique heritage</i>”¹⁰. It has a distance of 77 miles and runs along the coast, avoiding main roads and motorways. It takes in the historic Kingdom of Fife and rather neatly, it starts and ends on bridges crossing two of Scotland’s greatest rivers: the Firth of Forth and the Tay.</p> <p>The Central Scotland Green Network incorporates Southern parts of Fife and aims to restore and improve rural and urban landscapes across Scotland.</p>	<p>UK Government Local Landscape Areas – Scotland</p> <p>Central Scotland Green Network</p> <p>Scotland Environment Map</p>
Water Environment	
<p>The overall condition of surface waters in Fife (SEPA RBMP data 2020) are:</p> <ul style="list-style-type: none"> • Good – 10 • Moderate – 24 • Poor – 19 • Bad – 2 <p>The water bodies measured by SEPA are: “<i>part of or a whole: river; loch; estuary; coastal area; or groundwater.</i>”</p> <p>The overall condition of groundwaters in Fife are:</p> <ul style="list-style-type: none"> • Good – 9 • Poor – 6 <p>Fife predominantly consists of moderately productive aquifers to the south and low productivity aquifers to the north (which flow virtually all through fractures and discontinuities) with one highly productive aquifer (with significant intergranular flow) running through central Fife.</p> <p>A summary of characteristics for each type of aquifer is:</p>	<p>SEPA – RBMP Data</p> <p>SEPA – Hydrogeology data – aquifer classification¹¹</p> <p>Fife Local Biodiversity Action Plan</p> <p>British Geological Survey</p> <p>Scotland National Geodiversity Framework</p>

⁹ <https://en-gb.topographic-map.com/maps/snn8/Fife/>

¹⁰ <https://www.scottscastles.com/blog/fife-coastal-route/>

¹¹ <https://map.environment.gov.scot/sewebmap/>

Summary of baseline Environmental Data	Source of Data Collected
<ul style="list-style-type: none"> • Highly productive - Regionally important multi-layered aquifer with yields of up to 10 L/s in lower part and up to 40 L/s in upper part • Moderately productive - Regional, cyclic multi-layered aquifer with low yields from sandstones. Higher yields where mined but poor-quality water, including high iron and fluoride • Low productivity - small amounts of groundwater in near surface weathered zone and secondary fractures, rare springs yielding up to 2 L/s <p>The Scotland National Geodiversity Framework has identified the Devonian sandstones in Fife as one of the most important and productive bedrock aquifers. Bedrock aquifers are where groundwater flow is through fractures.</p> <p>The Fife Local Biodiversity Action Plan identified the following as key pressures on the freshwater and wetland ecosystem:</p> <ul style="list-style-type: none"> • Agriculture • Woodland • Development • Water abstraction • Wastewater management • Fish farming and aquaculture • Invasive non-native species • Recreation and tourism • Climate change <p>Fife's priority freshwater and wetlands habitats include: Lowland fens, lowland raised bogs, rivers, ponds and reedbeds. Priority freshwater and wetland species include water vole and great crested newts.</p> <p>SEPA Flood maps show areas which are likely to flood from rivers, the sea and surface water. This informs development areas and the likelihood of risk from flooding. The flood map does not show in the future probability of flooding over the lifespan of the Fife LTS.</p>	
Air Quality	
<p>There are currently two Air Quality Management Areas (AQMA) declared within Fife:</p> <ul style="list-style-type: none"> • Bonnygate (Cupar)– declared in 2008, monitoring Nitrogen dioxide (NO₂) and Particulate Matter (PM₁₀ and PM_{2.5}) • Appin Crescent (Dunfermline) – declared 2011, monitoring Nitrogen dioxide (NO₂) and 2012 for PM₁₀ (PM_{2.5} is also monitored) <p>As a result of the measures implemented through Fife's action plans there have been improvements in the air quality within both AQMAs. The levels of NO₂ are now below the air quality objective (and have been for a number of years) and both AQMA declarations have been amended for fine particles only (PM₁₀). However, Fife Council continues to monitor both NO₂ and PMs.</p> <p>The following two areas have air quality monitoring sites:</p> <ul style="list-style-type: none"> • Fife Kirkcaldy - monitoring Nitrogen dioxide (NO₂) and Particulate Matter (PM₁₀ and PM_{2.5}) • Fife Rosyth - monitoring Nitrogen dioxide (NO₂) and Particulate Matter (PM₁₀ and PM_{2.5}) 	<p>Scottish National Air Quality Strategy</p> <p>DEFRA AQMA data</p> <p>Scottish Transport Statistics 2020¹⁴</p>

¹⁴ <https://www.transport.gov.scot/media/49177/scottish-transport-statistics-2020-publication-final-version.pdf>

Summary of baseline Environmental Data	Source of Data Collected																																																															
<p>Note: Some of the following records are during the COVID-19 pandemic and included periods of national lockdown; thereby influencing the travel/work patterns and total emissions. In addition, not all 2019 data was published due to COVID-19 pandemic.</p> <p>In 2019 and 2020, all concentrations in both AQMAs were below the annual NO₂ objectives of 40 µg/m³.</p> <p><i>Annual mean NO₂ monitoring results in Fife.</i></p> <table border="1" data-bbox="280 564 1027 757"> <thead> <tr> <th colspan="3">Nitrogen dioxide (NO₂) monitoring</th> </tr> <tr> <th></th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Cupar</td> <td>23.6 µg/m³</td> <td>20.9 µg/m³</td> </tr> <tr> <td>Dunfermline</td> <td>20.5 µg/m³</td> <td>(Less than a 75% data capture)</td> </tr> <tr> <td>Kirkaldy</td> <td>15.8 µg/m³</td> <td>12.2 µg/m³</td> </tr> <tr> <td>Rosyth</td> <td>21.5 µg/m³</td> <td>15.4 µg/m³</td> </tr> </tbody> </table> <p>In 2019 and 2020, all concentrations in both AQMAs were below the annual PM₁₀ objectives of 18µg/m³.</p> <p><i>Annual mean PM₁₀ monitoring results in Fife.</i></p> <table border="1" data-bbox="280 887 1027 1079"> <thead> <tr> <th colspan="3">PM₁₀ monitoring</th> </tr> <tr> <th></th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Cupar</td> <td>14.6 µg/m³</td> <td>11.3 µg/m³</td> </tr> <tr> <td>Dunfermline</td> <td>11.2 µg/m³</td> <td>8.5 µg/m³</td> </tr> <tr> <td>Kirkaldy</td> <td>11.6 µg/m³</td> <td>9.0 µg/m³</td> </tr> <tr> <td>Rosyth</td> <td>10.0 µg/m³</td> <td>9.1 µg/m³</td> </tr> </tbody> </table> <p>In 2019 and 2020, all concentrations in both AQMAs were below the annual PM_{2.5} objectives of 10µg/m³.</p> <p><i>Annual mean PM_{2.5} monitoring results in Fife.</i></p> <table border="1" data-bbox="280 1207 1027 1400"> <thead> <tr> <th colspan="3">PM_{2.5} monitoring</th> </tr> <tr> <th></th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Cupar</td> <td>7.5 µg/m³</td> <td>5.6 µg/m³</td> </tr> <tr> <td>Dunfermline</td> <td>6.4 µg/m³</td> <td>4.8 µg/m³</td> </tr> <tr> <td>Kirkaldy</td> <td>6.7 µg/m³</td> <td>5.0 µg/m³</td> </tr> <tr> <td>Rosyth</td> <td>5.9 µg/m³</td> <td>5.1 µg/m³</td> </tr> </tbody> </table> <p>The World Health Organisation has updated its air quality guidelines. At time of writing, these guidelines are not legally binding but are a very ambitious and have concentrations significantly lower than current Scottish, UK and European guidelines. The lifespan of the Fife LTS will need to monitor and reflect evolving guidance. The current Scottish air quality guidelines are included for reference.</p> <p><i>WHO updated guidelines</i></p> <table border="1" data-bbox="185 1655 1125 1942"> <thead> <tr> <th>Pollutant</th> <th>Updated Air Quality Guideline (WHO) (2021)¹²</th> <th>Scottish Air Quality Guidelines¹³</th> </tr> </thead> <tbody> <tr> <td>PM_{2.5}</td> <td>Concentrations of 5 µg/ m³ annual mean, 15 µg/ m³ 24-hour mean and should not exceed more than 3-4 days per year.</td> <td>10 µg m-3 (limit) annual mean</td> </tr> <tr> <td>PM₁₀</td> <td>Concentrations of 15 µg/m³ annual mean, 45 µg/m³ 24-hour mean.</td> <td>50 µg m-3, not to be exceeded more than 7 times a year (24-hour</td> </tr> </tbody> </table>	Nitrogen dioxide (NO ₂) monitoring				2019	2020	Cupar	23.6 µg/m ³	20.9 µg/m ³	Dunfermline	20.5 µg/m ³	(Less than a 75% data capture)	Kirkaldy	15.8 µg/m ³	12.2 µg/m ³	Rosyth	21.5 µg/m ³	15.4 µg/m ³	PM ₁₀ monitoring				2019	2020	Cupar	14.6 µg/m ³	11.3 µg/m ³	Dunfermline	11.2 µg/m ³	8.5 µg/m ³	Kirkaldy	11.6 µg/m ³	9.0 µg/m ³	Rosyth	10.0 µg/m ³	9.1 µg/m ³	PM _{2.5} monitoring				2019	2020	Cupar	7.5 µg/m ³	5.6 µg/m ³	Dunfermline	6.4 µg/m ³	4.8 µg/m ³	Kirkaldy	6.7 µg/m ³	5.0 µg/m ³	Rosyth	5.9 µg/m ³	5.1 µg/m ³	Pollutant	Updated Air Quality Guideline (WHO) (2021) ¹²	Scottish Air Quality Guidelines ¹³	PM _{2.5}	Concentrations of 5 µg/ m ³ annual mean, 15 µg/ m ³ 24-hour mean and should not exceed more than 3-4 days per year.	10 µg m-3 (limit) annual mean	PM ₁₀	Concentrations of 15 µg/m ³ annual mean, 45 µg/m ³ 24-hour mean.	50 µg m-3, not to be exceeded more than 7 times a year (24-hour	
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¹² <https://apps.who.int/iris/bitstream/handle/10665/345329/9789240034228-eng.pdf?sequence=1&isAllowed=y>

¹³ <https://www.scottishairquality.scot/air-quality/standards>

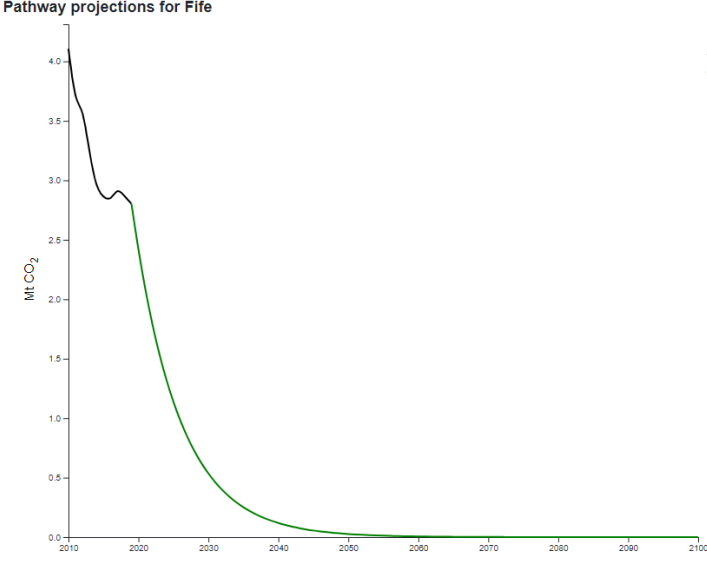
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		mean), 18 µg m-3 annual mean																					
Ozone (O₃)	Concentrations of 100 µg/m ³ 8-hour mean.	100 µg m-3 not to be exceeded more than 10 times a year (8 hourly running)																					
Nitrogen dioxide (NO₂)	Concentrations of 10 µg/m ³ annual average and 25 µg/m ³ 24-hour mean.	200 µg m-3 not to be exceeded more than 18 times a year (1-hour mean). 40 µg m-3 (annual mean).																					
Sulphur dioxide (SO₂)	Concentrations of 40 µg/m ³ 24-hour mean.	350 µg m-3, not to be exceeded more than 24 times a year (1-hour mean). 125 µg m-3, not to be exceeded more than 3 times a year (24-hour mean). 266 µg m-3, not to be exceeded more than 35 times a year (15-minute mean)																					
Carbon monoxide (CO)	Concentrations of 7 µg/m ³ 24-hour mean.	10.0 mg m-3 (running 8-hour mean)																					
<p>In 2019, on a nation scale, 0 sites in Scotland exceeded the PM₁₀ annual objective, with 1 site exceeding the daily mean objective of 50µg/m³ (Renfrew Johnstone exceeded 14 times). Five sites exceeded the annual mean objective for NO₂ (two in Dundee, two in Edinburgh, one in Glasgow), with 74 sites exceeding NO₂ annual mean objectives in 2018. In 2020, no NO₂, PM₁₀ or PM_{2.5} objectives were exceeded.</p>																							
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<p>The transport sector was the third highest emitting sector in Fife following Industry (industry electricity, industry gas, industry ‘other fuels’, large industrial installations and agriculture) and domestic (domestic electricity, gas and ‘other fuels’), as shown in Table 5.2.</p> <p><i>Fife Council emissions breakdown (2019):</i></p> <table border="1"> <thead> <tr> <th>Sector</th> <th>Emissions (ktCO₂)</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Domestic</td> <td>606.4</td> <td>23.7%</td> </tr> <tr> <td>Transport</td> <td>586.2</td> <td>22.9%</td> </tr> <tr> <td>Industry</td> <td>1063.9</td> <td>41.6%</td> </tr> <tr> <td>Commercial</td> <td>129.9</td> <td>5.1%</td> </tr> <tr> <td>Public Sector</td> <td>56.0</td> <td>2.2%</td> </tr> <tr> <td>Land use, land use change and farming</td> <td>116.1</td> <td>4.5%</td> </tr> </tbody> </table>		Sector	Emissions (ktCO ₂)	Percentage	Domestic	606.4	23.7%	Transport	586.2	22.9%	Industry	1063.9	41.6%	Commercial	129.9	5.1%	Public Sector	56.0	2.2%	Land use, land use change and farming	116.1	4.5%	<p>Department of Transport¹⁷</p> <p>Climate Action Plan</p> <p>Fife Council</p> <p>University of Manchester – Tyndall Carbon Budget</p>
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¹⁷ <https://roadtraffic.dft.gov.uk/local-authorities/32>

Summary of baseline Environmental Data	Source of Data Collected
<p style="text-align: center;">Total 2558.6</p> <p>It is estimated that 1.47 billion vehicle miles were travelled on roads in Fife in 2020*. This is compared with 1.92 billion in 2019, 1.90 in 2018 and 1.93 in 2018. In 2021, 1.69 billion vehicle miles were travelled on roads in Fife, which indicates a trend returning to pre-covid levels.</p> <p><i>*COVID-19 restrictions were introduced for significant periods in 2020 and this had an impact on total vehicle miles.</i></p> <p>Climate Fife: Sustainable Energy and Climate Action Plan sets out Fife's response to the climate emergency, including the strategy for Fife.</p> <p>Fife Council declared a Climate Emergency in September 2019¹⁵. By declaring a climate emergency, this acknowledges that there is a limited time to reduce carbon emissions to stop catastrophic climate change. Big changes in society are needed, but responding to the climate emergency presents an opportunity for positive change, including:</p> <ul style="list-style-type: none"> • better health and wellbeing • improved air quality • economic savings for individuals and businesses • new jobs • less congestion on our roads • cleaner and greener places <p>Fife spends an estimated £464million annually on gas, electricity, and diesel. Fife also has an aim of carbon reduction in line with Scottish Government and Climate Emergency targets of 75% by 2030 and net zero emissions by 2045.</p> <p>Fife has also developed the Low Carbon Fife Policy (Policy 11) to help meet carbon targets of reducing 75% of carbon emissions by 2030 and 80% by 2050.</p> <p>Transport emissions in Fife contribute to 2% of Scotland's entire carbon emissions, with half of all journeys in Fife being short enough to be walked, cycled or wheeled within 15 minutes. In 2019, CO₂ emissions related to transport was 586.2 kt. For comparison, City of Edinburgh, Glasgow City, Dundee City and Aberdeen measured 690.0kt, 773.2kt, 177.2kt and 328.5kt respectively.</p> <p>Dumfries and Galloway (545.6kt), South Lanarkshire (675.9kt), North Lanarkshire (780.5kt), Perth and Kinross (562.2kt), the Highlands (580.7kt) and Aberdeenshire (632.0kt) were other high emitting local authorities in comparison with Fife.</p> <p>Figure 5.1 shows Fife's progress and contribution to delivering the Paris Agreement's commitment to staying "well below 2 °C and pursuing 1.5 °C" global temperature rise¹⁶.</p>	

¹⁵ <https://www.fife.gov.uk/kb/docs/articles/environment2/climate-change,-carbon-and-energy>

¹⁶ <https://carbonbudget.manchester.ac.uk/reports/S12000047/>

Summary of baseline Environmental Data	Source of Data Collected
<p><i>Energy related CO₂ only emissions pathways (2010-2100) for Fife premised on the recommended carbon budget [source: University of Manchester, Tyndall Carbon Budget Tool]</i></p>  <p>The projected figures indicate the need for Fife to implement a rapid and stringent decarbonisation action with immediate effect to have a chance at staying within the recommended carbon budget. This includes decision making on development and the Fife LTS.</p> <p>Under the conditions modelled by the Tyndall Climate institute, from 2020 onwards, Fife Council would need to reduce their CO₂ emissions by 14% per year to meet the regional carbon budget and achieve net zero by 2050. This target informs the baseline for future emissions as a result of Fife LTS.</p>	
<p>Material Assets</p> <ul style="list-style-type: none"> • Fife has an estimated public road length of 2,571km. The total estimated road length in Scotland is 56,722km • In 2019, Fife has an estimated traffic volume 3,123 million vehicle km when looking at traffic on all roads. The total for Scotland was 48,714 million vehicle km, Fife was the fourth highest region • Petrol and diesel consumption of road vehicles was 189.1 thousand tonnes in 2018 in Fife • Cross border rail passenger journeys (starting or ending in Scotland) was estimated at 264,000 in 2018-19 (0.71 per capita); this is a greater number than other typical Scottish regions with no city (Angus: 0.36 per capita and West Lothian: 0.03 per capita) • Rail passenger journeys in Fife in 2018-19 were estimated at 5,796,000 (15.58 per capita); this is a greater number some other typical Scottish regions with no city such as Angus (7.56 per capita) but lower than other regions such as West Lothian (28.12 per capita). The higher levels of uptake compared to Angus are likely due to the numerous cities in proximity to Fife with rail connections including: Dundee, Perth and Edinburgh • There are 19 passenger stations in Fife (as of 2018-19); this is a greater number than other typical Scottish regions with no city (Angus: 7 and West Lothian: 12) • Fife had 75 electric vehicle charge points in 2020. The total for Scotland in 2020 was 1,592 	<p>Research Consolidation Report: Scotland's networks of paths and trails: key research findings</p> <p>SEPA</p>

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<p>Waste</p> <p>The amount of waste, generated in Fife has decreased since 2011, as shown in the table below, showing the household waste generated, recycled and landfilled in Fife¹⁸.</p> <p><i>Fife waste generation 2011 – 2021.</i></p> <table border="1" data-bbox="185 521 1121 1043"> <thead> <tr> <th>Year</th> <th>Generated (tonnes)</th> <th>Recycled (tonnes)</th> <th>Landfilled (tonnes)</th> <th>Other diversion (tonnes)</th> <th>Carbon Impact (tonnes CO2e)</th> </tr> </thead> <tbody> <tr><td>2011</td><td>214,552</td><td>114,983</td><td>98,593</td><td>975</td><td>444,838</td></tr> <tr><td>2012</td><td>195,595</td><td>102,310</td><td>92,292</td><td>993</td><td>420,148</td></tr> <tr><td>2013</td><td>190,784</td><td>105,601</td><td>83,217</td><td>1,967</td><td>375,435</td></tr> <tr><td>2014</td><td>188,213</td><td>101,061</td><td>82,667</td><td>4,485</td><td>377,689</td></tr> <tr><td>2015</td><td>191,152</td><td>99,967</td><td>82,100</td><td>9,088</td><td>388,927</td></tr> <tr><td>2016</td><td>187,748</td><td>102,611</td><td>76,956</td><td>8,183</td><td>365,824</td></tr> <tr><td>2017</td><td>178,479</td><td>97,545</td><td>68,786</td><td>12,146</td><td>348,830</td></tr> <tr><td>2018</td><td>167,355</td><td>85,471</td><td>71,323</td><td>10,560</td><td>339,826</td></tr> <tr><td>2019</td><td>174,976</td><td>77,853</td><td>78,275</td><td>18,847</td><td>387,423</td></tr> <tr><td>2020</td><td>156,152</td><td>68,219</td><td>73,300</td><td>14,634</td><td>356,220</td></tr> <tr><td>2021</td><td>166,981</td><td>72,787</td><td>79,543</td><td>14,651</td><td>390,154</td></tr> </tbody> </table> <p>In 2011, the amount of waste generated was 214,552 tonnes with a carbon impact of 444,838 tonnes CO2e. This has reduced by 2021 to 166,981 tonnes of waste generated (47,571 tonnes reduction) with a carbon impact of 390,145 tonnes CO2e (54,684 tonnes CO2e reduction).</p> <p>Fife has:</p> <ul style="list-style-type: none"> • Two landfill sites (including one Anaerobic Digestion Plant and one Refuse Derived Fuel Production) • 11 staffed Household Waste Recycling Centres • Approximately 300 recycling points 	Year	Generated (tonnes)	Recycled (tonnes)	Landfilled (tonnes)	Other diversion (tonnes)	Carbon Impact (tonnes CO2e)	2011	214,552	114,983	98,593	975	444,838	2012	195,595	102,310	92,292	993	420,148	2013	190,784	105,601	83,217	1,967	375,435	2014	188,213	101,061	82,667	4,485	377,689	2015	191,152	99,967	82,100	9,088	388,927	2016	187,748	102,611	76,956	8,183	365,824	2017	178,479	97,545	68,786	12,146	348,830	2018	167,355	85,471	71,323	10,560	339,826	2019	174,976	77,853	78,275	18,847	387,423	2020	156,152	68,219	73,300	14,634	356,220	2021	166,981	72,787	79,543	14,651	390,154	
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<p>Noise and Vibration</p> <p>The Scotland Transportation Noise Action Plan 2018 identified 10 Major Road and Rail Candidate Noise Management Areas (CNMA) (for END Round 3) in Fife.</p> <p><i>“Determination of a CNMA is simply a means of highlighting that a geographical area should be considered further in terms of a potential need for noise management. It may be that following further analysis, the area will be disregarded entirely or extended or reduced.”</i></p>	<p>Scotland Transportation Action Plan 2018</p> <p>SEPA</p>																																																																								

5.2. Initial Key findings for Fife

5.2.1. Main take away from the desktop study in relation to the LTS:

Population and Human Health

- Aging population

¹⁸ <https://informatics.sepa.org.uk/HouseholdWaste/>

- Fife's deprived areas are becoming more deprived, with increasing concentrations
- Generally there is poor access to green space, particularly in deprived areas
- More people access green space by car than on foot
- There are currently 222 Vacant and Derelict Land (VDL) sites within Fife with a total area of 730.37 hectares
- High number of blue badge holders
- More than half of cycling journeys are under 5km
- The Fife Core Paths Network has 400 paths throughout Fife including the coastal path
- The Fife Coastal path has an estimated 500,000 annual visits
- Fife, alongside Highland and Glasgow, have the highest number of health walks

Cultural Heritage

- The Forth Bridge
- Historical towns, villages and harbours
- National Garden and Designed Landscape

Biodiversity, Flora and Fauna

- Firth of Tay and Eden Estuary have European protected status
- There are 133 TPO
- Woodland covers 2.6% of the total land area of Fife
- Less than a fifth of Fife woodland is native

Soil and Geology

- At present Fife Council has not designated any areas of land as contaminated land
- There are 17 Geological Conservation Review (GCR) sites
- Trends show that towards the coast of Fife, more prime agricultural land is present, with some prime agricultural land present in central Fife

Landscape

- There are 21 Local Landscape Areas (LLA)
- The topography of Fife is generally low lying
- Fife Coastal Route
- The Central Scotland Green Network incorporates Southern parts of Fife and aims to restore and improve rural and urban landscapes across Scotland

Water Environment

- Fife has almost twice as many surface water bodies classified as poor than as good
- Fife has 9 good and 6 poor condition groundwaters
- Fife predominantly consists of moderately productive aquifers to the south and low productivity aquifers to the north
- Devonian sandstones in Fife are one of the most important and productive bedrock aquifers

- The Fife Local Biodiversity Action Plan identified key pressures on the freshwater and wetland ecosystems

Air Quality

- There are currently two AQMA declared: Bonnygate (Cupar) and Appin Crescent (Dunfermline)
- Kirkcaldy and Rosyth have air quality monitoring sites (NO₂, PM₁₀ and PM_{2.5})

Climatic Factors

- The transport sector was the third highest emitting sector in Fife following Industry
- 1.47 billion vehicle miles were travelled on roads in Fife in 2020
- Fife Council declared a Climate Emergency in September 2019
- Fife spends an estimated £464 million annually on gas, electricity and diesel for transport
- Fife carbon targets of reducing 75% of carbon emissions by 2030 and 80% by 2050
- Transport emissions in Fife contribute to 2% of Scotland's entire carbon emissions

Material Assets

- Public road length of 2,571km
- Net revenue expenditure on roads and transport was £28.4 million
- Petrol and diesel consumption of road vehicles was 189.1 thousand tonnes in 2018
- Number of rail passenger stations and journeys in Fife are higher than comparable regions in Scotland
- 75 electric vehicle charge points in 2020

Noise and Vibration

- Fife has 10 CNMA's (areas for further consideration for noise)

6 Compatibility Assessment

- 6.1.1. A compatibility assessment has been undertaken for the Fife LTS options ([Appendix C](#)) and policies ([Appendix D](#)), as per the methodology described in [section 4.4](#) of this report. The assessment identifies likely effects for each environmental topic as a result of the Fife LTS proposals.
- 6.1.2. Following the compatibility assessment, there are general observations made regarding the outcomes, which are set out below. These observations inform the recommendations set out in [section 10](#):
- Population, Human Health and Wellbeing was the environmental topic with the most identified effects (62 of 102). This is expected for a local transport assessment as this impacts the way people access amenities, employment and the wider environment
 - Climate is the second most environmental topic to have identified effects (38 of 102), which again is expected in the context of emissions associated with transport network and the climate resilience requirements of the transport infrastructure. It is recommended that the options and policies are reviewed and developed to increase the number and effectiveness / significance of interventions that positively impact climate as part of the Fife LTS
 - Air Quality (23), Material Assets (13) and Noise (14) have some identified effects. Historically, Fife has not had significant issues with air quality, noise and material assets but it should be recognised in the Fife LTS that these receptors are likely to be impacted future travel patterns and transport infrastructure. The transport network will also have a pivotal role in achieving Fife waste targets and carbon goals
 - Cultural heritage (3), biodiversity (8), water (5) and landscape (2) have limited identified effects. The LTS is an opportunity to positively address issues in the wider environment on which transport has a direct influence
 - Soils and geology have no identified significant effects on the environment. While operational activities are less likely to directly impact soils and geology, future maintenance regimes and construction of new projects would potentially impact these receptors. In addition, retention of soils (agriculture, peatland and habitat) has a net benefit and should be recognised in future policy and plans
- 6.1.3. Based on the impacts identified, recommendations for mitigation and enhancement have been included in [section 10](#) of this report. The recommendations seek to address the shape and outcome of the compatibility assessment and the SEA objectives assessment to improve the effects on the environment.

6.2. Cumulative Effects Assessment

- 6.2.1. As part of the Act (2005), a PPS must consider cumulative effects as part of the SEA.
- 6.2.2. The compatibility assessment considers the potential significant effects for each individual environmental topic. For this to be cumulative, an assessment evaluates both cross environmental topic considerations from the Fife LTS (intra-cumulative) and the implications of multiple developments acting on a single receptor or group of receptors (inter-cumulative).
- 6.2.3. The SEA objectives assessment takes into consideration the options and policies against each theme and indicator as agreed as part of the SEA Scoping Report. This provides a strategic intra-cumulative assessment of the Fife LTS, likely effects and recommendations to mitigate and enhance the proposals.
- 6.2.4. Without knowing the location, scale and specific characteristics of the options and policies provided, it is not possible to undertake an inter-cumulative assessment of impacts on a single receptor at this stage. It is recommended that as part of the monitoring process, Fife Council review the proposals on a periodic basis and update the conclusions of the environmental assessment.
- 6.2.5. Cumulative effects can also derive from cross-boundaries locally, regionally and nationally. It is important for Fife Council to review the proposed options of the LTS in collaboration with neighbouring partners and national policy.
- 6.2.6. Potential cumulative effects have informed the recommendations as part of the SEA Environmental Report in [section 10](#).

7 SEA Objectives Assessment

- 7.1.1. The compatibility assessment has been completed for each individual option and policy as part of the proposed Fife LTS to identify potential significant effects for each environmental topic.
- 7.1.2. The SEA Objectives were set out in the SEA Scoping Report and in consultation with the statutory consultees. This was prepared in advance of the LTS options and policies. A full list of the indicators are outlined in [Appendix B](#). For the purposes of the compatibility assessment table below, the draft indicators have been abbreviated / summarised to ensure make the table easier for the reader.
- 7.1.3. The SEA Objectives Assessment as shown in [Table 7.1](#) considers the Fife LTS as a whole and the likely potential effects (score 1). The assessment is then repeated based on the assumption that recommendations in [section 10](#) are adopted to demonstrate to the decision makers what could be achieved through the described recommendations and the residual effects (score 2).
- 7.1.4. The recommendations in [Table 7.1](#) refer to ‘packages’¹⁹ which are detailed in [section 10](#). Specific recommendations are also included where relevant / appropriate.
- 7.1.5. The final LTS options are due to be selected after further consultation and after the preparation of this report. The SEA post adoption statement will reflect on the finalized options / policies and conclusions set out in [Table 7.1](#).

¹⁹ Due to the nature and application of the proposed options and policy, it was considered most appropriate to package the recommendations into themes in order to inform the decision makers and simplify the application of measures across the different geographies and social contexts within Fife.

Table 7.1: Effects against the SEA objectives and indicators

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2	
Population and Human Health							
To protect and improve population, human health and wellbeing	Promote active travel	Efficiency	Increased / new active travel infrastructure and connectivity will increase the distribution and number of routes available	+	Active travel package Accessibility package Community package	++	
		Distribution					
		Quality	Increased / new availability of bikes through share schemes				
			Increased cycling awareness / education Maintenance schemes for active travel network				
	Encourage use of amenity / green space	Number	No specific policy or option to encouraging use and access to amenity / green space is currently included in the Fife LTS	0	Active travel package Biodiversity package Community package	+	
		Quality					
		Equality / distribution					
	Reduce pressure on existing environmental / health constraints		Need for travel	Prioritisation of Fife-wide active travel network to include “Connected Neighbourhoods 20-minute neighbourhood improvements” Traffic reduction measures around Fife	+	Active travel package Accessibility package Community package Biodiversity package	++
			Traffic for existing / proposed AQMAs / CNMAs				
			Traffic for low scoring SIMD areas				
			Traffic around biodiverse designated Sites				
			Priority themes by Food4Fife				

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2
	Improve access	Number	Increased number and distribution of rail infrastructure, bus network and active travel routes.	+	Accessibility package Community package	++
		Quality				
	Meet community wealth benefits objectives	Equality / distribution	No significant effects identified in relation to socially productive use of land and assets	0	Accessibility package Biodiversity package Carbon package Community package Waste package	+
		Progressive procurement of services				
Cultural Heritage						
To protect, conserve and enhance the historic environment	Impact heritage assets (listed buildings, scheduled monuments and other key assets)	Number of historical assets	No specific policy or option regarding cultural heritage is currently included in the Fife LTS	0	Landscape and heritage package	+
		Number of improvements				
Biodiversity, Flora and Fauna						
To protect, enhance, create and restore biodiversity and encourage habitat connectivity	Impact designated Sites and protected species	The size and / or number of designated Sites	No specific policy or option regarding impact on designated sites and protected species is currently included in the Fife LTS. There are some options with indicative geographic locations which have been considered further in section 8 where the potential	U	Biodiversity package	+
		The quality / condition /				

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2
		integrity of designated Sites	effects would be dependent on final design, impacted receptors and approach to mitigation and enhancement specific to that project			
		Number of LBAP habitats				
	Enhance biodiversity	BNG (or equivalent metric)	Policy to include biodiversity net gain in transport projects and reduction in unnecessary road space and increased planting	+	Biodiversity package Community package	++
		Access and understanding of natural environment	No specific policy or option regarding access and understanding of natural environment is currently included in the Fife LTS			
	Promote the connectivity, protection and integration of habitats, including the green network habitat links	Habitat connectivity and fragmentation	No specific policy or option regarding connectivity, protection and integration of habitats is currently included in the Fife LTS	0	Biodiversity package	+
Impact on or result in the removal of biodiversity habitats	Size and length of habitats	No specific policy or option regarding impact on biodiversity habitats is currently included in the Fife LTS. There are some options with indicative geographic locations which have been considered further in section 8 where the potential effects would be dependent on final design, impacted receptors and approach to mitigation and enhancement specific to that project	U	Biodiversity package	+	
	Management / control of non-native species					
	Management of woodlands and native planting					
Soil and Geology						
To promote the management, improvement and protection of soils and conserve recognised	Impact peatland, carbon-rich soils and priority peatland habitats	Number, area and quality of peatlands/ carbon-rich soils and priority peatland	No specific policy or option regarding management, improvement and protection of soils and geodiversity assets is currently included in the Fife LTS	0	Avoid SSSIs, peatland, carbon-rich soils and priority peatland	+

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2			
geodiversity assets	Impact food production relating to soils	Area and access to agricultural land		0	Avoid agricultural land	+			
		Number / area and access to allotments							
	Impact Ancient Woodland Inventory (AWI)	Area of AWI					0	Avoid AWI	+
	Impact Sites of geological importance	Indirect or direct impact on designated sites					0	Avoid sites of geological importance	+
	Impact areas of potentially contaminated land	Number and area of potentially contaminated land sites					0	Avoid areas of potentially contaminated land	+
Promote the use and development of vacant and derelict and brownfield land over the allocation of greenfield land for development	Number of vacant, derelict and brownfield land parcels	0	Avoid development on greenfield land and encourage development on vacant, derelict and brownfield land	+					
Landscape									
To protect and enhance the landscape character, local distinctiveness and To retain key viewpoints	Impact local distinctiveness in and around Fife	Designations	No specific policy or option regarding impact on landscape is currently included in the Fife LTS. There are some options with indicative geographic locations which have been considered further in section 8 where the potential effects would be dependent on final design, impacted receptors and approach to mitigation and enhancement specific to that project	U	Landscape and heritage package	+			
		Green features							
		Townscape features							
Water Environment									

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2
To protect and enhance the water environment	Impact flood risk	Development within the flood zones	Flood risk protection programme to look at flood risk reduction	U	Avoid flood zones Biodiversity package Climate resilience package	+
		Increase / decrease of permeable surface area	There are some options with indicative geographic locations which have been considered further in section 8 where the potential effects would be dependent on final design, impacted receptors and approach to mitigation and enhancement specific to that project			
		Formal and informal flood defence				
	Impact on the water environment	Development / agriculture within 8m of surface waters		No specific policy or option regarding impact on the water environment is currently included in the Fife LTS. There are some options with indicative geographic locations which have been considered further in section 8 where the potential effects would be dependent on final design, impacted receptors and approach to mitigation and enhancement specific to that project	0	Avoid developing within 8m of surface waters Avoid development near aquifers Avoid watercourses
Aquifers						
Number and linear metres of de-culverted watercourses						
Habitat in and around watercourses						
Air Quality						
To enhance air quality and prevent further deterioration	Impact on transport emissions	The number and proportion of L / ULEV	Interventions to support low emission vehicle and Low Traffic Neighbourhoods	+	Carbon package Biodiversity package	++
		The traffic volume for sensitive receptors and / or AQMAs	Improvements to public transport access such as: bus stop improvement programme, improvements to bus and rail service accessibility, rail corridor enhancements and Cross-Forth Transport Appraisal			
	Improve air quality	Decreased demand on fossil fuel-based energy supply	improvements to cross-Forth public transport services			

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2
		Access to public transport	Active travel infrastructure accessibility improvement programme			
		Access to active travel				
Climatic Factors						
Reduce contribution towards future emissions To prevent vulnerability to future climate related impacts	Impact the Scottish Government's greenhouse gas emissions reduction targets	Construction emissions	The construction of new transport infrastructure such as roads and railway stations will likely lead to increased carbon and greenhouse gas emissions.	-	Active travel package Accessibility package Carbon package Climate resilience package A detailed carbon assessment and management plan for the Fife LTS would improve understanding and monitor progress to meet the Scottish Government's net zero 2045 targets. This will also require cross department cooperation and bold strategies to deliver in Fife. The Fife LTS options and policy should be reviewed and adjusted depending on the findings of the detailed carbon assessment.	-
		Operational emissions	<p>The Fife LTS includes the diversifying of transport infrastructure (through more rail, better bus networks and new ferry crossings). Modelling undertaken by Fife Council of the proposed Fife LTS options and policies indicates that this will not be enough to meet the climate targets.</p> <p>IEMA Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance (2022)²⁰ states: <i>A project that follows a 'business-as-usual' or 'do minimum' approach and is not compatible with the UK's net zero trajectory, or accepted aligned practice or area- based</i></p>	--		U

20 IEMA Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance (2022) Available online: <https://www.iema.net/resources/blog/2022/02/28/launch-of-the-updated-eia-guidance-on-assessing-ghg-emissions>

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2
			<p>transition targets, results in a significant adverse effect.</p> <p>A project that is compatible with the budgeted, science-based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that has a minor adverse effect that is not significant. It may have residual emissions but is doing enough to align with and contribute to the relevant transition scenario, keeping the UK on track towards net zero by 2050 with at least a 78% reduction by 2035 and thereby potentially avoiding significant adverse effects.</p>			
		Energy demand	No specific policy or option regarding energy demand is currently included in the Fife LTS	+		++
	Impact climate resilience and adaptation	Vulnerability/preparedness for extreme weather	Climate resilience asset monitoring programme to monitor transport network assets and understand real-time resilience risks	+	Climate resilience package	++
		Vulnerable locations	Network resilience plan to undertake a study on the effects of climate change and disruption on the transport network			
Nature – based solutions	No specific policy or option regarding nature-based solutions is currently included in the Fife LTS					
Material Assets						
To promote the sustainable management of waste / materials	Promote the sustainable use and protection of natural resources	Natural resources Off Site waste / landfill requirements	Incorporation of "use recycled materials on infrastructure projects" and sustainable procurement practices to target embodied carbon of infrastructure projects options	+	Include the protection of natural resources	++

Proposed SEA Objective	Questions for Assessment	Indicators	Effects	Score 1	Recommendation	Score 2
To encourage and enhance the lifecycle of materials		Footprint on infrastructure			Inclusion of importation and exportation of resources and materials Carbon package Waste package	
		Reuse of existing resources				
		Import / export of material				
Noise and Vibration						
To prevent significant noise and vibration levels and prevent further deterioration	Impact of construction/ operational noise	Noise environment for sensitive receptors	No specific policy or option regarding impact of construction / operational noise is currently included in the Fife LTS. There are some options with indicative geographic locations which have been considered further in section 8 where the potential effects would be dependent on final design, impacted receptors and approach to mitigation and enhancement specific to that project	U	Community package Biodiversity package	+
	Enhance noise environment	Reduce number and frequency of night-time services around sensitive receptors	Lowering of speed limits and roll-out of 20mph speed limits is proven to be better for noise. The World Health Organisation reported that speed management initiatives help reduce levels of emissions and traffic noise, making streets more liveable with speed being proven to have adverse effects of environmental and noise pollution ²¹	+	Community package	++

²¹ World Health Organisation (2017) *Managing Speed*.

8 Geographical locations

- 8.1.1. As part of the Fife LTS options, Fife Council were able to indicate specific locations for certain infrastructure projects. These were generally road and rail projects.
- 8.1.2. Interventions with indicative locations were assessed at a strategic level for significant effects. This included a review of the likely impacts based on the type of project and the location in relation to designated sites, including:
- Site of Special Scientific Interest (SSSI)
 - Special Area of Conservation (SAC)
 - Special Protection Area (SPA)
 - Ancient Woodland Inventory (AWI)
 - Scheduled monuments
 - World Heritage Sites
- 8.1.3. Based on experience, road, rail and ferry infrastructure can result in the following impacts, which have been highlighted for Fife Council to consider. Effects cannot be established as this depends on the location, final design and sensitivity of the receptors. Fife Council should seek to review these projects in more detail prior to starting work.
- 8.1.4. Fife Council will need to consider the environmental impacts of these infrastructure projects both before progressing these interventions further and as part of the design stages to ensure as many benefits as possible.

Climate

- 8.1.5. Construction of road, rail and ferry infrastructure will have embedded carbon emission as well as for the operational and decommissioning phases. Fife Council have declared a climate emergency and are seeking to reduce overall emissions. It is recommended that a feasibility assessment is undertaken to establish if these projects are likely to have a material impact on Fife Council's climate targets both individually and cumulatively.
- 8.1.6. Land use change to grey infrastructure has the potential to impact flood capacity and climate resilience. This should be considered in detail as part of the design process of the projects and engagement with the statutory consultees.
- 8.1.7. New transport infrastructure and changes in operational activities does have the opportunity to move away from carbon intensive technologies and improve climate emissions compared with current / historic transport modes and routes. This will need to be assessed in the round to ensure there is a net benefit of the Fife options and policies and that these align with wider current and future policy.

Biodiversity

- 8.1.8. By their nature, linear projects have the potential to fragment habitat and migration and / or commuting routes of protected species.
- 8.1.9. Should the projects involve land take of green space and / or ecological receptors, Fife Council should ensure that there is suitable biodiversity assessment, mitigation and enhancement in line with current and future policy – Note that at time of writing, the 5th UN Biodiversity Conference

(COP 15) is close to agreeing a '30x30' climate deal²², which may influence Fife's targets and objectives for the natural environment.

- 8.1.10. New development has the potential to introduce new green and blue corridors to improve habitat and wider biodiversity. Considerate design and potential cumulative effects need to be included to ensure net positive gain.

Air Quality and Noise

- 8.1.11. Building new road infrastructure encourages more traffic and this should be considered as part of the sustainability transport hierarchy and Fife Council's policy to reduce private vehicle use.
- 8.1.12. New development can include both direct and indirect benefits for air quality and noise sensitive receptors. Intelligent use of space and integrating synergetic environmental design can improve public realm and user experience in the transport network.

Landscape

- 8.1.13. New road and rail projects are likely to impact on the landscape character of an area and will need to be considered at the design stage of the project.
- 8.1.14. Depending on the design of new development, this can re-introduce landscape aspects previously lost or undermined and can re-establish public space for the better.

Population, Human Health and Wellbeing

- 8.1.15. Significant road, rail and ferry infrastructure has the opportunity to both positively and negatively impact communities. It is recommended that Fife Council review the potential equality impact of these projects prior to work starting to understand how direct and indirect consequences of these projects will shape the future of residents and businesses. More vulnerable areas should be a priority of the Fife LTS.
- 8.1.16. Changes to infrastructure and operational activities impact communities in different ways and on different scales. Improving access in line with the sustainable hierarchy is likely to achieve a fairer and greener network within Fife.

Habitat Regulations Assessment (HRA)

- 8.1.17. Under the Conservation (Natural Habitats, &c.) Regulations 1994, all competent authorities must consider whether any plan or project could affect a European site before it can be authorised or carried out. This includes considering whether it will have a 'likely significant effect' on a European site, and if so, they must carry out an 'appropriate assessment'.
- 8.1.18. Any plan or project that could affect a European site, no matter how far away it is, should be subject to HRA²³.
- 8.1.19. It is likely that some of the Fife LTS options would require a HRA Screening as they are likely to be in proximity to designated wildlife sites. As the location, scale and characteristics of the projects are not known in detail at this stage, it is recommended that this is addressed at a case-by-case basis and in regular consultation with the statutory consultees.

²² <https://www.campaignfornature.org/cop15-countries-call-for-support-of-30x30-and-leaders-endorse-indigenous-rights-but-finance-commitments-fall-short>

²³ <https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra#:~:text=If%20you%20need%20to%20ask,stage%204%2C%20the%20appropriate%20assessment.>

9 Adaptation

- 9.1.1. With climate change and the associated impacts becoming ever more visible, it is critical that adaptation measures are promoted within the earliest possible stages of planning / design²⁴.
- 9.1.2. The changing climate conditions and increasing severity and irregularity of weather events means that decision makers need to understand more and plan robustly for a PPS to be sustainable, viable and successful.
- 9.1.3. The Stern Review on the Economics of Climate Change, commissioned by the UK Treasury, assessed a wide range of evidence on the impacts of climate change and on the economic costs. The review concluded that if we (humanity) don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global Gross Domestic Product (GDP) each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more²⁵. Acting sooner and planning better has an overall cost reduction and improved quality of life for people, the economy and the wider natural environment.
- 9.1.4. Fifteen years on from Lord Stern's review, climate change has continued at an accelerated rate. As a result, sustained action will need to take place over a prolonged period to prevent the worst-case scenario conclusions of the Stern Review becoming a reality²⁶.
- 9.1.5. The Fife LTS is an opportunity to proactively address the potential acute shocks and long-term stresses of climate pressures.
- 9.1.6. Economic and environmental reporting, in combination with experience shows that spending more in the short term, reduces the overall financial, environmental and social risk significantly.
- 9.1.7. The recommendations section of this report incorporates key measures which would contribute to divisive action being taken to help tackle climate change and mitigate the increased effects of this global phenomenon.
- 9.1.8. **Figure 9.1** shows the key issues identified by the European Environment Agency (2015) as a result of climate change, including: flooding, more frequent and more severe storms, higher temperatures and longer summers.
- 9.1.9. Global temperatures are rising: to date, the UK's ten hottest years on record have all occurred since 2002²⁷. Record temperatures²⁸, increased frequency of hosepipe bans and impacts on health has increased media coverage and public awareness. These issues are likely to impact developments more and more.

²⁴ Environment Agency: Climate Change Impacts and Adaptation Report (2018)

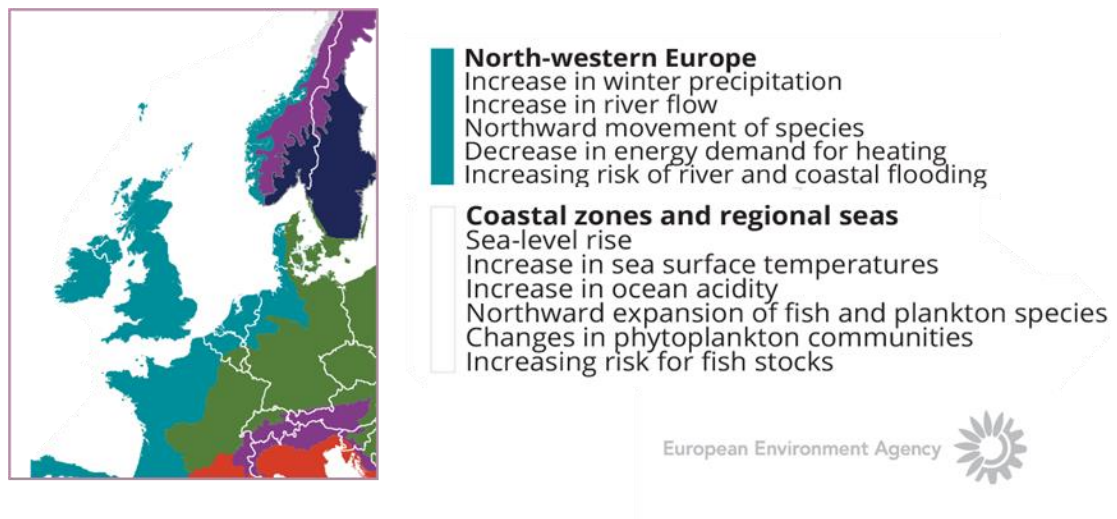
²⁵ The Economics of Climate Change: The Stern Review (2006)

²⁶ 15 years on from the Stern Review: the economics of climate change, innovation, and growth (2021)

²⁷ <https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2019/state-of-the-uk-climate-2018> (Accessed: July 2022)

²⁸ <https://www.pressandjournal.co.uk/fp/news/aberdeen-aberdeenshire/4555021/aboyne-record-high-temperatures-during-uk-heatwave/> (Accessed: July 2022)

Figure 9.1: Key observed and projected impacts from climate change in Europe



Source: European Environment Agency (2015)²⁹

9.2. Coastal flooding

- 9.2.1. Fife is a coastal region in Scotland. Global sea levels are predicted to rise leading to increased coastal flooding and extreme storm events. Extreme sea levels along coastlines result from a combination of factors, including increases in local mean sea levels and tidal levels, storm surge events, waves and changes in coastal morphology³⁰.
- 9.2.2. By taking coastal flooding into consideration within the Fife LTS and taking action now and into future transport strategies, Fife's coastline can be better prepared for future climatic constraints and potential significant effects to the wider transport network.
- 9.2.3. **Figure 9.2** shows the areas of Fife predicted to be impacted by sea level changes in 2040. This has numerous implications for the local transport network in Fife such as:
- Flooding of industrial areas (**Figure 9.3** shows sea level changes around Queensferry and the Forth Bridge)
 - Coastal amenities and historical villages (**Figure 9.4** shows the predicted impacts on Elie, St Monans, Pittenweem and Anstruther)
 - Access to towns, community facilities and tourist hubs (**Figure 9.5** shows flooding of the A91 road to the west of St Andrews)

²⁹ <https://www.eea.europa.eu/soer/2015/europe/climate-change-impacts-and-adaptation>

³⁰ <https://www.eea.europa.eu/ims/extreme-sea-levels-and-coastal-flooding#:~:text=Extreme%20sea%20levels%20can%20occur,a%20factor%20of%20approximately%20three.>

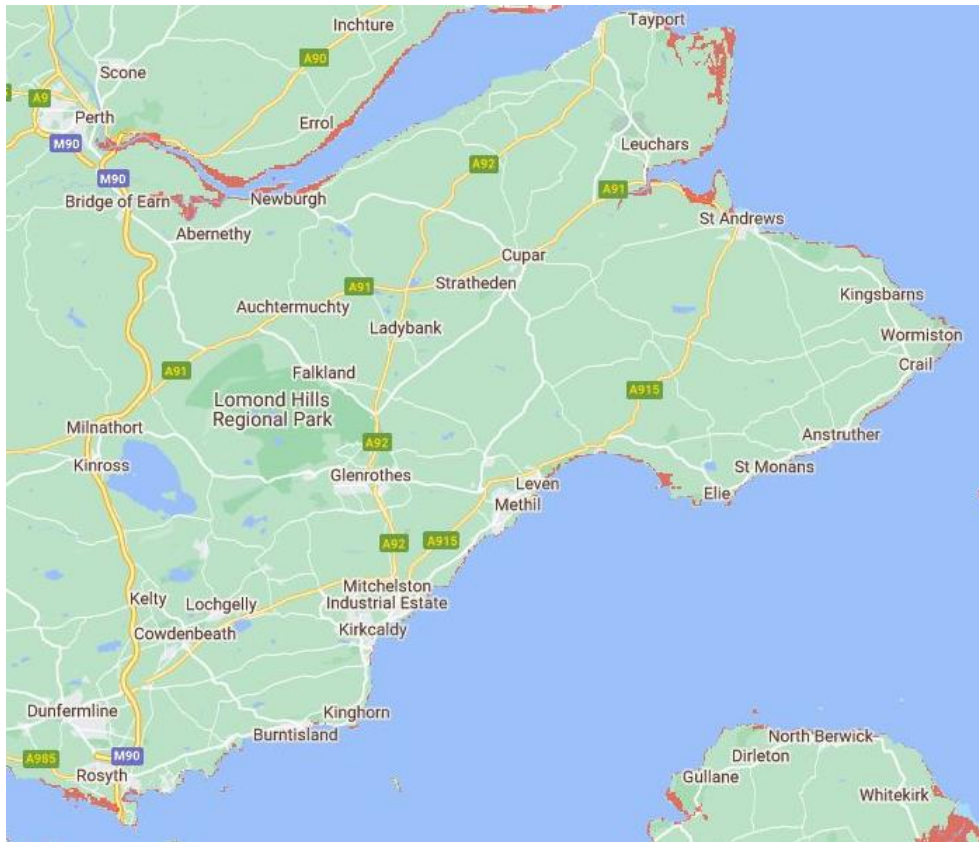


Figure 9.2: Projected 2040 Annual Flood Level - Fife

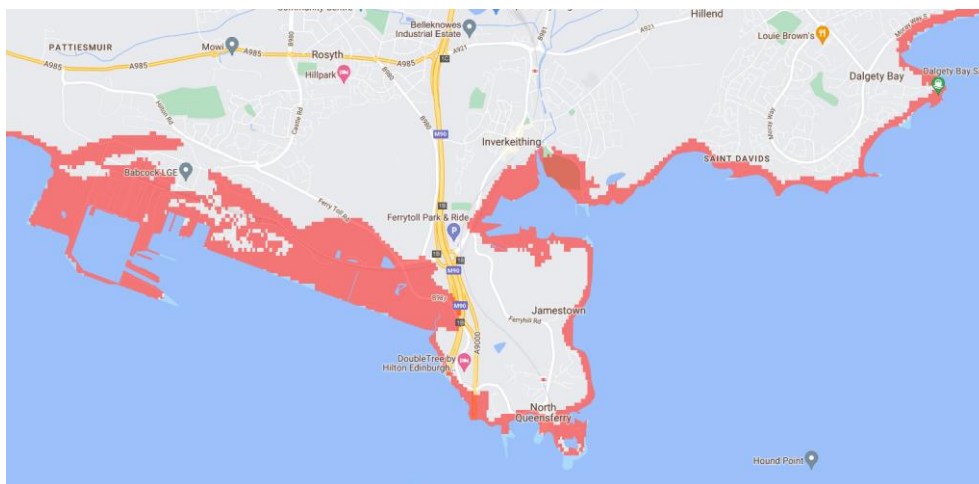


Figure 9.3: Projected 2040 Annual Flood Level - Queensferry / Forth Bridge



Figure 9.4: Projected 2040 Annual Flood Level - Elie to Anstruther

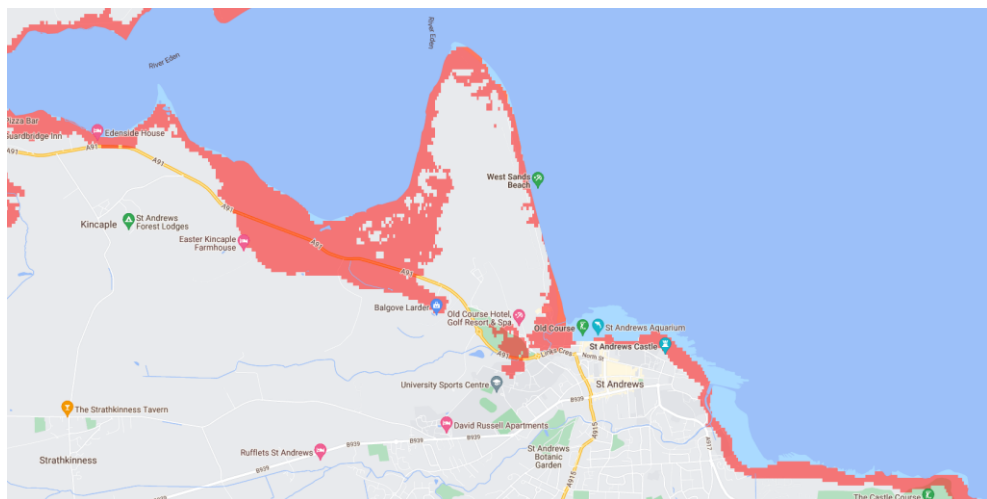


Figure 9.5: Projected 2040 Annual Flood Level - St Andrews

- 9.2.4. The sea level rise and coastal flood maps³¹ are based on peer-reviewed science in leading journals. As with all types of maps based on this kind of forecasting modelling, this is an indicative exercise to inform decision makers. The maps are not based on physical storm and flood simulations and do not take into account factors such as erosion, future changes in the frequency or intensity of storms, inland flooding, or contributions from rainfall or rivers. Further investigations of risk would be required for more detailed assessment but considered appropriate to inform a strategic assessment.
- 9.2.5. Effects from climate change are being observed at greater frequency and severity, including: the loss of Arctic sea ice, the amount of land burned by wildfires, and the rapid increase in extreme temperature events across Europe in recent decades.
- 9.2.6. Modelling of the potential sea level rise associated with the melting of the glaciers in Greenland estimates a sea level rise of 7.2m if we do not meet international agreements of limiting global warming to 1.5°C. Recent climate models anticipate that “even if greenhouse gas emissions could

³¹ https://coastal.climatecentral.org/map/12/-2.7771/56.2309/?theme=sea_level_rise&map_type=year&basemap=roadmap&contiguous=true&elevation_model=best_available&for_east_year=2040&pathway=ssp3rcp70&percentile=p50&refresh=true&return_level=return_level_1&rl_model=gtsr&slr_model=ipcc_2021_med

be cut to zero in the 2020s, Greenland’s melting ice would still contribute to at least 0.27m of sea level rise over the next century”³².

- 9.2.7. The Fife LTS options and polices should therefore consider proactive measures to adapt to climate change, including: avoiding flood risk areas, improving flood water storage and water cycle processes, identifying strategies for key infrastructure and integrate climate resilience into the local transport network.

Recommended considerations

- Reduce the amount of impermeable / grey areas to increase permeable ground
- Increase the amount of green (vegetation elements such as trees, green roofs and planting) and space for blue (water elements such as ponds, rain gardens, and drainage basins / SuDS) infrastructure
- Creation of buffer zones where key infrastructure should and shouldn’t be implemented
- Designing passive infrastructure considered to be non-essential to act as protection and / or flood water storage to provide greater resilience for essential infrastructure. For example, implementing a cycle route between the coast and a road / railway / hospital so that the essential infrastructure is better protected in extreme weather events
- Incorporate “Room for the River” principles as developed by the Dutch Government. This includes managing high water levels in rivers by lowering the levels of flood plains, creating water buffers, relocating levees, increasing the depth of side channels, and the construction of flood bypasses³³
- While it is recognised that the local transport network has limited operational activity in coastal areas, it is recommended that Fife Council continue to broaden conversations with other Fife Council departments and wider teams to seek opportunities to integrate adaptation measures into future marine projects such as ports and ferry crossings

9.3. Food security

- 9.3.1. In 2022, the IPCC published a report on the potential impacts of changes to the global average temperature. It identified climate change was already leading to more frequent and intense extreme weather events such as heatwaves, droughts and floods. It argued some natural and human systems had already been pushed beyond their ability to adapt to these changes, causing irreversible damage to food security.
- 9.3.2. The IPCC said increases to global warming of between 1.5°C and 2°C would put further pressure on food production and access. It also said the risk to food security would increase in areas worst affected and least able to adapt³⁴.
- 9.3.3. To proactively respond to these pressure, Fife Council should identify land as part of the LTS which can be used by local communities for food production. This can include areas set aside for orchards, allotments and raised beds to integrate with existing and new transport projects.
- 9.3.4. Changes to verge maintenance and planting regime within the road network in agricultural areas could also improve soil security, biodiversity and natural resource protection, which in turn would help increase climate resilience for food production within Fife.

³² <https://scied.ucar.edu/learning-zone/climate-change-impacts/greenlands-ice-melting#:~:text=If%20all%20the%20ice%20that,this%20rate%20may%20be%20increasing.>

³³ <https://www.dutchwatersector.com/news/room-for-the-river-programme#:~:text=In%202007%20the%20Dutch%20Government,the%20construction%20of%20flood%20bypasses.>

³⁴ <https://lordslibrary.parliament.uk/impact-of-climate-change-and-biodiversity-loss-on-food-security/#:~:text=At%20%2C%20or,South%20America%20and%20Small%20Islands.>

9.4. Green and blue infrastructure

9.4.1. The existing transport network infrastructure provides an opportunity to connect green space with linear and maintained habitat. For example, wildflower meadows planted along the verge of highways and railways.

9.4.2. Interconnectivity of habitat is a requirement to future proof our natural environment.

The local transport network of Fife is an opportunity to connect with landowners, businesses and communities using the existing infrastructure owned and maintained by Fife Council. A collaborative approach is likely to have cumulative positive outcomes and contribute to wider biodiversity and net zero carbon goals.

9.4.3. Recommendations include:

- Increased collaboration between Fife Council departments and other councils and other countries
- Increasing the amount of biodiversity and habitat for pollinators (pollinators have a significant impact on crop capacity)
- Drainage design of the road network and transport infrastructure to reduce flooding, soil erosion and pollution / nutrients from agriculture into g/b networks and providing sufficient space for flood water
- Create multi-purpose areas to better use finite space available, all year round

10 Recommendations

- 10.1.1. Schedule 3 paragraph 7 of the Act states that a SEA Environmental Report is to include the measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment that may be generated. This report has considered what effects could be caused as a result of the Fife LTS.
- 10.1.2. The compatibility assessment within this SEA Environmental report considers the potential impacts to the environmental topics for the Fife LTS options and policy progressed by Fife Council to date.
- 10.1.3. Based on the impacts identified, recommendations for mitigation and enhancement have been included in this report. Due to the nature and application of the proposed options and policies, it was considered most appropriate to package the recommendations into themes in order to inform the decision makers and simplify the application of measures across the different geographies and social contexts within Fife.
- 10.1.4. The options and policies of the proposed Fife LTS have been assessed against the SEA Objectives. To inform the decision-makers, the assessment is repeated based on the assumption that all recommendations have been included. This output provides a comparison of likely outcomes and effects with and without the recommendations.
- 10.1.5. The recommendations for Fife Council may have wider scope than the Fife LTS. It is recommended that Fife Council review the recommendations in terms of viability, effectiveness and significant effects. It may be more suited to adopt some recommendations into the Local Development Plan.
- 10.1.6. Recommendations have been packaged together and grouped into the following packages:
- Accessibility
 - Active Travel
 - Biodiversity
 - Carbon
 - Climate Resilience
 - Community
 - Landscape and heritage
 - Waste

10.2. Accessibility

- 10.2.1. To achieve a fairer local transport strategy in line with the goals of the Fife LTS, the transport network needs to be accessible to as many users as possible. This also aligns with the core theme of fairness within the Plan for Fife 2017-2027 - Opportunities for All: *ensuring that no-one is left behind... ensure that everyone can access opportunities in education, training, jobs and wider society, and have equal access to the support and advice they might need to support a fulfilling and decent life*³⁵.
- 10.2.2. To mitigate adverse environmental effects and maximise environmental opportunities of the proposed policies and options within the local transport strategy, Fife Council should consider:

An Accessibility Audit

The Fife LTS already includes an accessibility audit but the following provides detail and recommendations that will improve the environmental effects. It is recommended that as part of the Fife LTS, a multifaceted assessment considers:

- The **location, quality and state** of existing and future infrastructure, including: bus / rail stations, footways, footpaths, cycleways, bridleways, etc and importantly how they connect together
- **Destinations within Fife**, including: community facilities, green open space, scenic locations, tourist spots, education facilities, sports and leisure grounds, transport hubs, etc
- **Social and historical context**, including: SIMDs, areas/locations that currently require accessibility infrastructure, vacant and derelict land, access to employment centres etc

Location informs distribution i.e. which areas in Fife are well connected? Where are existing gaps or missing connectors that would increase uptake and increase accessibility.

Quality informs effectiveness i.e. does the infrastructure meet the accessibility requirements? e.g. lift, ramp, dropped kerb, tactile surfaces, etc. Does the infrastructure improve safety and thereby accessibility? e.g. segregated from traffic, rest spaces, integration of green space.

State informs timeline i.e. what is the health of the infrastructure? Does it require maintenance? Is it needing repaired / replaced within the lifespan of this LTS or the next? Can the space be repurposed to better meet the needs of Fife?

The baseline from the audit should include a mapping output to identify gaps, inequalities, risks and opportunities in and around Fife. This will be a viable asset to inform options and policy proposals going forward. Proposals should be functional, proportionate and drive inclusive mobility. This could include a review of examples of best practice from the European Union Access City Awards³⁶ and incorporate relevant projects.

Interventions are recommended to be informed by equality impact assessment and categorised in terms of need (social, economic and environmental context) and feasibility (cost, technical requirements and scale). The Fife LTS should include policies and options to improve accessibility across Fife and lay the groundwork for further improvements to be made within the next Fife LTS.

A Transport for All's Equal Pavements Pledge, which was adopted by Edinburgh Council, is a potential key component for accessibility following an audit. This can set out a blueprint and ethos to enhance footways for those with disabilities through a series of actions. Examples include measures to keep streets clear of clutter, install dropped kerbs for step-free access and protect disabled parking bays. The matching geography with Edinburgh could lead to a broader, interconnected and accessible network for users.

³⁵ https://our.fife.scot/_data/assets/pdf_file/0017/183320/Plan_for_Fife_2017_2027_June19-1.pdf

³⁶ <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8462&furtherPubs=yes>

Maintenance

A review of current and future maintenance approach is recommended for the transport network infrastructure. Approach should prioritise safety, environment and the sustainable transport hierarchy to maximise the quality, availability and efficiency of the infrastructure. This should also contribute positively to broader national and regional environmental policies and targets.

Measures could include:

- Winter maintenance programme prioritising key footpaths, transport hubs and infrastructure that supports key routes for vulnerable users
- New traffic lights integrating weather sensors that detect a pre-set level of precipitation to automatically reduce wait times for users who are walking, cycling and wheeling in poor weather conditions³⁷. This would support behavioural change to transition away from private vehicle to more active travel
- Adopt a green space management strategy (including review of contract arrangements and key performance indicators for transport procurement) to develop green / blue infrastructure within the transport network and improve streetscape appearance to increase uptake and accessibility
- Reduce overall grey infrastructure area to reduce maintenance costs and identify target areas to improve land value optimisation, including: carbon sequestration / offsetting, biodiversity net gain, nutrient neutrality and flood plain compensation. This would improve amenity and climate resilience of the transport network and the wider community
- Consultation / engagement to understand priorities and opportunities from the public to improve maintenance approach

Inclusive spaces

Areas within the transport network, including pavements, bus / rail stations, active travel routes, etc should be inclusive and accessible to all. Changes to existing infrastructure that improves the experience and protects from the elements will increase uptake, accessibility and help meet anticipated future climate challenges. Proposed measures to consider include:

- **rest areas**, including: benches, green space, water fountain, quiet areas, etc in and around transport hubs and the wider transport routes. Introduction of these spaces allows for a greater portion of the community, including: the elderly, young families, the vulnerable, people with autism, and more to take a rest when travelling
- **shade**, which is anticipated to be a potentially significant future risk and an important part of accessibility to the wider transport network as our climate changes. Depending on location and design, tree pits can provide sustainable and effective drainage systems to increase resilience against storm water and provide shade, shelter and beauty to bus stops, railway stations and active travel routes

The measures above are known to have a positive effect for vulnerable users and have a wide array of benefits including mental health, biodiversity, access to green space and safety. Using green / blue infrastructure within the local transport network can reshape the land use and help to achieve multiple policy targets for Fife Council while also protecting and enhancing the infrastructure.

³⁷ <https://www.mentalfloss.com/article/73352/rotterdam-installing-traffic-lights-rain-sensors>

The image is an example from a Sweco project in Maastricht, Netherlands, which incorporates green space, tree pits and benches for rest along an active travel route.



Integrated network

An integrated network would increase accessibility and contribute significantly to the transition to net zero. Fife LTS should consider the interconnectivity between transport methods and promote behavioural changes, including:

- **An all-in-one ticket** that allows for travel across more than one mode of transport. This would make the use of public transport more affordable as there is a premium for users who require two or more modes of transport. This approach would simplify the public network for users, make the transport network more flexible for users and likely increase overall uptake. As a result, this would increase accessibility and the effectiveness of behavioural change to meet the environmental and climate policy goals of Fife Council. This should be reviewed, including the procurement process and cost effectiveness within Fife and the surrounding areas
- **Greater integration of cycling** into the network, including bike racks at transport hubs (wheel and ride) and infrastructure on trains and buses to promote integrated travel. This type of integration should be considered when setting the scope and assessment criteria for service provider procurement
- **Higher frequency of services** is a key part of an integrated network as this impacts significantly on the reliability and perception of confidence for travellers. Both aspects are necessary to accelerate a transition away from private vehicle use. Where services are limited / irregular, this is a significant blocker to accessibility and achieving carbon emission net zero targets

10.2.3. Adopting the above measures as part of the accessibility package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:

- Biodiversity – more green space
- Climate resilience – shading and flood storage
- Carbon emissions – behavioural change and reduced tail pipe emissions
- Wellbeing – improved experience of the local transport network
- Population and Human Health – greater accessibility

10.2.4. Fife Council should consider the following options and policy as part of the LTS:

- Undertake accessibility audit
- Include rest area for each new transport nodes (rail stations, bus stations, etc) and average one rest area per kilometre along key transport routes
- 15% increase in new bike parking spaces within Fife by the year 2030

10.2.5. Policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package and may be best placed to include / incorporate the recommended measures are:

- 63: Safe and secure travel for all - Active travel infrastructure accessibility improvement programme
- 62: Safe and secure travel for all - Bus stop improvement programme
- 64: Safe and secure travel for all - Improvements to bus and rail service accessibility
- 16: Fair access to daily activities - Improved service provision on supported bus services, including frequency and operating hours
- 7: Fair access to daily activities - Increase reach of Bikeability cycling education in places of education and workplaces
- 37: Fairer access to daily activities: Traffic signal re-timing and coordination to increase sustainable travel priority and improve traffic flows
- 20: Fair access to daily activities - Increased accessible transport services to cover wider range of routes and timings
- 21: Fair access to daily activities - Increased community transport services
- 6: Fair access to daily activities - Network of public bike share schemes
- 19: Fair access to daily activities - Increased Demand Responsive Transport services to cover wider geographical area and times, in particular rural areas
- 42: Fair access to daily activities - New express bus services between Dunfermline and Stirling and Glenrothes and Perth
- 113: Transport network resilience - Active travel network maintenance
- 112: Transport network resilience - Implement a regime of active travel asset management
- 73: Safe and secure travel for all- Prioritise new street lighting based on the Sustainable Travel Hierarchy, especially walking, cycling and wheeling routes
- 38: Fair access to daily activities - Support free bus travel for those who need it most
- 23: Fair access to daily activities - Support improved integration between transport modes, including ticketing and timetables
- 51: Fair access to daily activities - Support place-led public realm improvements and re-design of town centre streets to favour people, maintaining appropriate access for disabled people, emergency services and deliveries

10.3. Active Travel

- 10.3.1. The transport network should support a wide-ranging, efficient and high-quality active travel network to support a transition to net zero.
- 10.3.2. The local transport network should explore synergies with other Fife policy to promote active travel and wellbeing including Active Fife: A Strategy for Physical Activity and Sport 2021-2024 (“Active Fife Strategy”)³⁸.
- 10.3.3. Increasing active travel creates a more efficient way to get around locally while having a positive impact on people and the environment.
- 10.3.4. The Fife LTS options include an active travel strategy. To mitigate adverse environmental effects and maximise environmental opportunities of the proposed policies and options within the local transport strategy, Fife Council should also consider:

Active travel audit

A multifaceted assessment that considers:

- The **location, quality and availability** of existing and future roads and pavements, considering how best this infrastructure can be used with minimal changes, improving service but being mindful of carbon and wider sustainability challenges
- **Destinations within Fife**, including: community facilities, green open space, scenic locations, tourist spots, education facilities, sports and leisure grounds, transport hubs, etc
- **Social and historical context**, including: SIMDs; historical transport routes that can be rediscovered, reopened and revitalised; areas / locations that currently require accessibility infrastructure; vacant and derelict land, etc

Location informs how well distributed the network is i.e. which areas in Fife are well connected? Where are existing gaps or missing connectors that would increase uptake and increase size of Fife active travel network.

Quality informs effectiveness i.e. does the infrastructure meet the safety requirements? e.g. segregation, signage, lighting, tactile surfaces, etc. Is the infrastructure attractive / pleasant? e.g. integration of green space, additional amenities, separation from traffic, perceived as safe for lone / vulnerable users.

Availability informs feasibility and capacity within the network i.e. are there existing carriageways with sufficient space to host separate travel routes for traffic, pedestrians and cyclists? Are there constraints that are likely to slow / stop active travel infrastructure expansion. Mapping quick wins and relevant constraints based on available existing space and other environmental receptors would be very informative to this and future LTS options.

The baseline from the audit should include a mapping output to identify risks, gaps and opportunities within Fife. This will be a viable asset to inform options and policy proposals going forward. Proposals should be functional, simple and drive inclusive mobility.

Interventions should also be informed by equality impact assessment and categorised in terms of need (social, economic and environmental context) and feasibility (cost, technical requirements and scale). The Fife LTS should include policies and options to increase the quantity, quality and distribution of active travel routes within Fife in line with the Fife Active Travel Strategy and the Scotland Active Travel Framework.

- 10.3.5. Adopting the above measures as part of the active travel package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:
 - Air Quality and Noise – reduced pollution
 - Carbon emissions – behavioural change and reduced emissions

³⁸ <https://www.fva.org/downloads/Physical%20Activity%20&%20Sport%20Strategy%202021%20-%202024.pdf>

- Wellbeing – increased use of and improvements made to the active travel network
- Wellbeing – improved access to green space
- Population and Human Health – fairer access to transport network
- Population and Human Health – greater access to different transport types
- Cultural heritage – reintroduction of historical transport routes

10.3.6. Fife Council should consider the following options and policy as part of the Fife LTS:

- Undertake active travel audit
- Increase the quantity, quality and distribution of active travel routes
- Identify low SIMD areas and increase availability of active travel routes
- Increase cycling education around Fife, including: areas of low SIMD, education, workplaces

10.3.7. Policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package and may be best placed to include / incorporate the recommended measures are:

- 63: Safe and secure travel for all I- Active travel infrastructure accessibility improvement programme
- 66: Safe and secure travel for all - Undertake and implement the recommendations of proportionate equality impact assessments on all Roads & Transportation projects
- 1: Fair access to daily activities - Prioritised Fife-wide active travel network, including the SEStran Strategic Network, Active Freeways, Interurban Active Travel Routes, Connected Neighbourhoods 20-minute neighbourhood improvements, Cycle Parking Hubs and wayfinding
- 5: Fair access to daily activities - Levenmouth Connectivity Project Active Travel Network and River Park Routes
- 7: Fair access to daily activities - Increase reach of Bikeability cycling education in places of education and workplaces
- 113: Transport network resilience - Active travel network maintenance
- 112: Transport network resilience - Implement a regime of active travel asset management

10.4. Biodiversity

- 10.4.1. Biodiversity both within Fife and worldwide is under threat. The protection and restoration of the natural environment provides ecosystem services that benefit communities, agriculture, climate resilience and human health.
- 10.4.2. The transport network is a significant opportunity to address habitat connectivity impacted by linear infrastructure, biodiversity and food security, rewilding targets and climate resilience.
- 10.4.3. Changes to adapt current management and maintenance approaches, project objectives and aligning with current and emerging policy is likely to significantly effect biodiversity of the local transport network and permeate into other key sectors to facilitate green ambition of Fife Council as described in Plan for Fife 2021-2024.
- 10.4.4. The Fife LTS should take significant, meaningful and urgent steps to integrate biodiversity into the construction, operation and maintenance of transport projects. Making Space for Nature³⁹ sets out 24 wide ranging recommendations to the UK government required to achieve a coherent and resilient ecological network. These recommendations are grouped into five themes, which are summarised as:
- retaining and improving the management and condition of designated wildlife sites, particularly SSSIs
 - properly plan ecological networks, including restoration areas
 - take steps to improve the protection and management of these remaining wildlife habitats
 - derive multiple benefits from the ways we use and interact with our environment - embrace more radical thinking; flood management by creating wetlands is an obvious example. We need to exploit these 'win-win' opportunities to the full. Being better at valuing a wider range of ecosystem services would help this process
 - accept nature conservation to be necessary, desirable, and achievable
- 10.4.5. All interventions of the Fife LTS should be aligned with the Fife Local Biodiversity Action Plan (LBAP) and the Scottish Biodiversity Strategy. Engagement with the local biodiversity officer, statutory bodies and local community groups is recommended to identify opportunities, synergies with other projects and inform feasibility.
- 10.4.6. To mitigate adverse environmental effects and maximise environmental opportunities of the proposed policies and options within the local transport strategy, Fife Council should also consider:

Protect habitat

The construction and operational activities of the transport network have the potential to impact ecological receptors, including: habitat loss, air quality, noise and lighting.

The Fife LTS should consider the following for designated wildlife sites:

- Avoid direct adverse impacts, including: land take, vegetation clearance, etc
- Adopt measures to reduce traffic emissions to reduce noise and air quality emissions in proximity to habitat
- Review lighting strategy to reduce avoidable lighting in proximity to habitat

Green Networks

By its nature, the linear infrastructure of the local transport network (i.e. roads and rail) act as barrier to flora and fauna. Isolated pockets of habitat and associated species are particularly vulnerable - especially in the context of the growing threat of climate change.

The existing transport network does however have the potential to revitalise and connect wildlife through agricultural and urban environments. Fife Council should undertake a mapping exercise of the road network and available space to establish green corridors through Fife and identify key ecological receptors in proximity to the transport network infrastructure that would benefit from greater connectivity.

Maintenance methodology and procurement approach should be reviewed and changed to maximise biodiversity and additional efforts to map, control and eradicate invasive species (see also maintenance within the accessibility package).

Increase biodiversity

Fife Council should audit the capacity of the existing space within the transport network, prioritising current vacant and derelict land, and set ambitious targets to restore grey infrastructure and brownfield land to green and blue habitat appropriate to Fife's physical and geographical context i.e. informed by Fife's LBAP.

Biodiversity net gain targets to improve size, quality and connectivity of habitat for new development should be adopted for all transport projects.

Bus stop roofs and other similar spaces within the transport network should be reviewed and considered for green roofs / walls.

Increase access to green space

The Fife LTS should review the green space within Fife and increase the number and type of modes of transport to access it including:

- Rewilding green space in and around the transport network
- Ensuring public transport is accessible to natural environments rich in wildlife for people to enjoy and experience
- Reducing traffic volume and traffic speeds in proximity to green open spaces

Adopting the above measures as part of the biodiversity package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:

- Biodiversity – no direct adverse impact on designated wildlife sites
- Biodiversity – greater connectivity and enhancement
- Geology and soils – protection and enhancement of soils
- Population and Human Health – more attractive transport routes
- Wellbeing – improved access to green space
- Climate – retained habitat retains embedded carbon
- Climate – greater habitat and species security

10.4.7. Fife Council should consider the following options and policy as part of the LTS:

- Avoid direct adverse impacts on designated wildlife sites
- Reduce traffic noise and air quality pollution in proximity to designated wildlife sites

- Reduce avoidable lighting in proximity to designated wildlife habitat
- Avoid all Ancient Woodland Inventory and associated soil
- Additional action plan to map, control and eradicate invasive species
- Biodiversity net gain of 15% for all new development projects
- Identify capacity / space within the transport network to replace grey infrastructure to green blue infrastructure with 10% replacement by 2030, 20% by 2050 and 30% aspirational and in the long-term
- Establish 100 temporary (5 year) raised bed allotment plots within the transport network infrastructure
- Introduce and/or reinstate 30km of green corridors (minimum 2m wide)
- 200 bus stops with green roofs by 2030
- Increase transport modes to / from open green space by 20% with the majority of connections servicing high SIMD areas

10.4.8. Policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package and may be best placed to include / incorporate the recommended measures are:

- 114: Transport network resilience - Biodiversity net gain in all transport projects through reduction in unnecessary road space and planting

10.5. Carbon

10.5.1. Fife Council's Climate Action Plan 2020 includes sustainable travel:

“Climate Fife projects will focus on decarbonising the Council’s own fleet, reducing the need to travel by settlement and development planning and smart technology; promoting active travel, increasing vehicle efficiencies, making public transport more popular and increasing the uptake of ULEV (ultra-low emission vehicles) such as full-electric and hydrogen fuel vehicles.”⁴⁰

10.5.2. It identifies an action area to prepare for the revision of the Fife LTS and support sustainable transport projects through active travel, Fife Council’s carbon management plan, Leven Rail Link Blueprint and Levenmouth Connectivity project.

10.5.3. The carbon emissions of the transport sector are a significant portion of emissions associated with Fife and will be pertinent to meeting climate targets set regionally, nationally and internationally. Fife Council policy acknowledges that to be ‘climate friendly’, Fife will need to transform ‘the economy, infrastructure, land use and energy system to decarbonise how we live’. These goals are entwined with the transport network and will require bold, informed and urgent action to address.

10.5.4. International examples can help to inform options and policies for Fife LTS. In the United States, mapping of average household carbon footprints by postcode⁴¹ indicates that for urban areas located closer to public transport networks have lower average emissions. This shows a close relationship between sustainable travel and the wider climate impacts of communities. Fife Council should consider the value of having and developing strategic mapping to address future policy targets through the identification of high carbon producing areas.

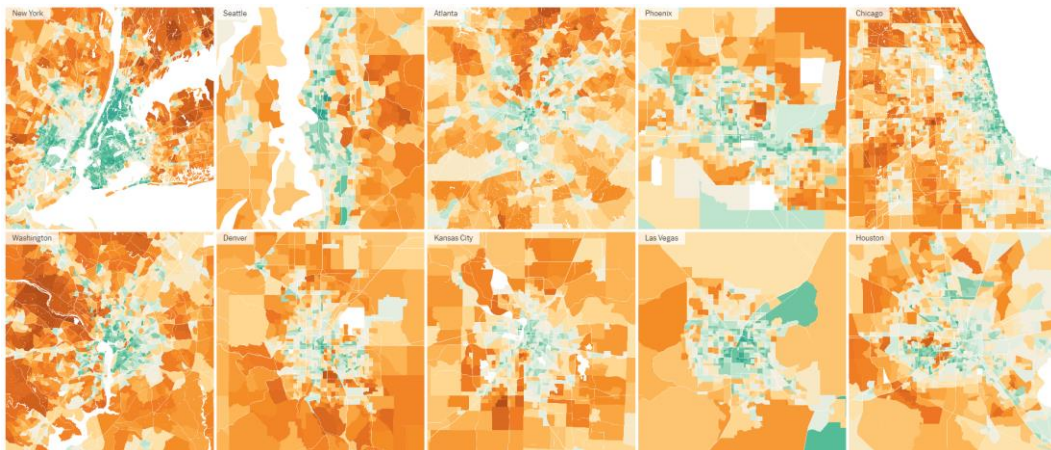


Figure 10.1: Neighbourhood Climate Impacts⁴²

10.5.5. Behavioural change will be a significant factor to achieve future targets, which will require a versatile, attractive and affordable network of low carbon alternatives.

⁴⁰ https://www.fife.gov.uk/__data/assets/pdf_file/0017/193121/ClimateActionPlan2020_summary.pdf

⁴¹ <https://coolclimate.org/maps>

⁴² <https://piedmontexedra.com/2022/12/in-the-news-nyt-map-of-neighborhood-climate-impacts-shows-piedmont-in-the-red>

Case Study: North Yorkshire SeaGrown⁴²

An initiative in the coastal waters of North Yorkshire includes growing seaweed, which provides agricultural output as well as significant carbon capture opportunities.

Scientists estimate that acre-for-acre, seaweed is up to 20 times more effective at absorbing carbon from the atmosphere than woodland is onshore⁴⁰.

This scheme will help York and North Yorkshire's as part of their Routemap to Carbon Negative An ambitious co-owned plan to deliver net zero by 2034, and carbon negative by 2040⁴¹.

Fife is a coastal region with the potential to promote these practices. The Fife LTS can incorporate these ideas and promote uptake as part of the design and planning process for ferry infrastructure and operational offsetting.

- 10.5.6. To mitigate adverse environmental effects and maximise environmental opportunities of the proposed policies and options within the local transport strategy, Fife Council should also consider:

Reduce energy consumption

Energy alternatives will help reduce carbon emissions, but reduced energy consumption will also be required to meet climate targets. This should include:

- Reducing the need for travel (this is included in part by option 55 “New developments should be located to reduce the need to travel and minimise the use of unsustainable modes, by the application of Transit-Oriented Development, 20-minute neighbourhoods and shared mobility concepts”)
- A review of existing / future lighting and heating requirements in the transport network and minimising / removing where suitable. This should include consultation with the police, statutory environmental stakeholders and the local community
- Increasing insulation of buildings in operation as part of the transport network
- All new transport buildings (e.g. ticket offices, terminals etc) having a minimum score of Excellent and above for BREEAM and NABERS UK
- A review of future procurement process to include energy reduction measures within the assessment criteria
- Alignment with Climate Fife’s themes, programmes and action areas to identify opportunities, synergies and constraints for energy saving

Reduce carbon emissions

The Fife LTS includes options and policy to decarbonise fleets and promotion of active travel, which would reduce carbon emissions. Other considerations include:

- A review of the cumulative construction and operational emissions of the proposed transport network developments to understand the potential impact on Fife Council’s net zero targets

⁴³ <https://www.seagrown.co.uk/pages/seaweed-carbon>

⁴⁴ <https://www.seagrown.co.uk/>

- Use new innovative technologies to extend the life of assets where possible reducing the need to replace i.e. thermal road repairs using renewable energy to melt and patch the road rather than dig out and replace
- Ensuring all grid connection energy within the transport network is supplied from a renewable source
- All new energy demands within the transport network should be powered with renewable energy or offset within Fife except where residual significant adverse environmental effects are likely to occur
- Using available land within transport network to install renewable energy e.g. on roofs of bus / rail depots, parking areas, etc and incorporating battery storage
- A goal to improve air quality and noise in proximity to the transport network and to have no new AQMAs from 2030
- Alignment with Climate Fife's themes, programmes and action areas to identify opportunities, synergies and constraints for reducing carbon emissions
- To assist with reducing carbon emissions from transport interventions, all operators using carbon offsetting should have investments located within Fife
- A review of future procurement process to prioritise carbon reduction measures
- A carbon strategy to address net zero targets, feasibility of measures and potential political blockers to meaningful and beneficial change for the Fife LTS

Collective improvements

- Engage with wider departments of Fife Council to identify quick wins, synergies and opportunities to accelerate carbon reduction and overcome hurdles that would otherwise restrict a department acting alone. This should include a review of renewable technologies, available land use and battery storage / use
- Identify energy consumption needs and constraints of non-transport Fife Council operations to map potential opportunities for low carbon technologies and cost savings across departments
- Explore land in the transport network suitable for carbon sequestration, prioritising peatland, carbon rich soils and seaweed opportunities.

10.5.7. Adopting the above measures as part of the carbon package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:

- Air Quality and Noise – reduced pollution
- Climate – reduced emissions
- Biodiversity – habitat restoration

10.5.8. Fife Council should consider the following options and policy as part of the LTS:

- Minimise non-essential lighting within the transport network
- Increased insulation for all transport network buildings
- Minimum energy and renewable requirements for new buildings on the transport network
- Use of renewable technologies within the transport network estate
- Alignment with Climate Fife's themes, programmes and action areas to identify opportunities, synergies and constraints for reducing carbon emissions and energy consumption
- Cross department engagement to maximise efficiencies and cost effectiveness of renewable technologies

- Explore land in the transport network suitable for carbon sequestration

10.5.9. Policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package and may be best placed to include / incorporate the recommended measures are:

- 102: Just transition to net zero - Sustainable procurement practices to target embodied carbon of infrastructure projects
- 103: Just transition to net zero - Light Fife Green energy efficient lighting programme
- 93: Just transition to net zero - Support the decarbonisation of the bus network in Fife
- 92: Just transition to net zero - Support the decarbonisation of the rail network in Fife

10.6. Climate Resilience

10.6.1. All infrastructure development should be aligned with the Climate Fife – Sustainable Energy and Climate Action Plan 2020-30, which states that plans and projects need to be climate ready and *'increase the resilience of Fife communities and the economy to help minimise the impacts from unavoidable climate change'*⁴⁵.

10.6.2. To achieve this as part of the local transport strategy, Fife Council should consider:

Nature based solutions

There are multiple benefits to nature-based solutions to address current and future climate pressures, including: heat stress, storm events, flooding and biodiversity loss. Fife Council should consider:

- Planting trees at transport hubs and along transport routes to provide: shade, more green space and storm water retention. As part of the Scottish Government's Update to the Climate Change Plan 2018-32⁴⁶, proposes woodland expansion to cover 21% of Scotland by 2032. Aligning the actions of the Fife LTS achieves multiple targets and additional benefits.
- Convert unused grey infrastructure into green / blue networks to increase local flood storage capacity, biodiversity and access to green space
- Introduce green infrastructure into traffic calming measures. This can potentially decrease the segregation effect for wildlife caused by roads and have wider community and climate resilience benefits
- Identify potential sites for allotments and orchards to improve community amenity and food security
- Identify target areas to improve land value optimisation within the transport network, including: carbon sequestration / offsetting, biodiversity net gain, nutrient neutrality and flood plain compensation.

Strategic land use

As climate factors change, land use will need to adapt and by: reprioritising areas, avoiding constraints and building strategically, Fife Council can improve the resilience of the transport infrastructure and surrounding areas. Fife Council should consider:

- A review of infrastructure located within future coastal flood zones to identify future risk. Fife Council can then consider land use change for habitat creation to meet biodiversity and carbon targets, build or retrofit linear infrastructure to create active travel routes that can act as buffers to increase the life span for essential infrastructure such as train lines or emergency routes
- Review transport network and audit impermeable surfaces and structures to identify opportunities to increase flood storage capacity
- New transport developments should contribute a net gain to adaptation measures

10.6.3. Adopting the above measures as part of the climate resilience package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:

- Climate – greater resilience

⁴⁵ https://www.fife.gov.uk/__data/assets/pdf_file/0017/193121/ClimateActionPlan2020_summary.pdf

⁴⁶ <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2020/12/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/documents/update-climate-change-plan-2018-2032-securing-green-recovery-path-net-zero/update-climate-change-plan-2018-2032-securing-green-recovery-path-net-zero/govscot%3Adocument/update-climate-change-plan-2018-2032-securing-green-recovery-path-net-zero.pdf>

- Biodiversity – more green space
- Population and Human Health – more amenities
- Water – increased flood storage and increase groundwater retention

10.6.4. Fife Council should consider the following options and policy as part of the Fife LTS:

- Plant more trees at transport hubs and along transport routes to provide shade
- Reduce grey space and replace green / blue infrastructure
- Identify locations for allotments and orchards within the transport network estate
- Net increase in flood storage
- New transport developments should contribute a net gain to adaptation measures
- Climate resilience risk review for infrastructure

10.6.5. Policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package and may be best placed to include / incorporate the recommended measures are:

- 114: Transport network resilience - Biodiversity net gain in all transport projects through reduction in unnecessary road space and planting
- 109: Transport network resilience - Climate resilience asset monitoring programme
- 110: Transport network resilience - Network resilience plan
- 108: Transport network resilience – Transport flood protection scheme

10.7. Community

- 10.7.1. Community is a key part of the environment and is at the heart of a local transport strategy. Community involvement has been a key part of the consultation process to date in developing the Fife LTS policy and options.
- 10.7.2. Engagement with the community has potentially significant benefits for the Fife LTS.

Case Study: Climate Action Strathaven⁴⁶

Strathaven and Stonehouse are two villages within South Lanarkshire with populations of around 7,000 and 3,000 respectively. Historically, public transport connections to Glasgow required a lengthy trip including a bus to Hamilton and a train into the city centre.

Climate Action Strathaven is a community-led group that identified a need for a more direct service and make public transport **cheaper, faster and more comfortable** for people to commute to Glasgow rather than using private cars or a two-part public transport network.

This initiative now delivers five services a day and is an exemplar project of empowering communities, improving transport and tackling carbon emissions.

- 10.7.3. The following has been recommended to continue to engage and improve the Fife LTS.

Increase education and understanding of the natural environment

The transport network connects people with the wider environment but more can be done to improve education and understanding, including:

- Information boards and posters to inform users of the wider Fife environment, such as: transport alternatives, wildlife sites and biodiversity projects, historic locations and community hubs. This should be approached strategically and informed by an equality impact assessment to reach vulnerable users and key communities / demographics
- A review of key transport methods and routes to and from education and community locations within Fife. This review should consider safety, environmental constraints and potential opportunities to improve efficiency, attractiveness and quality of travel routes
- Undertake an education campaign to improve awareness, understanding and uptake of sustainable travel in Fife

Community programmes

Fife has a long history of celebrated towns and villages with community garden groups and woodland stewardships at the forefront of the work and vision. Fife Council has an opportunity to empower communities and galvanise change by:

- offering land to be revitalised as allotments, green space and biodiversity hot spots either on a temporary or permanent basis
- targeting funding to reopen historic travel routes and placemaking spaces in and around transport hubs
- strategy to improve air quality and noise within communities

⁴⁷ <https://castrathaven.org/>

- create partnerships to exchange knowledge and resources to better inform policy decisions and futureproofing of the transport network

Parking

Parking within the public realm, when not considered and managed properly, can negatively impact on the community space and transport links.

The RAC foundation found that the average car or van in 2021 was driven just 4% of the time, and that this ratio has stayed more or less constant for decades⁴⁸. Fife had over 200,000 vehicles licensed at the end of 2015⁴⁹. The potential implications from parked vehicles on the transport network and public realm are significant.

Each parking space is likely to be an area of paved, impermeable ground with associated access, infrastructure (e.g. lighting, flood storage) and maintenance. These factors are important to consider for future land use and in the context of the recognised climate emergency and resource allocation within the Fife LTS.

Public space is a finite resource. Parking of private vehicles limits that space and can restrict alternative, more sustainable transport methods such as buses, walking, cycling, and wheeling. Fife Council will need to consider the land use and access for the community as a whole.

In addition to the electric vehicle charging point options already included in the Fife LTS options, Fife Council should consider:

- a review of private vehicle parking and blue badge requirements
- minimising private vehicle parking where wider adverse effects are identified and existing land use does not align with the sustainable transport hierarchy
- rotating land use on a temporal basis depending on community needs, for example: certain hours on a Sunday to allow for local markets and events that would deliver wider benefits
- removing on street parking within key transport routes and constrained urban environments to facilitate better bus and cycle travel whilst considering accessibility for those who need it.
- retrofitting existing carparks to increase flood storage and available green space for wildlife i.e. sponge cities / floodable green space.
- including a significant portion green and blue infrastructure within all new parking projects (considering where historical infrastructure can be restored (streams, burns etc).
- a feasibility study of solar power for all existing parking areas within the transport network estate

10.7.4. Adopting the above measures as part of the community package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:

- Air quality – reduced pollution
- Biodiversity – more green space
- Water – increased flood storage
- Climate – improved resilience
- Climate – increase renewables capacity
- Noise – reduced pollution
- Population and Human Health – more amenities

⁴⁸ Standing Still, Emily Nagler (2021) RAC Foundation

⁴⁹ <https://www.transport.gov.scot/publication/scottish-transport-statistics-no-35-2016-edition/sct01171871341-04/>

- Population and Human Health – more reliable bus routes

10.7.5. Fife Council should consider the following options and policy as part of the LTS:

- Identify locations for allotments and orchards within the transport network estate
- Make land available to community groups to develop green spaces
- Fife parking review based on the sustainable transport hierarchy
- Renewable energy feasibility study for all car parks within the transport network estate
- Incorporating green and blue infrastructure into new car parks
- Increase flood storage capacity and green space within existing parking

10.7.6. Policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package and may be best placed to include / incorporate the recommended measures are:

- 50: Fair access to daily activities - Manage parking supply in major towns and cities to balance access and sustainable travel
- 46: Fair access to daily activities - New Fife parking strategy
- 114: Transport network resilience - Biodiversity net gain in all transport projects through reduction in unnecessary road space and planting
- 118: Delivering the strategy - Adopt the Sustainable Investment Hierarchy in all service provision
- 3: Fair access to daily activities - Embed the Sustainable Travel Hierarchy on all Fife Council projects
- 120: Delivering the strategy - Community-led local area transport strategies

10.8. Landscape and heritage

- 10.8.1. The inherent linear nature of transport infrastructure such as roads and rail have a significant influence over the landscape. Consideration of the design, planting, maintenance and distribution of transport infrastructure can influence streetscape and wider landscape in a positive way.
- 10.8.2. The historic environment has an intrinsic interconnectivity with the transport network; from bridges and stations to historic routes, canals and former branch railway lines that contribute to our active travel network. There is potential for mutual benefits through transport infrastructure investment.
- 10.8.3. The Fife LTS should consider:
- Restoration and replacement of historic signposts in Fife
 - Protect and enhance dry stone walls, hedgerows and historic assets within the transport network
 - Audit of existing historical assets within the transport network and an action plan to safeguard their future use, setting and characteristics. This should include consultation with Historic Environment Scotland and local communities.
 - Protect and enhance landscape character areas
 - Additional information boards on the history and landscape of Fife
 - More access to / from historical sites and scenic areas, with emphasis on equality
- 10.8.4. Adopting the above measures as part of the climate resilience package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:
- Cultural Heritage – recording, restoring and protecting historical assets
 - Landscape and Visual – more protection
 - Population and Human Health – improved links with local history and identity
- 10.8.5. Fife Council should consider the following options and policy as part of the LTS:
- More education and access to historical and scenic elements of Fife
 - Restoration and replacement of historic signposts in Fife
 - Protect and enhance dry stone walls, hedgerows and historic assets
 - Audit of existing historical assets within the transport network and an action plan to safeguard their future use, setting and characteristics.
 - Protect and enhance landscape character areas
- 10.8.6. There are currently no policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package.

10.9. Waste

10.9.1. Zero Waste Fife⁵⁰ has an action plan to reduce waste with six key themes:

1. Preventing waste
2. Minimising the environmental impacts of waste including climate change
3. Engaging and communicating with householders and other stakeholders
4. Optimising services and infrastructure for the future
5. Maximising economic benefit on the way to zero waste and a circular economy
6. Managing non-recyclable waste

10.9.2. The transport network has a pivotal role in waste management for the construction, operation and decommissioning of projects and activities.

10.9.3. Waste can be a valuable resource if there is space to store, process and transport. The transport network has opportunities to collaborate with other Fife departments and adjoining councils to reduce waste and contribute to the waste targets.

10.9.4. The Fife LTS should consider:

- Reviewing contracts with transport operators to incorporate waste prevention into key performance indicators
- An audit of the existing waste streams and capacity to adopt the waste hierarchy. This should include a review of constraints and opportunities to work with local partners and Fife Council departments to improve efficiency
- Investigate opportunities to store and reuse primary and secondary aggregates for future projects. Changing land use within the transport network to allow for storing and processing aggregates would have significant financial and carbon savings for future projects. Procurement contracts for construction / maintenance contractors on Fife transport projects would also need to be reviewed to ensure that the re-use of Fife Council aggregates should have first refusal to ensure material is reused
- Prioritise the waste hierarchy to retain, reuse and recycle existing material and infrastructure as part of the transport network

10.9.5. Adopting the above measures as part of the climate resilience package would mitigate adverse effects and enhance opportunities within the proposed Fife LTS, including:

- Material Assets and Waste – reduced consumption and waste
- Climate – reduced emissions

10.9.6. Fife Council should consider the following options and policy as part of the LTS:

- Contract procurement review to reduce waste and enable aggregate reuse for construction projects at scale
- A review of existing and predicted waste streams to reduce waste and reuse / recycle as a priority

10.9.7. Policy and options proposed within the Fife LTS included as part of the compatibility assessment that align with this package and may be best placed to include / incorporate the recommended measures are:

⁵⁰ https://www.fife.gov.uk/_data/assets/pdf_file/0032/193379/Resources-Strategy-Action-Plan.pdf

- 104: Just transition to net zero - Use recycled materials on infrastructure projects
- 102: Just transition to net zero - Sustainable procurement practices to target embodied carbon of infrastructure projects

11 Other Considerations

11.1. Equality

11.1.1. The Equality Act 2010 introduced a new public sector equality duty which requires public authorities to try to:

- eliminate discrimination and harassment victimisation
- advance equality of opportunity
- foster good relations between and across a range of protected characteristics

11.1.2. Fife Council developed the Equality, Diversity and Human Rights Equality Outcomes 2021 – 2025⁵¹ which states:

“The Public Sector Equality Duty (PSED) requires the Council to assess the impact of changes in policy and practice in relation to the nine protected characteristics. Similarly, the Fairer Scotland Duty requires a written assessment (in relation to strategic decisions) of how inequalities of outcome caused by socio-economic disadvantage can be reduced. Fife Council has incorporated the requirements of the latter into the Equality Impact Assessment Guidance, and assessments are required as part of the committee reporting process.”

11.1.3. On a national scale, guidance includes: Equality Act (2010) (Equality Impact Assessment), Environmental Assessment (Scotland) Act 2005, General Data Protection Regulations (GDPR) and Data Protection Act 2018 (Data Protection Impact Assessment).

11.1.4. Equality Impact assessments are a way of assessing the effects or impacts of a council policy or function on removing barriers to equality. Equality impact assessments outline policies which are likely to have an impact (positive or negative) on service users.

11.1.5. An equality impact assessment is due to be completed in conjunction with the Fife LTS and it is recommended to be revisited at each key stage of the options development. This will ensure that it is in accordance with the regulations and guidance but also that equality will be embedded in the options development process.

11.2. Child Rights

11.2.1. In December 2018 the Scottish Government published the Progressing the Human Rights of Children in Scotland: 2018-2021 Action Plan and the Progressing the Human Rights of Children in Scotland: Report 2018, in line with the duties placed on Scottish Ministers under Part 1 of the Children and Young People (Scotland) Act 2014.

11.2.2. Child Rights and Wellbeing Impact Assessment (CRWIA) of legislation and policy in Scotland is a tool that can help to inform and meet these duties. CRWIA is a process through which you can identify, research, analyse and record the anticipated impact of any proposed law, policy or measure on children’s human rights and wellbeing.

11.2.3. This non-statutory guidance was originally produced for Scottish Government officials but is also suitable for use by public authorities (such as Fife Council) and third sector organisations.

11.2.4. CRWIA follows accepted impact assessment practice and should take place as early as possible in the development of a PPS. The CRWIA takes the UN Convention on the Rights of a Child as its starting point for measuring policy / measures for their compliance with the Articles of the Convention. Then it requires the consideration of how the policy / measure will advance the

⁵¹ <https://www.fife.gov.uk/kb/docs/articles/council-and-democracy/equality,-diversity-and-human-rights>

realisation of children's rights in Scotland providing evidence for any conclusions made in the process.

- 11.2.5. Fife Council has engaged with local schools as part of the development of options for the Fife LTS. This empowers younger people and improves the decision-making process. Fife Council should continue to engage with younger people throughout the lifespan of the Fife LTS and monitor the successes, gaps, feedback and opportunities going forward.

12 Monitoring

- 12.1.1. Under Section 19 of the Act, Fife Council is required to monitor significant environmental effects of the implementation of the Fife LTS.
- 12.1.2. The development of the Fife LTS will be subject to further environmental assessment and continued consultation.
- 12.1.3. This SEA Environmental Report has provided a narrative of the assessment and consultation work undertaken to date and sets out strategic recommendations for this stage in the design.
- 12.1.4. The proposed approach to the monitoring will be the continued environmental assessment under the planning requirements, managed by Fife Council and included in the consultation stages as the design progresses. Objectives and environmental priorities are to be reviewed and refined as part of this design process.
- 12.1.5. As part of the delivery of the Local Transport Strategy, Fife Council will undertake ongoing monitoring. Key measures set out as Transport Planning Objectives and Strategic Environmental Assessment objectives will be reviewed and reported. Progress will be used to inform subsequent action plans.

13 Statutory Consultation and SEA Timeline

13.1. Statutory Consultation

13.1.1. Statutory consultees were engaged as part of the SEA Scoping process. The key consultees have included:

- Historic Environment Scotland
- Nature Scot
- SEPA
- the wider Fife Council environment teams

13.1.2. Following the completion of the SEA Environmental Report, it will be issued to consultees, via the SEA Gateway. Relevant feedback will be recorded and responded to in the Post Adoption Statement.

13.2. Public consultation

13.2.1. Throughout the wider SEA process there will be continued engagement with the statutory consultees. In addition, the wider public will be given the opportunity to comment / engage to ensure a high degree of transparency in the SEA decision-making process.

13.2.2. Fife Council are consulting with the community, stakeholders and partners on the draft Local Transport Strategy, Strategic Environmental Assessment and Equality Impact Assessment in early 2023. Consultation will comprise a survey, public pop-up consultation events and stakeholder workshops.

13.3. Post adoption statement

13.3.1. SEA Post Adoption Statements are intended to improve the transparency of the decision-making process within PPS such as the Fife LTS.

13.3.2. The SEA Post-Adoption Statement will document:

- how environmental considerations have been integrated into the Fife LTS
- how the SEA Environmental Report and consultation responses have been taken into account
- recommendations going forward
- an overview of monitoring potential significant environmental effects of implementing the Fife LTS

13.4. Proposed Consultation Timescale, Anticipated Milestones and Consultation

13.4.1. The Environmental Report for the LTS will be available alongside the draft Plan for a proposed public consultation period for a minimum of six to eight weeks. [Table 13.1](#) below illustrates this alignment and provides the anticipated timescales for each.

Table 13.1: Proposed Timescale & Milestones

Strategy Preparation Stages	SEA Stages	Anticipated Timescale & Consultation Period, if required
Preliminary Assessment and Research	Scoping Report: <ul style="list-style-type: none"> • Collate and forecast baseline environmental information • Environmental input to draft LTS Objectives and transport interventions 	<ul style="list-style-type: none"> • November 2021 – February 2022 (research and draft) • Consultation January 2022 – February 2022 • Scoping Report submitted March 2022
Environmental Assessment	Environmental Assessment: <ul style="list-style-type: none"> • Assessment of LTS transport interventions • Prepare Environmental Report 	August 2022 – January 2023
Consult on Environmental Report and draft Strategy	Publish & Consult on Draft Environmental Report	February 2023 – March 2023
Adopt Plan	Post-Adoption Statement	Summer 2023
Monitor & Review	Monitor and Review	On-going/Annual review

Appendix A – Initial List of the International, National and Local Legislative Drivers

Relevant PPS and Legislation	Summary / Objectives or requirements
International	
Rio Declaration (1992)	The Declaration sets out 27 principles to enable the global community to work towards international agreements that respect the interests of all and protect the integrity of the global environmental and developmental systems. The Declaration highlighted the necessity to protect and enhance the environment, economics and social aspects in both developed and developing countries. The Rio Declaration led to an international commitment to Agenda 21 which represented a global action on sustainable development.
Kyoto Protocol (1997)	The UK has committed itself to a 12.5% reduction in greenhouse gas emissions from 1990 levels by 2008-2012. It has also set its own domestic target of a 20% reduction in carbon dioxide by 2010.
Paris Agreement (2015)	The Paris Agreement is the first-ever universal, legally binding global climate change agreement, adopted at the Paris climate conference (COP21) in December 2015. It sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. It also aims to strengthen countries' ability to deal with the impacts of climate change and support them in their efforts.
Johannesburg Declaration (2002)	The Johannesburg Declaration on Sustainable Development was adopted at the World Summit on Sustainable Development (WSSD) in 2002. It is built on earlier declarations made at the United Nations Conference on the Human Environment at Stockholm in 1972 and the Earth Summit in Rio de Janeiro in 1992. The Declaration commits the nations of the world to build a humane, equitable and carry global society, cognisant of the need for human dignity for all.
Gothenburg Protocol (1990)	The Gothenburg Protocol was established to address pollutants that cause acidification and ground-level ozone with the understanding that air pollutants cross borders and affect air quality far from where emitted. It sets limits on air pollutants including sulphur dioxide, nitrogen oxide, ammonia and volatile organic compounds that are hazardous to human health and the environment. It was updated in 2012 to include particulate matter (PM) and black carbon (as a component of PM) and to include new commitments for 2020.
National	
National Planning Framework 4 (2022) (Draft)	NPF4 will, when adopted, set out the Scottish Governments priorities and policies for the planning system up to 2045 and how our approach to planning and development will help to achieve a net zero, sustainable Scotland by 2045. NPF4 differs from previous NPFs in two ways. It incorporates Scottish Planning Policy and the NPF into a single document and will form a part of the statutory development plan.
National Planning Framework 3 (2014)	The National Planning Framework 3 is the Scottish Government's Strategy for the long-term development of Scotland's towns, cities and the countryside. It sets out key planning outcomes for Scotland: <ul style="list-style-type: none"> • A successful sustainable place – supporting economic growth, regeneration and the creation of well-designed places • A low carbon place – reducing our carbon emissions and adapting to climate change • A natural resilient place – helping to protect and enhance our natural cultural assets and facilitating their sustainable use

	<ul style="list-style-type: none"> • A connected place – supporting better transport and digital connectivity
Scottish Government National Outcomes	<p>11 National Outcomes were set for the Scottish Government as part of the National Performance Framework. These are:</p> <ol style="list-style-type: none"> 1. Children & Young People – We grow up loved, safe and respected so that we realise our full potential 2. Communities – We live in communities that are inclusive, empowered, resilient and safe 3. Culture – We are creative and our vibrant and diverse cultures are expressed and enjoyed widely 4. Economy – We have a globally competitive, entrepreneurial, inclusive and sustainable economy 5. Education – We are well educated, skilled and able to contribute to society 6. Environment – We value, enjoy, protect and enhance our environment 7. Fair Work & Business – We have thriving and innovative businesses, with quality jobs and fair work for everyone 8. Health – We are healthy and active 9. Human Rights – We respect, protect and fulfil human rights and live free from discrimination 10. International – We are open, connected and make a positive contribution internationally 11. Poverty – We tackle poverty by sharing opportunities, wealth and power more equally
Town & Country Planning (Scotland) Act 1997	This is the principal piece of legislation governing the use and development of land in Scotland.
Planning Etc (Scotland) Act 2006	Amends certain aspects of the 1997 Act, relating to both Development Planning and Development Management. Introduces a new development plan hierarchy: National Planning Framework; Strategic Development Plans; Local Development Plans.
The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997	Primary legislation which sets out the legal requirements for the control of development and alterations that affect buildings that are listed or in conservation areas, and the framework by which control is maintained.
Historic Environment Policy for Scotland (HEPS) 2019	<p>HEPS is a policy statement directing decision-making that affects the historic environment. It is a non-statutory document. It is relevant to a wide range of decision-making at national and local levels, supported by detailed policy and guidance and should be taken into account when making decisions which will affect the historic environment. It is a material consideration for planning proposals.</p> <p>In particular, HEP3 states that <i>“Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment”</i>.</p>
Infrastructure Investment Plan for	Scotland aims to deliver a wellbeing economy. That means ensuring society thrives economically, socially and environmentally, and that we (Scotland Government) deliver sustainable and inclusive growth for all. Making the right investments in the right places is crucial.

<p>Scotland 2021-22 to 2025-26</p>	<p>Investment in infrastructure will be key to Scotland’s economic recovery from COVID-19, and also in supporting public services, delivering our (Scotland Government) transition to net zero, and meeting the needs of people and communities across Scotland.</p> <p>This Infrastructure Investment Plan sets out what we (Scottish Government) are doing with capital funds spent on infrastructure. It provides a strategic picture of Scottish Government-wide priorities across the next five financial years from 2021-22 until 2025-26.</p> <p>This Plan includes the Sustainable Investment Hierarchy that encourages the maintenance, repair and use of our existing assets over new build.</p>
<p>Nature Conservation (Scotland) Act 2004</p>	<p>The Act places duties on public bodies in relation to the conservation of biodiversity, increases protection for Sites of Special Scientific Interest (SSSI), amends legislation on Nature Conservation Orders, provides for Land Management Orders for sites and associated land, strengthens wildlife enforcement legislation, and requires the preparation of a Scottish Fossil Code.</p>
<p>Scottish Forestry Strategy 2019 - 2029</p>	<p>Vision In 2070, Scotland will have more forests and woodlands, sustainably managed and better integrated with other land uses. These will provide a more resilient, adaptable resource, with greater natural capital value, that supports a strong economy, a thriving environment, and healthy and flourishing communities.</p> <p>Objectives</p> <ul style="list-style-type: none"> • Increase the contribution of forests and woodlands to Scotland’s sustainable and inclusive economic growth • Improve the resilience of Scotland’s forests and woodlands and increase their contribution to a healthy and high-quality environment • Increase the use of Scotland’s Forest and woodland resources to enable more people to improve their health, well-being and life chances <p>Priorities</p> <ul style="list-style-type: none"> • Ensuring forests and woodlands are sustainably managed • Expanding the area of forests and woodlands, recognising wider land-use objectives • Improving efficiency and productivity, and developing markets • Increasing the adaptability and resilience of forests and woodlands • Enhancing the environmental benefits provided by forests and woodlands • Engaging more people, communities and businesses in the creation, management and use of forests and woodlands
<p>Scottish Biodiversity Strategy 2004</p>	<ul style="list-style-type: none"> • To conserve biodiversity for the health, enjoyment and wellbeing of the people of Scotland now and in the future • To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats • To increase awareness, understanding and enjoyment of biodiversity, and engage many more people in conservation and enhancement • To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice • To develop an effective management framework that ensures biodiversity is taken into account in all decision making

	<ul style="list-style-type: none"> To ensure that the best new and existing knowledge on biodiversity is available to all policy makers and practitioners
The Environmental Noise (Scotland) Regulations 2006	<p>Avoiding, preventing or reducing on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. This will involve:</p> <ul style="list-style-type: none"> Informing the public about environmental noise maps for large urban areas (referred to as 'agglomerations' in the END and in these regulations), major roads, major railways and major airports as defined in the END and Preparing action plans based on the results of the noise where necessary and preserve environmental noise quality where it is good
Climate Change (Scotland) Act 2009	<ul style="list-style-type: none"> Part 1 of the Act creates the statutory framework for greenhouse gas emissions reductions in Scotland by setting an interim 42 per cent reduction target for 2020, with the power for this to be varied based on expert advice, and an 80 per cent reduction target for 2050. To help ensure the delivery of these targets, this part of the Act also requires that the Scottish Ministers set annual targets, in secondary legislation, for Scottish emissions from 2010 to 2050. The Scottish Ministers will take advice on the targets they set. In the first instance this advice will be provided by the UK Committee on Climate Change. However, Part 2 of the Act contains provisions which will allow the Scottish Ministers to establish a Scottish Committee on Climate Change or to designate an existing body to exercise advisory functions should it be decided that this is appropriate. Part 3 places duties on the Scottish Ministers requiring that they report regularly to the Scottish Parliament on Scotland's emissions and on the progress being made towards meeting the emissions reduction targets set in the Act. Part 4 places climate change duties on Scottish public bodies. This Part also contains powers to enable the Scottish Ministers, by order, to impose further duties on public bodies in relation to climate change. <p>The Act includes other provisions on climate change in Part 5, including adaptation, forestry, energy efficiency and waste reduction. Public engagement is a significant feature of Part 6 of the Act, which also includes provision on carbon assessment.</p>
Climate Change Plan: Third Report on Proposals and Policies 2018 – 2032 (RPP3)	<p>By 2032, Scotland will have reduced its emissions by 66% against 1990 levels. This will be an enormous transformational change – achieved by Government and the public, private and third sectors alongside families and communities. It is an exciting time for Scotland with tremendous opportunities, not only in reducing emissions but in growing and diversifying our economy, improving the wellbeing of our people, and protecting and enhancing our natural environment.</p>
Climate Change (Emissions Reductions Targets) (Scotland) Act 2019	<p>Sets targets for greenhouse gas emissions reduction, in relation to a 1990/95 baseline, of 75% by 2030, 90% by 2040 and net zero by 2045.</p>
National Air Quality Strategy -Revised 2000	<ul style="list-style-type: none"> To improve and protect ambient air quality in the UK in the medium-term To protect people's health and the environment without imposing unacceptable economic or social costs The strategy sets objectives for eight main air pollutants to protect health

	Local authorities work towards achieving the objectives prescribed by regulation for seven of the pollutants: benzene; 1, 3-butadiene; carbon monoxide; lead; nitrogen dioxide; particles (PM10); and sulphur dioxide.
Cleaner Air for Scotland 2 2021	<p>To maximise the benefits from action to tackle poor air quality, it is essential that we build on the linkages with other key government policies and strategies across transport, climate change, health, environment, planning, energy and land use.</p> <p>This new air quality strategy sets out how the Scottish Government will continue to deliver air quality improvements over the next five years. All of this is necessary if we are to secure our vision of Scotland having the best air quality in Europe – a quality of air that aims to protect and enhance health, wellbeing and the environment.</p> <p>The actions set out in this strategy are built on the work of an independently led review of Cleaner Air for Scotland completed in 2019.</p>
Scotland's Zero Waste Plan (2010)	<p>It aims to drive change and inspire households, businesses, community groups, local authorities and the wider public sector to change the way they view and deal with waste. It contains a broader approach to tackle all waste, not just waste collected by councils.</p> <ul style="list-style-type: none"> • The plan proposes a new way of looking at the materials Scotland produces - recognising everything designed, produced and used is a resource which has a value. It will introduce 'radical' new measures, including: <ul style="list-style-type: none"> • Landfill bans for specific waste types, aiming to reduce greenhouse gas emissions and capturing their value • Separate collections of specific waste types, including food (to avoid contaminating other materials), to increase reuse and recycling opportunities and contributing to the Scottish Government's renewable energy targets • Two new targets that will apply to all waste: 70 per cent target recycled, and maximum five per cent sent to landfill, both by 2025 • Restrictions on the input to all energy from waste facilities, in the past only applicable to municipal waste • Encouraging local authorities and the resource management sector to establish good practice commitments and work together to create consistent waste management services, benefitting businesses and the public.
Water Environment Water Services (Scotland) Act 2003	<p>The Act sets out the arrangements for the protection of the water environment. The aim of the Act is to protect and improve the ecological status of the water environment whilst also protecting the social and economic interests of those who depend on the water environment. The Act aims to:</p> <ul style="list-style-type: none"> • Promote sustainable water use • Ensure the water environment achieves good ecological status • Promote sustainable flood management.
Flood Risk Management (Scotland) Act 2009	<p>The Act provides a more sustainable and modern approach to flood risk management, suited to the needs of the 21st century and to the impact of climate change. The Act will also create a more joined up and coordinated process to manage flood risk at a national and local level. Specific measures within the Flood Risk Management (Scotland) Act 2009 include:</p> <ul style="list-style-type: none"> • A framework for coordination and cooperation between all organisations involved in flood risk management. • Assessment of flood risk and preparation of flood risk management plans. • New responsibilities for SEPA, Scottish Water and Local Authorities in relation to flood risk management.

	<ul style="list-style-type: none"> • A revised, streamlined process for flood protection schemes. • New methods to enable stakeholders and the public to contribute to managing flood risk. • A single enforcement authority for the safe operation of Scotland's reservoirs.
<p>Scotland's Economic Strategy 2015</p>	<p><i>Scotland's Economic Strategy</i> sets out how we will deliver on our vision for Scotland. It brings increased focus to the dual objectives of boosting competitiveness and tackling inequality and sets out the priorities we will target to achieve these mutually reinforcing goals.</p> <p>The approach to <i>Scotland's Economic Strategy</i> is underpinned by four priorities for sustainable growth:</p> <ul style="list-style-type: none"> • Investing in our people and our infrastructure in a sustainable way • Fostering a culture of innovation and research and development • Promoting inclusive growth and creating opportunity through a fair and inclusive jobs market and regional cohesion; and • Promoting Scotland on the international stage to boost our trade and investment, influence and networks.
<p>National Transport Strategy 2020: Protecting Our Climate and Improving Lives</p>	<p>The National Transport Strategy (NTS2) sets out an ambitious and compelling vision for Scotland's transport system for the next 20 years. Vision: We will have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors</p> <p>There are four priorities to support that vision.</p> <ul style="list-style-type: none"> • reduces inequalities • takes climate action • helps deliver inclusive economic growth • improves our health and wellbeing
<p>Land Reform (Scotland) Act 2016</p>	<p>An Act of the Scottish Parliament to make provision for a land rights and responsibilities statement; to establish the Scottish Land Commission, provide for its functions and the functions of the Land Commissioners and the Tenant Farming Commissioner; to make provision about access to, and provision of, information about owners and controllers of land; to make provision about engaging communities in decisions relating to land; to enable certain persons to buy land to further sustainable development; to make provision for non-domestic rates to be levied on shootings and deer forests; to make provision about the change of use of common good land; to make provision about the management of deer on land; to make provision about access rights to land; to amend the law on agricultural holdings to provide for new forms of agricultural tenancy, to remove the requirement to register before tenants of certain holdings can exercise a right to buy, to provide a new power of sale where a landlord is in breach of certain obligations, to provide about rent reviews, to expand the list of the persons to whom holdings can be assigned or bequeathed and to whom holdings can be transferred on intestacy and to make provision about landlords' objections to such successor tenants, to provide for certain holdings to be relinquished where landlords agree or assigned to persons new to or progressing in farming, to provide for a 3 year amnesty period in relation to certain improvements carried out by tenants, and to provide for notice of certain improvements proposed by landlords; and for connected purposes.</p>
<p>Land Use Strategy for Scotland 2021</p>	<p>Getting The Best From Our Land: A Land Use Strategy For Scotland 2016 - 2021 sets out land use policy for the next five years.</p>

	<p>It is Scotland's second Land Use Strategy and builds on the foundations of the first, retaining the Vision, Objectives and Principles for Sustainable Land Use.</p> <p>It contains a land use framework for land use and business/ the environment and communities and policies and proposals, including one recognising the relationship with the statutory spatial planning system – SPP and NPF2 and Development Plans.</p>
<p>Scottish Canals Heritage Strategy 2013-38</p>	<p>This strategy sets out how Scottish Canals will manage canal heritage and may be used as a guide for others with responsibility for, or an interest in, aspects of that heritage. Our charitable arm, the Scottish Waterways Trust is our main delivery partner and implementing this strategy will also help to achieve its strategic aims.</p> <p>The five-year plan, which forms Part 2 of the strategy, sits below these documents, as a functional or operational plan or programme.</p> <p>Our ambitions for the future of the canal network are described in the Vision for Scottish Canals. This future includes maintaining and enhancing access and harnessing development and commercial opportunities. Whilst canal heritage may be maintained and enhanced by maintenance and development programmes and by the Scottish Waterways Trust and partner initiatives, the heritage strategy deliberately focuses on specific, significant cultural and natural heritage which might not otherwise be prioritised.</p> <p>This strategy includes all types of cultural and natural heritage associated with Scottish Canals. As well as engineering structures and buildings, our estate includes archaeological sites, historical documents and artefacts.</p> <p>This strategy is a live document and so can be adapted at any stage.</p>
<p>SEPA Scotland River Basin Management Plan 2</p>	<p>River basin management planning protects and improves Scotland's water environment for the benefit of people, wildlife and the economy.</p> <p>Much of the water environment in Scotland is in good condition. However, there are still significant problems affecting water quality, physical condition, water flows and levels, and the migration of wild fish. Invasive non-native species are also damaging aquatic plant and animal communities.</p> <p>The river basin management plans for Scotland set out a range of actions to address these impacts. They are produced every six years by SEPA on behalf of Scottish Government. They cover actions for all responsible authorities in Scotland. They summarise:</p> <ul style="list-style-type: none"> • the state of the water environment; • pressures affecting the quality of the water environment where it is in less than good condition; • actions to protect and improve the water environment; • a summary of outcomes following implementation.
<p>Reforming the Planning System</p>	<p>The Planning (Scotland) Act 2019 was passed by the Scottish Parliament in June 2019. This will determine the future structure of the modernised planning system. Key aspects include:</p>

	<ul style="list-style-type: none"> • Development plans – LDPs and NPF to be reviewed every 10 years, rather than five years • Purpose for planning – linked to the exercise of development plan functions, with references to sustainable development and achieving national outcomes • NPF – housing targets to be included; and new outcomes, including improving health and well-being of people, increasing rural population, improving equality and eliminating discrimination, meeting greenhouse gas reduction targets, and securing positive effects for biodiversity • LDP – participation of children and young people, evidence report and gate check examination by reporter • Supplementary guidance – no longer has ‘development plan’ status • Local place plans – prepared by community bodies • Open space strategy and forest and woodland strategy – to be published by planning authorities • Strategic development plans abolished – and replaced by Regional Spatial Strategies.
<p>The Government’s Programme for Scotland 2020-21</p>	<p>This Programme for Government sets out the Scottish Government’s response to these connected challenges and opportunities. It commits to:</p> <ul style="list-style-type: none"> • a national mission to create new jobs, good jobs and green jobs - with a particular focus on our young people, supporting retraining and investing in our Green New Deal to tackle climate change • promoting lifelong health and wellbeing - by tackling COVID-19, remobilising and reforming the NHS and social care and tackling health inequalities • promoting equality and helping our young people fulfil their potential
<p>Transport (Scotland) Act 2019</p>	<p>The Transport (Scotland) Act was designed to help make Scotland’s transport network cleaner, smarter and more accessible than ever before - aiming to empower local authorities and establish consistent standards in order to tackle current and future challenges, while delivering a more responsive and sustainable transport system for everyone in Scotland.</p> <p>The Act took forward a number of Scottish Government commitments from its 2017-18 Programme for Government.</p>
<p>Scottish Planning Policy (SPP)</p>	<p>Policy statement on how nationally important land use planning matters should be addressed across the country.</p>
<p>Strategic Transport Projects Review 2022</p>	<p>STPR2 considers the transport needs of Scotland’s people and communities, and examines active travel (walking, wheeling, cycling), bus, ferry, rail and motorways and trunk roads as well as passenger and freight access to major ports and airports. These needs are reviewed from national and regional perspectives to reflect their different geographies, travel patterns and demands.</p> <p>STPR2 provides an overview of transport investment, mainly infrastructure and other behavioural change recommendations, that are required to deliver the National Transport Strategy priorities and objectives of the Review.</p>

Scottish Government Update to the Climate Change Plan 2018-32	the Scottish Government's draft Update to the Climate Change Plan 2018 - 2032 sets out Scotland's path, across eight key sectors, to achieving a 75% reduction in greenhouse gas emissions by 2030, and ultimately net-zero emissions by 2045. The draft update is a crucial staging post in Scotland's trajectory to net-zero, as it encompasses the interim 2030 target, which independent advisers the Climate Change Committee consider to be "extremely challenging".
Regional	
SEStran 2035 Regional Transport Strategy	SEStran is the statutory Regional Transport Partnership (RTP) formed from the eight local authorities in the east and south of Scotland. The RTP has a duty in law to prepare a Regional Transport Strategy (RTS) for their area. In 2021 SEStran undertook work to identify key issues that would be relevant to the ongoing development of a new RTS. The report identified main issues in the SEStran area which were aligned closely with issues identified in the National Transport Strategy 2 which was published in February 2020. There has also been recent public consultation on the draft strategy.
Local	
Fife Council Local Development Plan - FIFEplan	Sets out the policies and proposals for the development and use of land across Fife. The policies in the Plan and supplementary guidance will be used to determine planning applications and give guidance to communities and investors on where development can and cannot take place, what type of development is allowed, how it should be laid out and designed and how environmental and cultural assets will be protected.
Climate Fife – Sustainable Energy and Climate Action Plan 2020-30	<p>Climate Fife is Fife's response to the climate emergency. The plan sets out the strategy which underpins Climate Fife, presenting:</p> <ul style="list-style-type: none"> • a vision for where Fife Council wants to be, and the themes and programmes to show where actions are needed and how this will be supported • where Fife is now, with a Baseline Emission Inventory for Greenhouse Gas Emissions, and a Risk and Vulnerability Assessment to show the known and expected risks from unavoidable climate change • action plans showing how Fife will get to where we want to be, working in partnership to deliver a robust response to climate change and identifying the first critical steps and plans to take <p>Climate Fife is a Fife-wide plan; however, at this stage the action plan largely comprises actions being driven by Fife Council and key public sector partners. While the Council's direct footprint only represents 3% of Fife's total carbon footprint, through policies, projects and service delivery it has an influence over upwards of 40% of Fife's total carbon footprint. Fife Council wants to lead by example in our response to the climate emergency and use our procurement, assets and staff to help deliver a zero carbon and resilient Fife.</p>
Community Learning and Development Plan 2021-24	<p>The CLD plan is one of the key delivery vehicles for the Plan for Fife. It outlines how community learning and development activity will contribute to the Plan for Fife outcomes over the next three years. The plan identifies the needs and gaps in our current delivery around how we address poverty and inequality in Fife and sets out how we are going to collectively work to tackle these gaps and will report on progress through measurable impacts at a local and regional level. Our plan uses local and national research to help us to understand different aspects of life in Fife. This has identified:</p> <ul style="list-style-type: none"> • Mid Fife presents a number of challenges. It has some of the poorest outcomes in Scotland in areas like jobs, health and deprivation.

	<ul style="list-style-type: none"> • Population groups that aren't doing as well as expected include people living in rural areas and people in hard pressed circumstances. • Inequality continues to increase and this is a major risk for Fife • COVID recovery is having a major impact on many people in Fife and on the local economy • Making better use of assets provides an important opportunity to improve outcomes
Fife Structure Plan 2006-2026	<p>The Plan sets out the development strategy and strategic land use policies and proposals and identifies the general scale and location of development. The Plan sets the context for Local Plans, which translate the strategic guidance into site-specific detail. Together the Structure Plan and the Local Plans form the Fife Development Plan.</p> <p>Superseded by Fife's Economic Strategy 2017-2027.</p>
Fife's Economic Strategy 2017-2027	<p>The purpose of this Strategy is to:</p> <ul style="list-style-type: none"> • Provide a framework for employability and economic development activity in Fife and for the allocation of resources to these activities. • Ensure a commitment from partner organisations to a range of priorities. • Challenge existing ways of doing things. • Solve rather than describe the problem. • Help businesses be more resilient and better able to take advantage of change.
Fife Shoreline Management Plan 2011	<p>Fife's Shoreline Management Plan aims to:</p> <ul style="list-style-type: none"> • Reduce the threat of flooding and coastal erosion to people and their property; and • Deliver the greatest environmental, social and economic benefit, consistent with the Government's sustainable development principles.
Air Quality Strategy for Fife 2021-2025	<p>This updated Air Quality Strategy sets out the proposals for delivering further air quality improvements over the next five years and is set around the 9 key areas of approach as detailed in the Cleaner Air for Scotland 2 document (2020). This approach seeks to ensure consistency in the approach in tackling air quality issues across Scotland. A coherent and integrated outlook is key to avoid the risk of health-related impacts.</p>
Fife Council's Contaminated Land Inspection Strategy 2019	<p>Fife Council's Inspection Strategy not only fulfils the statutory duty on the Council to inspect Fife for historical contamination: it also seeks to complement and enhance Fife Council's wider policies aimed at regeneration and sustainability for people who live in, work in, or choose to visit, Fife.</p> <p>This Inspection Strategy document is presented in four sections. They are:</p> <ol style="list-style-type: none"> 1. a description of the characteristics of Fife and how they influence our approach, 2. an outline of the Land & Air Quality Team's main goals, objectives, and priorities, 3. appropriate timescales for the inspection of potentially contaminated land, and 4. arrangements and procedures for managing the risk from land contamination. <p>This document has been completely rewritten from its predecessors to reflect significant progress with the team's objectives, both strategic (periodic inspection) and reactive (timely consultation).</p>

<p>Fife Alcohol and Drug Partnership Delivery Plan 2020-2023</p>	<p>Vision To enable all the people of Fife to live healthy lives free from the harms of alcohol and drug use.</p> <p>Mission 'We will deliver our vision by working with individuals with lived and living experience, communities, services and local and national partners using our collective resources effectively. We will be motivated by a desire to tackle health inequalities, poverty and service exclusion, for all affected by alcohol and drug use. We will focus on prevention and early intervention, improving our existing treatment and support system of care and protect and ensure equity of opportunity for children, young people and families. We will ensure that public health principles underpin the work with those in the criminal justice system. Furthermore, we will mitigate against health and social harms caused by high levels of alcohol consumption by continuing to employ a whole population approach.'</p> <p>Values</p> <ul style="list-style-type: none"> • Person-centred • Human Rights based approach • Integrity • Caring • Respectful • Inclusive • Empowering • Improvement driven
<p>Fife Local Biodiversity Action Plan 2013-18</p>	<p>The Local Biodiversity Action Plan (LBAP) sets out nature conservation priorities and projects for Fife for 2013-2018. It will help to improve the condition of habitats and protect species. It will contribute to restoring and enhancing landscapes. The LBAP will help further our understanding of nature and tackle locally some of the threats that face biodiversity. It will enable local people to take part in conservation initiatives on their doorstep and help raise awareness about the value of the environment. In doing the above, the Fife LBAP will improve people's quality of life in Fife</p> <p>Note: At time of writing, there is no updated LBAP policy.</p>
<p>Active Fife: A Strategy for Physical Activity and Sport 2021-2024</p>	<p>'An Active Fife where everyone has opportunities to be more active, with better physical and mental health & wellbeing'</p> <p>'We aim to improve the lives of people across Fife through participation in physical activity and sport. This will contribute the delivery of the six Active Scotland outcomes:</p> <ol style="list-style-type: none"> 1) We encourage and enable the inactive to be more active 2) We encourage and enable the active to stay active throughout life 3) We develop physical confidence from the earliest age 4) We improve our active infrastructure – people and places

	<p>5) We support wellbeing and resilience in communities through physical activity and sport 6) We improve opportunities to participate, progress and achieve in sport.'</p>
<p>Fairer Health for Fife: Fife's Health Inequalities Strategy 2015-20</p>	<p>This is Fife's fourth health and wellbeing strategy. Its aim is to support organisations and partnerships across Fife's 7 local areas to work towards reducing inequalities in health and wellbeing by:</p> <p>'Increasing understanding around health inequalities - it explains:</p> <ul style="list-style-type: none"> • why some people experience better health than others • who is at most risk of poorer health and wellbeing <p>Promoting ways of working most likely to reduce health inequalities - it outlines:</p> <ul style="list-style-type: none"> • how Fife organisations and partnerships can work more effectively to reduce inequalities in health • which types of activities are likely to be most effective <p>Providing 6 health and wellbeing outcomes which are key to reducing inequalities in health and wellbeing - it highlights:</p> <ul style="list-style-type: none"> • what we want to achieve with communities in Fife over the next 5 years • what you can do and where to find further help and information'
<p>Fife Child Poverty Action Report 2021/22</p>	<p>In the last few years, poverty has remained an issue for many families in Fife. Recent rises in the cost of living will push many more families with children into hardship and will make getting out of poverty more difficult for those already struggling to feed their families and heat their homes.</p> <p>Child poverty rates remain high in Fife at 17% with little improvement since our first Local Child Poverty Action Report was published in 2019.</p> <p>Successfully tackling child poverty will require us to work with families in different ways, through greater collaboration and joined up support. To achieve this, we will:</p> <ul style="list-style-type: none"> • Make it easier for families to access services through a no wrong door approach • Challenge stigma and attitudes that prevent families from accessing the services they need • Make better use of intelligence to proactively reach families in need, with a focus on prevention rather than just responding to crisis • Maximise family incomes and remove cost barriers to participation • Utilise community wealth building approaches to help to break the poverty spiral • Explore sustainable approaches to basics such as food security and welfare provision
<p>Fife Children's Services Plan 2021- 23</p>	<p>The Priorities for this Plan aim to support recovery from the Covid pandemic for all children, young people and families. However, they have a particular focus on Fife's most disadvantaged and vulnerable children and young people. They are:</p> <ul style="list-style-type: none"> • Delivering the Promise

	<ul style="list-style-type: none"> • Supporting Wellbeing • Closing the Equity Gap • Promoting Children’s Rights
<p>Fife Community Justice Outcome Improvement Plan 2021-2022</p>	<p>Priorities</p> <ul style="list-style-type: none"> • Improved community understanding and participation. • Strategic planning and partnership working. • Effective use of evidence-based interventions. • Equal access to services.
<p>Fife Health and Social Care: Strategic Plan for Fife 2019-2022</p>	<p>Our Vision To enable the people of Fife to live independent and healthier lives.</p> <p>Our Mission We will deliver this by working with individuals and communities, using our collective resources effectively. We will transform how we provide services to ensure these are safe, timely, effective, high quality and based on achieving personal outcomes.</p> <p>Our Values</p> <ul style="list-style-type: none"> • Person-focused • Integrity • Caring • Respectful • Inclusive • Empowering
<p>Draft Local Housing Strategy 2022-2027</p>	<p>The LHS is a five-year strategy which sets out the strategic vision of Fife Housing Partnership for the delivery of housing and housing related services. The LHS considers local and national priorities which, along with stakeholder consultation, have helped shape the outcomes aimed to be achieved across all tenures of housing in Fife.</p> <p>Strategic Vision and Outcomes The Partnership supports the Scottish Government’s Housing to 2040 vision for everyone in Scotland to have a safe, high-quality home that is affordable and meets their needs in the place they want to be. In line with this national vision, the Fife Local Housing Strategy 2022-2027 provides a range of housing outcomes to <i>Provide housing choices for people in Fife.</i></p>

	<p>Five priorities forming the basis of the LHS 2022-2027 Outcome Plan have been established through strategic analysis, housing need and demand assessment and stakeholder consultation. These priorities will promote equality in housing, help eradicate poverty, provide physical housing improvement, and maintain recovery from the Covid-19 pandemic.</p> <p>LHS Priorities 2022-2027</p> <ol style="list-style-type: none"> 1. Ending Homelessness 2. More Homes in the Right Places 3. A Suitable Home 4. A Quality Home 5. A Warm Low Carbon Home
<p>Plan for Fife 2017-2027</p>	<p>The Plan has a strong focus on addressing inequalities and four key themes will now direct the work of the Fife Partnership.</p> <p>The four themes of fairness:</p> <p>Opportunities for All is about ensuring that no-one is left behind. We aim to ensure that everyone can access opportunities in education, training, jobs and wider society, and have equal access to the support and advice they might need to support a fulfilling and decent life</p> <p>Thriving Places are safe, well designed and maintained places that promote wellbeing, where people are proud to be, and where they have access to the services and facilities they need at different stages of their lives</p> <p>Inclusive Growth and Jobs in the local economy should benefit everyone, and shouldn't pass people and places by. We will therefore focus on improving investment, growth and participation by businesses, people and communities, particularly in the Mid-Fife area. We aim to support businesses to grow and to make sure that communities benefit from new business investment</p> <p>Community Led Services means putting communities and service users at the heart of how we design services, and building on the strengths and assets we have in our workforce and in our communities in order to deliver valued services</p>
<p>Zero Waste Fife: Resource Strategy & Action Plan 2018 - 2028</p>	<p>This Zero Waste Fife - Resources Strategy sets out the strategic direction for waste and resource management within the Council's control for the next 10 years. The accompanying action plan details the actions required to deliver the objectives of the main strategy.</p> <p>The purpose of this Zero Waste Fife - Resources Strategy and Action Plan is to:</p> <ul style="list-style-type: none"> • Align Fife Council's policies and practices with those set out in the national Circular Economy Strategy "Making Things Last" (February 2016). • Set policies and actions, which fulfil the Council's commitment to the national Household Recycling Charter (July 2016).

	<ul style="list-style-type: none"> • Establish how the Council will tackle new challenges arising from the Waste (Scotland) Regulations 2012 ban on the landfilling of biological municipal waste • Ensure the objectives of the new strategy link with the Plan for Fife (2017 Local Outcome Improvement Plan) aiming to put communities at the heart of delivering a Fairer Fife to grow jobs in the green economy, achieve 60% recycling rates and meet the challenges of climate change <p>The key legal drivers shaping the Resources Strategy from European Union to local level along with financial drivers are also explained.</p> <p>The strategy focuses on the main challenges ahead on the path to zero waste and delivery of a circular economy and sets out objectives and actions to address these. These challenges have been identified into 6 key themes:</p> <ol style="list-style-type: none"> 1. Preventing waste 2. Minimising the environmental impacts of waste including climate change 3. Engaging and communicating with householders and other stakeholders 4. Optimising services and infrastructure for the future 5. Maximising economic benefit on the way to zero waste and a circular economy 6. Managing non-recyclable waste
Other relevant authorities	
<p>East Lothian LTS 2018-24</p>	<p>The LTS outlines a range of problems and issues affecting Transport in East Lothian. The Council has identified five core Themes which provide the overarching framework under which the actions and measures to deliver the LTS all sit. These include:</p> <ul style="list-style-type: none"> • Maintenance Strategy & Whole Life Costing • A Safer East Lothian • Active Travel and Healthy Lifestyles • Accommodating Growth and Supporting the Economy • Encouraging Sustainable Travel
<p>Clackmannanshire LTS 2015-19</p>	<p>The Local Transport Strategy for Clackmannanshire:</p> <ul style="list-style-type: none"> • outlines the strategy for the Council's roads and transportation plans for the next five years • looks to how the roads and transportation system will develop in the short and long term • acts as support for future roads and transportation improvements • sets out measures aimed at providing travel choices for all • ensures that job opportunities are not restricted to only those with access to a car.

<p>Dundee Local Transport Strategy 2000</p>	<p><i>“This document provides a review of the interim strategy, published in July 1999 and has subsequently been subject to a wide-ranging consultation exercise. The outcomes of which are reflected in the targets portrayed in this strategy. Consultation on transportation issues will continue to occur in relation to specific project areas but also as a direct result of this publication, thus ensuring that Dundee City Council continues to be responsive to the needs of the population it serves. Whilst this document will be subject to continuous monitoring.”</i></p>
<p>The City of Edinburgh LTS 2014-19</p>	<p>Edinburgh’s Local Transport Strategy (LTS) sets out the transport policies and actions for the five years (2014-19) that will contribute to the Council’s vision of Edinburgh as a thriving, successful and sustainable capital city. It aligns with national and regional strategies and sits above the Council’s transport-related Action Plans. It is based on nine inter-related outcomes, which were first developed in the Transport 2030 Vision. Much of the strategy carries on from the previous LTS. The Council will continue to work towards implementation of its adopted Action Plans, including those covering Road Safety, Active Travel and Public Transport.</p> <p>Superseded by The Edinburgh City Mobility Plan.</p>
<p>The Edinburgh City Mobility Plan 2021-2030</p>	<p>The City Mobility Plan 2021-2030 replaces Edinburgh’s Local Transport Strategy 2014-2019.</p> <p>It has been prepared alongside the City Plan 2030 to help Edinburgh connect through a safer and more inclusive carbon neutral transport system - delivering a healthier, thriving, fairer and compact capital city and a higher quality of life for all residents.</p> <p>The plan is central to a clean, connected and net zero carbon future. This sits along with other innovative schemes we’re progressing, from City Centre Transformation to a Low Emission Zone, Trams to Newhaven and a range of exciting active travel projects connecting communities. It will help people make sustainable choices about how they move around the city, through improving walking, cycling and wheeling options and creating better links to public transport.</p> <p>Regional activity is also part of the strategy, looking at:</p> <ul style="list-style-type: none"> • how transport can further support the wider region in moving to more sustainable forms of travel • the impact of commuter travel on our transport network • the importance of retail and leisure. <p>Setting out the Council’s strategic approach to sustainable, safe and effective movement of people and goods around Edinburgh up to 2030, the plan has a series of objectives and policy measures under the themes of</p> <ul style="list-style-type: none"> • people • movement • place

Appendix B – SEA Objectives

Proposed SEA Objective	Draft Questions for Assessment Will the proposed vision / objectives / projects ...	Draft Indicators Change to...
Population and Human Health		
To protect and improve population human health and wellbeing	Promote active travel?	<p>Efficiency</p> <ul style="list-style-type: none"> • Direct routes i.e., less distance between settlement envelopes/amenities/etc • Broader access i.e., increase connectivity to/from settlement envelopes/amenities/etc • Travel time i.e., reduce <hr/> <p>Distribution</p> <ul style="list-style-type: none"> • Number of active travel corridors in areas that have historically not had or a relatively low number. • Quality of active travel corridors in areas that have historically not had high quality infrastructure. <hr/> <p>Quality</p> <ul style="list-style-type: none"> • Active travel route in/adjacent to green space and/or local landscape areas • Accessibility (number/length of routes accessible to all non-motorised users) • Obstructions (traffic lights/road crossings/staircases/etc) • Confidence in completing the route
	Encourage use of amenity/green space?	<p>Number of transport modes to/from:</p> <ul style="list-style-type: none"> • Local Landscape Areas • Protected Open Space • Green Belt • Amenity Buffer <hr/> <p>Quality of transport links to/from:</p> <ul style="list-style-type: none"> • Local Landscape Areas • Protected Open Space • Green Belt

		<ul style="list-style-type: none"> • Amenity Buffer
		<p>Equality/distribution of access to:</p> <ul style="list-style-type: none"> • Local Landscape Areas • Protected Open Space • Green Belt • Amenity Buffer
	Reduce pressure on existing environmental/health constraints?	<p>Need for travel</p> <p>Traffic for existing/proposed Air Quality Management Areas and/or Candidate Noise Management Areas</p> <p>Traffic in and around areas scoring low on the Scottish Index of Multiple Deprivation</p> <p>Traffic around biodiverse designated sites</p> <p>Priority themes defined by Food4Fife</p>
	Improve access?	<p>Number of transport modes/nodes available in the network</p> <p>Quality of transport modes/nodes available in the network</p> <p>Equality/distribution of transport modes/nodes available in the network</p>
	Meet community wealth benefits objectives?	<p>Progressive procurement of services</p> <p>Socially productive use of land and assets</p>
Cultural Heritage		
To protect, conserve and enhance the historic environment	Impact heritage assets (listed buildings, scheduled monuments, and other key assets)?	Number of historical assets (both directly and indirectly)
	Enhance the historic environment?	<p>Number of improvements to historical assets including</p> <ul style="list-style-type: none"> • Restoration • Improved understanding (recording of findings, etc) • Increased information and engagement (noticeboards, etc) • Increased access (new/improved links to heritage assets)
Biodiversity, Flora and Fauna		
To protect, enhance, create and restore biodiversity and encourage habitat connectivity	Impact designated sites and protected species?	<p>The size and/or number of designated sites (including indirect impacts up to 2km)</p> <p>Number habitats identified in Fife LBAP and associated protected species</p>
	Enhance biodiversity?	<p>Biodiversity Net Gain (or equivalent metric)</p> <p>Access and understanding of natural environment</p>

	Promote the connectivity, protection, and integration of habitats, including the green network habitat links?	Habitat connectivity and fragmentation
	Impact on or result in the removal of biodiversity habitats?	Size/length of habitats (indicating retention, loss and enhancement) The management of woodlands and native planting
Soil and Geology		
To promote the management, improvement and protection of soils and conserve recognised geodiversity assets	Impact peatland, carbon-rich soils and priority peatland habitats?	The number, area and quality of peatlands, carbon rich soils and or priority peatland habitats
	Impact food production relating to soils?	Area and access to agricultural land Number/area and access to allotments
	Impact Ancient Woodland Inventory (AWI)?	Area of AWI
	Impact sites of geological importance?	Indirect or direct impact on designated sites
	Impact areas of potentially contaminated land?	Number and area of potentially contaminated land sites
	Promote the use and development of vacant and derelict and brownfield land over the allocation of greenfield land for development?	The number of vacant, derelict and brownfield land parcels in Fife
Landscape		
To protect and enhance the landscape character, local distinctiveness and To retain key viewpoints	Impact local distinctiveness in and around Fife?	Local landscape area, conservation area, protected open spaces and green belt Green features: hedgerows, mature trees and other key local features Townscape features: built heritage assets, garden and designed landscape and other key local features
Water Environment		
To protect and enhance the water environment	Impact flood risk?	Number and area of development within the flood zones
		Resulting increase/decrease of permeable surface area
		Number and capacity of formal and informal flood defence (including vegetation)
	Impact on the water environment?	Development/agriculture within 8m of surface waters in Fife (SEPA RBMP data 2020)
		Aquifers
		Number and linear metres of de-culverted watercourses Habitat in and around watercourses
Air Quality		
	Impact on transport emissions?	The number and proportion of low/ultra-low emission vehicles

To enhance air quality and prevent further deterioration	Improve air quality?	The traffic volume for sensitive receptors and/or AQMAs	
		Demand on fossil fuel-based energy supply	
		Access to public transport	
		Access to active travel	
		Carbon sequestration	
Climatic Factors			
Reduce contribution towards future emissions	Impact the Scottish Government's greenhouse gas emissions reduction targets?	Construction emissions of the Fife transport network	
To prevent vulnerability to future climate related		Impact climate resilience and adaptation?	Operational emissions of the Fife transport network
			Energy demand of the transport network
		Vulnerability/ preparedness for extremes in temperature, rainfall, sea level and storms	
		Vulnerable locations	
Material Assets			
To promote the sustainable management of waste/materials	Promote the sustainable use and protection of natural resources?	Natural resources	
To encourage and enhance the lifecycle of materials		Offsite waste/landfill requirements	
		Footprint of infrastructure	
		Reuse of existing resources	
		Import/export of material	
Noise and vibration			
To prevent significant noise and vibration levels and prevent further deterioration	Impact of construction/operational noise?	Noise environment for sensitive receptors	
	Enhance noise environment?	Reduce the number of and frequency of night-time services in and around sensitive receptors	
		Access to active travel	

Appendix C – Options Compatibility Assessment

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
63	Safe and secure travel for all	O Active travel infrastructure accessibility improvement programme	+										Likely to improve accessibility to active travel.
62	Safe and secure travel for all	O Bus stop improvement programme	+										Likely to improve quality of transport hubs.
74	Safe and secure travel for all	O Continued improvement of personal safety initiatives at transport hubs	+										Likely to improve safety of transport hubs.
61	Safe and secure travel for all	O Enforce the Transport (Scotland) Act 2019 footway parking ban	+										Likely to improve safety and accessibility of footpaths for users.
70	Safe and secure travel for all	O Enforcement and behaviour change delivered through the Road Casualty Reduction Group											No significant environmental effect identified.
64	Safe and secure travel for all	O Improvements to bus and rail service accessibility	+										Likely to improve accessibility for transport modes.
69	Safe and secure travel for all	O Lower speed limits and 20mph roll-out	+		+				+	+		+	Likely to result in a speed reduction of traffic. Likely to reduce pollution improve air quality, climate and noise.
67	Safe and secure travel for all	O Road Safety Action Plan to identify and prioritise actions to improve road safety in Fife	+										Likely to improve safety of transport network.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
68	Safe and secure travel for all	O Route Accident Reduction Plans on key corridors	+										Likely to improve safety of transport network.
71	Safe and secure travel for all	O School Streets, where non-residential traffic is banned from roads around school during arrival and leaving time	+						+			+	Likely to result in reduction of traffic in and around schools.
72	Safe and secure travel for all	O Support the introduction and development of autonomous vehicles through trials, where safe and legal											No significant environmental effect identified.
120	Delivering the strategy	O Community-led local area transport strategies											No significant environmental effect identified.
35	Fair access to daily activities	O A92 Glenrothes to Ladybank Priority Action List safety and active travel improvements	+										Likely to improve safety and accessibility for vulnerable users.
18	Fair access to daily activities	O Bus Partnership strategic bus priority measures	+										Likely to improve quality of transport modes.
25	Fair access to daily activities	O Car clubs at key transport interchanges and trip generators											No significant environmental effect identified.
9	Fair access to daily activities	O Circulation Plan in major towns and cities	+	+	+		+		+			+	Likely to improve placemaking by reducing traffic within affected towns and villages. Likely to reduce pollution and potentially improving setting within towns and cities.
33	Fair access to daily activities	O Cross-Forth passenger ferry	+		-			-					Likely to increase available transport modes for local population. Likely to impact designated marine wildlife sites.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
29	Fair access to daily activities	O Cross-Forth Transport Appraisal improvements in access to cross-Forth public transport services	U										The effect of the option on population and human health is unknown / dependent upon implementation.
59	Fair access to daily activities	O Dunfermline Strategic Transport Intervention Measures	U										The effect of the option on population and human health is unknown / dependent upon implementation.
28	Fair access to daily activities	O Edinburgh/Glasgow-Perth/Dundee Rail Corridor Enhancements	+										Likely to improve quality of transport modes.
32	Fair access to daily activities	O Edinburgh-Dunfermline mass transit	U										The effect of the option on population and human health is unknown / dependent upon implementation.
43	Fair access to daily activities	O Ferry service between Rosyth and Europe	+		-			-					Likely to increase available transport modes for local population. Likely to impact designated marine wildlife sites.
14	Fair access to daily activities	O Fife Council directly operates some bus services (commercial and supported network)											No significant environmental effect identified.
15	Fair access to daily activities	O Fife Council franchises bus services (commercial and supported network)											No significant environmental effect identified.
22	Fair access to daily activities	O Fife Mobility as a Service platform	+										Likely to improve safety and accessibility for vulnerable users.
17	Fair access to daily activities	O Improved bus service timetables and vehicles through Bus Service Improvement Partnerships	+										Likely to increase availability and frequency of transport modes for local population.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
16	Fair access to daily activities	O Improved service provision on supported bus services, including frequency and operating hours	+										Likely to increase availability and frequency of transport modes for local population.
7	Fair access to daily activities	O Increase reach of Bikeability cycling education in places of education and workplaces	+										Likely to improve accessibility to active travel network and provide the confidence and ability of local population.
20	Fair access to daily activities	O Increased accessible transport services to cover wider range of routes and timings	+										Likely to increase availability and frequency of transport modes for local population.
21	Fair access to daily activities	O Increased community transport services	+										Likely to increase availability and frequency of transport modes for local population.
19	Fair access to daily activities	O Increased Demand Responsive Transport services to cover wider geographical area and times, in particular rural areas	+										Likely to increase availability and frequency of transport modes across the whole of Fife.
5	Fair access to daily activities	O Levenmouth Connectivity Project Active Travel Network and River Park Routes	+										Likely to improve quality and quantity of transport modes.
60	Fair access to daily activities	O Local Development Plan Strategic Development Area transport infrastructure, including Cupar Northern Relief Road			-					-	-		Likely to impact wildlife sites and increase climate emissions.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
8	Fair access to daily activities	O Low Traffic Neighbourhoods	+						+	+		+	Likely to improve placemaking by reducing traffic within affected neighbourhoods. Likely to reduce pollution and improve air quality, reduce carbon emissions and noise for neighbourhoods.
50	Fair access to daily activities	O Manage parking supply in major towns and cities to balance access and sustainable travel	+						+	+			Likely to increase availability of active travel and public transport modes for local population. Likely to reduce carbon emissions and improve air quality.
24	Fair access to daily activities	O Mobility hubs at key transport interchanges and trip generators	+										Likely to increase available transport modes for local population.
6	Fair access to daily activities	O Network of public bike share schemes	+										Likely to increase availability and access to active travel.
42	Fair access to daily activities	O New express bus services between Dunfermline and Stirling and Glenrothes and Perth	+										Likely to increase available transport modes for local population and reduce travel time.
46	Fair access to daily activities	O New Fife parking strategy											No significant environmental effect identified.
41	Fair access to daily activities	O New rail corridor between Dunfermline and Perth	+							U			Likely to increase available transport modes for local population. At this stage in the assessment, it is unknown if the project would have net positive or negative carbon emissions from construction and operational activities.
53	Fair access to daily activities	O Periphery car parks and active travel routes to access town centres	+						+			+	Likely to improve accessibility, quality and use of active travel network and provide confidence with the active travel routes. Likely to improve air quality and noise for town centres.
1	Fair access to daily activities	O Prioritised Fife-wide active travel network, including the SEStran	+						+	+		+	Likely to improve accessibility, quality and use of active travel network with indirect improvements on air quality, noise and carbon due to behavioural change.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
		Strategic Network, Active Freeways, Interurban Active Travel Routes, Connected Neighbourhoods 20-minute neighbourhood improvements, Cycle Parking Hubs and wayfinding											
30	Fair access to daily activities	O Reopen Newburgh railway station	+										Likely to increase the number and access to transport modes for local population.
31	Fair access to daily activities	O Reopen Wormit railway station	+										Likely to increase the number and access to transport modes for local population.
26	Fair access to daily activities	O Specific public transport services for businesses	+										Likely to increase available transport modes for local businesses.
44	Fair access to daily activities	O St Andrews Transport Study public transport infrastructure and services	+										Likely to increase number, access and quality of transport modes for local population.
37	Fair access to daily activities	O Traffic signal re-timing and coordination to increase sustainable travel priority and improve traffic flows	+										Likely to improve accessibility, quality and use of active travel network.
40	Fair access to daily activities	O West Fife Rail Link between Dunfermline and Alloa	+										Likely to increase available transport modes for local population.
86	Just transition to net zero	O Anti-engine idling campaign	+						+			+	Likely to improve air quality and noise. Potential health improvements for sensitive receptors in close proximity to the transport network.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
101	Just transition to net zero	O Fleet Vehicle Replacement Programme							+	+		+	Likely to reduce carbon emissions and improve air quality. Likely to reduce noise due to quieter vehicles.
97	Just transition to net zero	O Forth sustainable, integrated freight network, including rail access to Rosyth, the Charlestown Rail Chord and electrification.							+	+		+	Likely to reduce carbon emissions and improve air quality. Likely to reduce noise due to quieter vehicles. Likely to increase access and availability to transport modes for freight.
98	Just transition to net zero	O Freight partnerships to consolidate freight movements							+	+	+	+	Likely to reduce number of freight movements across Fife.
95	Just transition to net zero	O Hydrogen propulsion trials											No significant environmental effect identified.
100	Just transition to net zero	O Innovative delivery technique trials, for example drones or box bikes											No significant environmental effect identified.
103	Just transition to net zero	O Light Fife Green energy efficient lighting programme								+	+		Likely to reduce carbon emissions.
96	Just transition to net zero	O Mid-Fife inter-modal freight consolidation centre, including rail freight, hydrogen refuelling, electric vehicle charging and driver refuge							+	+	+	+	Likely to reduce number of freight movements across Fife and likely reduction in number of freight vehicles with internal combustion engines.
99	Just transition to net zero	O Rapid heavy goods vehicle electric charging and digital forecourts on key routes							+	+			Likely to reduce carbon emissions and improve air quality.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
90	Just transition to net zero	○ Set prices for Fife Council electric vehicle charging services in line with commercial rates											No significant environmental effect identified.
102	Just transition to net zero	○ Sustainable procurement practices to target embodied carbon of infrastructure projects								+			Likely to reduce carbon emissions.
84	Just transition to net zero	○ Traffic reduction behaviour change campaign	+		+			+	+	+		+	Likely to lead to a reduction in private-car use and adoption of sustainable transport hierarchy principles. Likely positive impact on biodiversity, water, air quality, climate and noise in proximity to the road network.
104	Just transition to net zero	○ Use recycled materials on infrastructure projects									+		Likely reduction in waste to landfill.
113	Transport network resilience	○ Active travel network maintenance	+								+		Likely to improve accessibility, quality and use of active travel network.
109	Transport network resilience	○ Climate resilience asset monitoring programme								+	+		Likely to improve climate resilience and infrastructure lifespan.
105	Transport network resilience	○ Increased funding for pro-active maintenance									+		Likely to improve infrastructure lifespan.
110	Transport network resilience	○ Network resilience plan								+	+		Likely to improve climate resilience and infrastructure lifespan.
115	Transport network resilience	○ Targeted bridge improvement programme											No significant environmental effect identified.
108	Transport network resilience	○ Transport flood protection programme						+		+			Likely to improve climate resilience of infrastructure and flood.

Ref	Priority	Option	PHHW	Historic Env	BFF	Soil & Geo	Landscape	Water	AQ	Climate	Material	Noise	Effect
27		O Fife lift share scheme											No significant environmental effect identified.

Appendix D – Policy Compatibility Assessment

Ref	Priority	Policy	PHHW	Historic Env	BFF	S&Geo	Landscap e	Water	AQ	Climate	Material Assets	Noise	Effect
118	Delivering the strategy	P Adopt the Sustainable Investment Hierarchy in all service provision	+							+			Likely to improve access and the carbon baseline for operational activities.
56	Fair access to daily activities	P All new developments (over a certain size) must provide sustainable transport in line with the Sustainable Travel Hierarchy	+							+			Likely to increase number and availability of sustainable modes of transport for local population. Increased uptake is likely to lead to a reduction in carbon emissions.
114	Transport network resilience	P Biodiversity net gain in all transport projects through reduction in unnecessary road space and planting			+					+			Likely to improve biodiversity and potential carbon storage capacity.
58	Fair access to daily activities	P Developers must subsidise public transport services in new developments until passenger numbers reach commercial viability	+										Likely to increase the number of modes of transport.
3	Fair access to daily activities	P Embed the Sustainable Travel Hierarchy on all Fife Council projects	+							+			Likely to increase number and availability of sustainable modes of transport for local population. Increased uptake is likely to lead to a reduction in carbon emissions.
75	Safe and secure travel for all	P Fife Council believes everyone has the right to travel safely and any aggressive, bullying or harassing behaviour will	+										Likely to lead to increased safety on transport modes for the local population.

Ref	Priority	Policy	PHHW	Historic Env	BFF	S&Geo	Landscap e	Water	AQ	Climate	Material Assets	Noise	Effect
		not be tolerated on public transport.											
112	Transport network resilience	P Implement a regime of active travel asset management	+								+		Likely to increase quality of and access to active travel and transport modes for local population.
55	Fair access to daily activities	P New developments should be located to reduce the need to travel and minimise the use of unsustainable modes, by the application of Transit-Oriented Development, 20-minute neighbourhoods and shared mobility concepts	+							+			Likely to reduce the need for travel and increased uptake of sustainable transport modes. Increased uptake is likely to lead to a reduction in carbon emissions.
111	Transport network resilience	P Prioritise asset and winter maintenance in accordance with the Sustainable Travel Hierarchy	+							+			Likely to increase quality of and access to active travel and transport modes for local population. Increased uptake is likely to lead to a reduction in carbon emissions.
73	Safe and secure travel for all	P Prioritise new street lighting based on the Sustainable Travel Hierarchy, especially walking, cycling and wheeling routes	+							+			Likely to increase quality, safety and access to active travel for local population. Increased uptake is likely to lead to a reduction in carbon emissions.
11	Fair access to daily activities	P Promote cycle recycling and upcycling								+	+		Likely to increase sustainable waste hierarchy.

Ref	Priority	Policy	PHHW	Historic Env	BFF	S&Geo	Landscap e	Water	AQ	Climate	Material Assets	Noise	Effect
89	Just transition to net zero	P Provide ChargePlace Scotland electric vehicle charging in locations where not commercially viable, scaled to meet demand, based on a new Public EV Charging Strategy & Expansion Plan.							+	+			Introducing new public EV charging points as described is likely to help with a fairer transition to net zero. The scale of this policy and the way it is implemented will largely dictate whether this approach has a significant effect on future emissions.
85	Just transition to net zero	P Reduce the maximum parking allowed in some types of new development, and support low/no parking developments	+										Likely to improve placemaking by reducing traffic within affected areas.
83	Just transition to net zero	P Support blended homeworking and the provision of digital services, with appropriate in-person services for those who need it	U										The effect of the policy on population and human health is unknown / dependent upon implementation.
10	Fair access to daily activities	P Support community groups to deliver community-led active travel projects	+							+			Likely to empower local communities and potentially lead to an increase in active travel projects. Increased uptake is likely to lead to a reduction in carbon emissions.
39	Fair access to daily activities	P Support fair rail fares	+							+			Likely to increase access to rail for local population. Increased uptake is likely to lead to a reduction in carbon emissions.
38	Fair access to daily activities	P Support free bus travel for those who need it most	+										Likely to increase access to bus for local population with low SIMD. Increased uptake is likely to lead to a reduction in carbon emissions.
23	Fair access to daily activities	P Support improved integration between transport modes,	+										Likely to increase quality and access of local transport network. Increased uptake is likely to lead to better

Ref	Priority	Policy	PHHW	Historic Env	BFF	S&Geo	Landscap e	Water	AQ	Climate	Material Assets	Noise	Effect
		including ticketing and timetables.											sustainable transport hierarchy and a reduction in carbon emissions.
94	Just transition to net zero	P Support low emission taxis							+	+			Likely to improve air quality and carbon emissions.
82	Just transition to net zero	<p>P Do not support new road capacity unless:</p> <ul style="list-style-type: none"> - Other strategic priorities will be significantly disadvantaged or links to new developments are required; and - Active travel and public transport are prioritised in line with the Sustainable Travel Hierarchy; and - Overall traffic growth can be demonstrated to be negligible 	+						+	+	+		<p>New road infrastructure is likely to have a negative impact on a number of environmental topics, in particular: biodiversity, water, air quality, carbon, material assets and noise receptors.</p> <p>The scale, location and the way road projects are implemented largely dictates the potential significant effect.</p> <p>How strategic priorities are defined will significantly influence the effect of this policy.</p> <p>A policy that prioritises the sustainable travel hierarchy over new road schemes is likely to reduce the number of new roads being built over the course of a local transport strategy, when compared to a future baseline that does not incorporate this approach. The result is a beneficial effect due to a reduction in embodied carbon, materials being used and increased active travel infrastructure.</p> <p>No increase in traffic growth is likely to have a positive effect when compared with future baseline and result in a net improvement in tailpipe emissions.</p>
51	Fair access to daily activities	P Support place-led public realm improvements and re-design of town centre streets to favour people, maintaining appropriate access for disabled	+	+					+	+		+	Likely to improve placemaking and reduce traffic within town centre streets to benefit the local population, including vulnerable users. Likely to reduce carbon emissions, air and noise pollution, and improve heritage experience.

Ref	Priority	Policy	PHHW	Historic Env	BFF	S&Geo	Landscap e	Water	AQ	Climate	Material Assets	Noise	Effect
		people, emergency services and deliveries.											
12	Fair access to daily activities	P Support the adoption of new modes of personal mobility where they are legal and safe	+							+			Likely to improve the number access of transport modes. Increased uptake is likely to lead to better sustainable transport hierarchy and a reduction in carbon emissions.
93	Just transition to net zero	P Support the decarbonisation of the bus network in Fife	+						+	+			This will reduce the carbon emissions of the transport network and improve air quality. Potential health improvements for sensitive receptors in close proximity to the road network.
92	Just transition to net zero	P Support the decarbonisation of the rail network in Fife							+	+			Likely to decrease emissions of the rail network.
88	Just transition to net zero	P Support the installation and operation of public electric vehicle charging by the private sector and by community-led groups							+	+			Likely to increase the uptake and accessibility of electric vehicles and reduce carbon emissions and improve air quality.
91	Just transition to net zero	P Support the provision of on-street residential electric vehicle charging, where they are safe, fully accessible and do not reduce active travel provision.							+	+			Likely to increase the uptake and accessibility of electric vehicles and reduce carbon emissions and improve air quality.
13	Fair access to daily activities	P Support the roll-out of superfast broadband, 4G and 5G to improve digital connectivity	+										Improvement of digital connectivity for the local population.
119	Delivering the strategy	P Support the trialling and adoption of innovative technologies, techniques and services	U	U	U	U	U	U	U	U	U	U	The effect of the option is unknown / dependent upon implementation.

Ref	Priority	Policy	PHHW	Historic Env	BFF	S&Geo	Landscap e	Water	AQ	Climate	Material Assets	Noise	Effect
4	Fair access to daily activities	P Take a strategic approach to redesigning roads to help us allocate road space in line with our priorities.	+	+	+		+	+	+	+	+	+	Depending on implementation, likely to decrease grey infrastructure, improve biodiversity, flooding, water quality and carbon. Public realm is likely to improve and setting of historical assets in proximity to the road network. Change in land use likely to improve material use and maintenance requirements.
66	Safe and secure travel for all	P Undertake and implement the recommendations of proportionate equality impact assessments on all Roads & Transportation projects	+										Likely to improve access and availability to use the transport network.
57	Fair access to daily activities	P Use developer contributions to fund sustainable transport interventions	+							+			Likely to lead to an increase in sustainable transport options. Increased uptake will likely lead to reduced carbon emissions.