Falkirk Council

# Active Travel Strategy

## SEA Environmental Report

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Falkirk Council

# Falkirk Active Travel Strategy
# Strategic Environmental Assessment

## Environmental Report

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# 1 Introduction

## 1.1 Background

1.1.1 Falkirk Council ("the Council") has decided to develop an Active Travel Strategy (ATS) that sets out the policy direction of the Council and establishes active travel proposals for future investment.

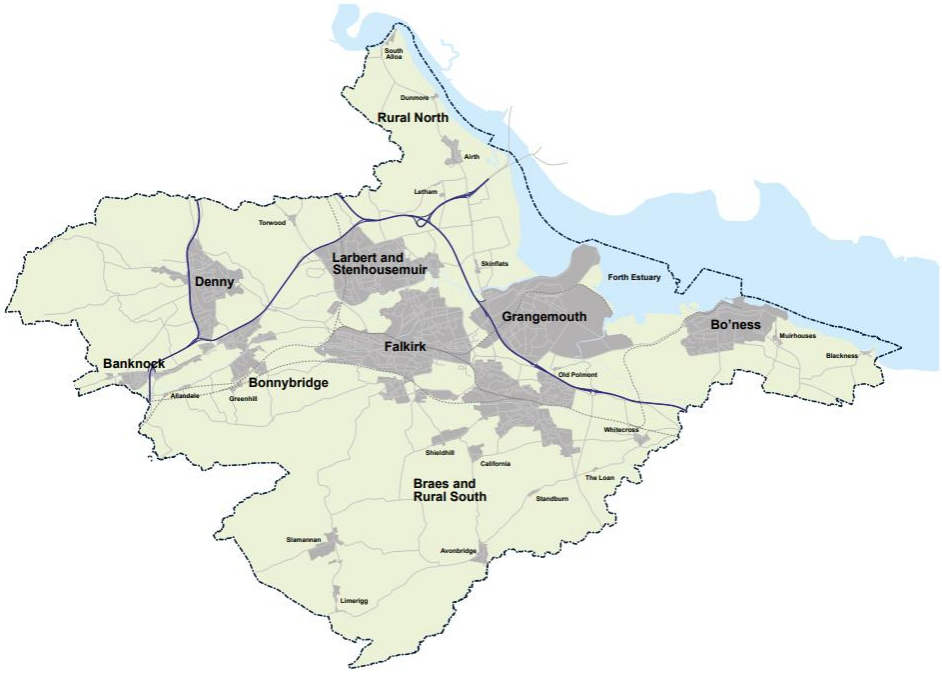
1.1.2 The ATS aligns with the development of a refreshed Local Transport Strategy that prioritises active and sustainable travel. The updated Local Transport Strategy is due to be adopted in Spring 2023, replacing the existing Transport Strategy, which was adopted in 2014. The ATS will become a supplementary strategy to the new Transport Strategy.

1.1.3 The Council has set the following vision for the ATS:

*Our vision for the next decade is that our communities are shaped around people, with walking, wheeling or cycling the most popular choice for shorter everyday journeys.*

1.1.4 The ATS covers the whole of the Falkirk Council area which is set out in Figure 1-1 below.

**Figure 1-1 - Falkirk Council Boundary (Falkirk Local Development Strategy 2, 2020)**




1.1.5 As part of this process WSP UK Ltd ("WSP") have been appointed to undertake a Strategic Environmental Assessment (SEA) in support of the ATS.

1.1.6 SEA is used to describe the application of environmental assessment to strategies and programmes in accordance with European Council Directive 2001/42/EC 'The SEA Directive'. The SEA Directive is enacted in Scotland through the "Environmental Assessment (Scotland) Act 2005", known as the 'SEA Regulations'.

1.1.7 The purpose of the SEA Directive is to ensure a high level of environmental protection, and to integrate the consideration of the environment into the preparation and adoption of programmes, plans and strategies, with a view to promoting sustainable development.

1.1.8 More information on the SEA process is provided in **Section 3**.

## 1.2 The Purpose of the Environmental Report

1.2.1 The preparation of the Environmental Report comprises the third stage of the SEA process. This report summarises the findings of the assessment of the ATS' policies, proposed route options and alternatives. It sets out mitigation and monitoring measures as well as identifying potential sources of cumulative effects.

1.2.2 The Environmental Report includes:

- An overview of the purpose and process for the development of the ATS (**Section 2**);
- A description of the SEA process and methodology (**Section 3**);
- A summary of baseline information (current and future), key issues and opportunities and the formation of the SEA Appraisal Framework (**Section 4**);
- Compatibility of the ATS' vision and objectives against the SEA Appraisal Framework (**Section 5**)
- An assessment of the Preferred policies and policy alternatives (**Section 6**);
- An assessment of the Preferred ATS routes and route alternatives (**Section 7**):
- An assessment of cumulative effects (**Section 8**);
- Outline mitigation and enhancement measures (**Section 9**);
- Monitoring Measures (**Section 9**);
- Recommendations for future changes to the ATS identified throughout the SEA assessment (**Section 10**) and
- Next Steps (**Section 11**).

# 2 Active Travel Strategy

## 2.1 Background

2.1.1 The Scottish Government has declared a climate emergency, committing to reduce emissions yearly by 2032 through the Climate Change Act 2009. The Act was updated in 2019 to commit to zero emissions by 2045.

2.1.2 In line with the National agenda and urgent need to take climate action, Falkirk Council declared a climate emergency in 2019, Falkirk Council (2019), Scotland's Climate Change Legislation. [online] Available at: Scotland's Climate Change Legislation and '*agreed to push towards increasing efforts to reduce carbon emissions to net zero by 2030*'.

2.1.3 Transport is currently the largest source of greenhouse gas emissions, with cars accounting for 39% of transport emissions, according to Transport Scotland (2022), Strategic Transport Projects Review 2 [online] Available at: Strategic Transport Projects Review. To address the contribution of transport to carbon emissions, the Scottish Government has committed to reducing car kilometres by 20% by 2030. The modal shift to active and sustainable transport is predicted to significantly reduce role these emissions and car kilometres both nationally and locally.

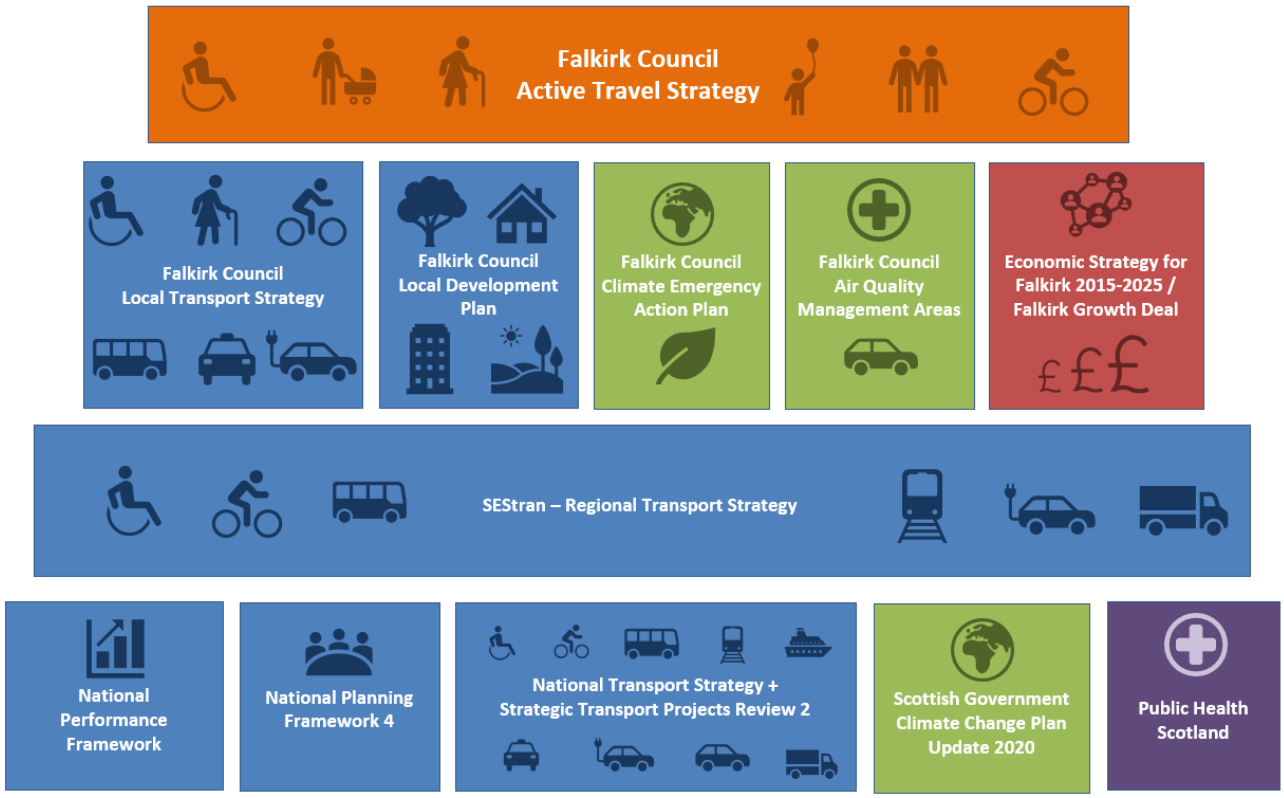
2.1.4 Previously, active travel has been part of Falkirk Council's overarching Local Transport Strategy, however, as funding opportunities shift to active travel initiatives, Falkirk Council has decided to develop an ATS that sets out the policy direction of the Council and establishes active travel proposals for future investment.

2.1.5 The spatial scope of the ATS comprises the whole of the Falkirk Council area as shown in Figure 1-1 above. The temporal scope of the ATS is the 10-year period between 2023 and 2033.

2.1.6 The Strategy aligns with the development of a refreshed Local Transport Strategy that prioritises active and sustainable travel through its objectives and policy direction.

2.1.7 The ATS has been influenced by Falkirk's Council strategies and programmes, as policy makers strive for a people-first approach to planning and transport. It sets a policy direction and details actions that will prioritise investment in active travel to reduce emissions and promote wellbeing across communities. Figure 2-1 below sets out the relation between the ATS and other local, regional and national strategies of key relevance to the ATS.

**Figure 2-1 - Relationship of the ATS with other Plans and Strategies**




## 2.2 Proposed Objectives

2.2.1 The ATS' goal is to develop suitable conditions for most people to easily undertake their local journeys by walking, wheeling or cycling.

2.2.2 This is underpinned by three objectives:

**Thriving Communities**. As more people walk, cycle and wheel for everyday journeys, they will help to create more sociable and more pleasant communities. Travelling actively will improve health levels for everyone. Connected paths, footways and more 'eyes on the street' create safer streets and places for all.

**Growing Economy**. Making it easier to walk, wheel and cycle will reduce inequalities of access to employment, education, services and leisure. When everyone can move across our communities more easily, they can support local businesses and facilities. This encourages more sustainable economic growth.

**Sustainable Place**. The shift from private car use to active modes will reduce transport-related carbon emissions and other air pollution. This shift also will allow some of the space currently used for excessive traffic-levels and parking to be used more productively, creating greener and more attractive spaces and places.

2.2.3 To achieve these objectives, the Council has identified three key priorities:

- Raising awareness of the importance of walking, wheeling and cycling for wellbeing, cost-of-living, and community.
- Supporting all road users, business owners, and key services to make walking, wheeling and cycling easier, safer, and more welcoming for everyone.
- Investing in new and upgraded infrastructure to create safe spaces for walking, wheeling and cycling.

2.2.4 The ATS recognises that there are some groups of people who need additional support to access walking, wheeling and cycling, so the Council has committed to prioritise investment in improving inclusivity accordingly.

## 2.3 Proposed Policies

2.3.1 The  below sets out the ATS' proposed policies.

### Identifying Strategic Routes

- We will invest in our strategic active travel network, with a goal of completing the primary network by 2038.
- We will develop and maintain an ambitious delivery plan for delivering the strategic active travel network.
- We will prioritise investment in street lighting, the footway network, and cycle routes to provide safe, sustainable travel options.

- We will work with the Council's Core Paths Plan to enhance the existing path network and develop multi-use paths that are easily accessible and well-connected.
- We will improve the pedestrian and cycle environment in the busiest used areas to enhance safety for walking, wheeling and cycling.
- We will continue listening carefully to communities through prioritising consultation and collaboration with community groups.

## Promoting Thriving High Streets

- We will trial pedestrian and cycling improvements and monitor the economic impacts on local businesses through business engagement.
- We will invest in secure cycle parking infrastructure at key destinations.
- All new flats will have dedicated secure cycling storage.
- We will invest in infrastructure and placemaking to make the walking, wheeling and cycling gateways to town centres welcoming and accessible.
- We will work collaboratively to increase the flexibility of land use, to encourage thriving high streets.
- We will remove time restrictions for cycle access on Falkirk town's high street to increase cycle access and facilitate greater use of cargo bike delivery models.
- We will explore opportunities for cargo bikes in the Grangemouth Investment Zone, and make arriving at this zone by foot, cycle or wheel a welcoming and accessible experience.
- Ensure the Grangemouth Investment Zone is accessible via walking, wheeling and cycling.

## Creating Liveable Neighbourhoods

- We will review existing footway and path clutter and remove or relocate anything unnecessary which is a barrier to access for all people whether, walking or wheeling.
- We will invest in new street infrastructure such as pedestrian crossings, wider footways, and protected vehicle-free spaces to improve the pedestrian experience.

- We will improve connectivity and integration between different modes of transport to ensure seamless mobility. This includes steps such as exploring integrated ticketing, walking, wheeling and cycling access to train station, and active travel integration with car club vehicles (e.g. cycle racks).
- In areas of high pedestrian demand we will ensure that the default position is pedestrian priority at signal-controlled junctions.
- We will prioritise cycling movements over motor vehicles through greenlights, and investigate 'green wave' technology to help cyclists progress through a series of junctions more smoothly.

### Embracing Sustainability

- We will continue promoting and increasing awareness of sustainable and active travel choices through the Take the Right Route campaign.
- Continue to work with the schools and other partners to educate children on the benefits of walking and cycling, to increase walking, wheeling and cycling to and from school.
- We commit to ensuring more than 10% biodiversity net gain across our active travel programme to improve the habitats and environments within the Falkirk district.

## 2.4 Proposed Route Options

2.4.1 The ATS includes a total of 26 proposed route options. The proposed routes options cover four key routes:

- Falkirk Town Centre to Bellsdyke Road
  - Graham Road – A803 to Retail Park / George Street Roundabout
  - Graham Road – Retail Park / George Street Roundabout to Main Street
  - Main Street to Carron Road
  - Carron Road – Main Street to Lidl
  - Carron Road – Lidl to New Carron Road
  - New Carron Road to Carron Roundabout
  - New Carron Road – Carron Roundabout to Bellsdyke Road

- Falkirk Town Centre to Laurieston to Polmont
  - Corporation Street Roundabout to Bellsmeadow Road Roundabout
  - Bellsmeadow Road Roundabout to Callendar Boulevard Roundabout
  - Callendar Boulevard Roundabout to B805 Roundabout
  - B805 Roundabout to Sandy Loan
  - Sandy Loan to Westquarter Avenue
  - A803 – Westquarter Avenue to Salmon Inn Road
  - A803 – Salmon Inn Road to Polmont Park
- Falkirk Town Centre to Hallglen
  - Cow Wynd – Cochrane Avenue to Gartcows Road
  - Glen Brae – Gartcows Road to Slamannan Road
  - Glen Brae to Pedestrian Access to Orkney Place
  - Glen Brae Pedestrian Access to Orknet Place to Hallglen Roundabout
- Camelon to Larbert
  - Stirling Road – A9 Roundabout to Camelon Train Station (Centurion Way)
  - Stirling Road – Camelon Train Station to Larbert Bus Depot
  - Park from Dorrator Bridge to Carronvale Road
  - Carronvale Road to B905
  - B905 – Carronvale Road to Foundry Loan
  - Foundry Loan
  - Old Bellsdyke Road
  - Old Denny Road

2.4.2 The 26 routes include a mix of options including:

- Shared use paths (next to the existing highway or located remotely);
- Unidirectional carriageway level cycle lanes (with and without hard segregation);
- Bi-directional carriageway level cycle lanes (with and without hard segregation);
- Traffic calmed on-carriageway cycling/quiet street; and
- Cycle streets.

# 3 SEA Methodology

## 3.1 Strategic Environmental Assessment

3.1.1 SEA is used to describe the application of environmental assessment to programmes, plans and strategies (PPS) in accordance with European Council Directive 2001/42/EC 'The SEA Directive'. The SEA Directive is enacted in Scotland through the "Environmental Assessment (Scotland) Act 2005", known as the 'SEA Regulations'.

3.1.2 The purpose of the SEA Directive is to ensure a high level of environmental protection, and to integrate the consideration of the environment into the preparation and adoption of PPS, with a view to promoting sustainable development. SEAs aim to make PPS more sustainable and more responsive to their environmental effects, by identifying a PPS' significant impacts and ways of minimising significant negative effects.

3.1.3 SEAs should be undertaken at an early stage in the preparation of a PPS, as it is important that the future consultation on the strategy and the SEA Environmental Report (ER) takes place when ideas are forming, and policy options are still being actively considered.

3.1.4 SEA is an iterative process of gathering data and evidence, assessment of environmental effects, developing mitigation measures and making recommendations to refine plans or programmes in view of the predicted environmental effects. The effects predicted at this stage will remain at a strategic level.

3.1.5 The SEA process in Scotland has five distinct stages which include:

1. Undertaking a Screening (including pre-screening exercise);
2. Production of a Scoping Report, including consultation;
3. Environmental Assessment of the Strategy and reporting on the significant effects (this stage);
4. Consultation on the Environmental Report and Strategy; and
5. Production of a Post-adoption statement.

3.1.6 **Figure 3-1** overleaf outlines further details on these stages. This report represents stage 3 – Environmental Assessment of the Strategy and reporting on the significant effects.

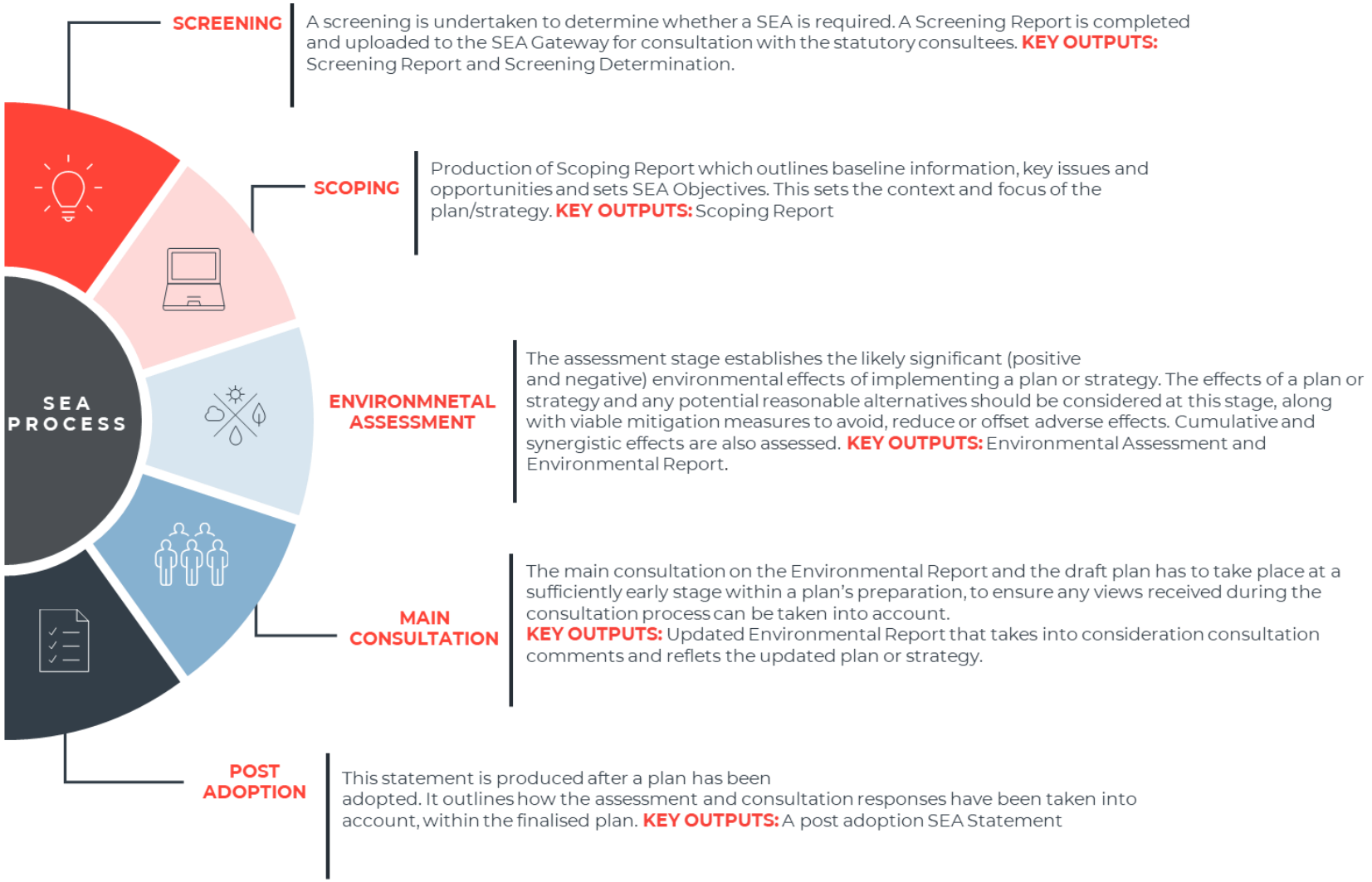



**Figure 3-1 – SEA Process**

3.1.7 Falkirk Council conducted an initial SEA Screening exercise in July 2022. The SEA Screening concluded that the ATS presents opportunities for significant positive effects on population and human health. Depending upon the effectiveness of proposals and policies, there is potential for a considerable modal shift which could result in significant positive effects on greenhouse gas emissions and noise and air pollution.

3.1.8 It also concluded that the significance of effects on some topics such as biodiversity, cultural heritage, water, soils and landscape will be highly dependent upon the nature of the policies and proposals outlined within the ATS.

3.1.9 Given the current level of uncertainty as well as the potential for significant effects, it was determined that under Section 5(3) of the Environmental Assessment (Scotland) Act 2005, a full SEA is required.

3.1.10 Through the screening consultation the SEA Consultation Authorities (Cas) NatureScot, Historic Environment Scotland, and Scottish Environment Protection Agency (SEPA) were also of the view that a SEA was required and that a SEA Scoping Report would be required for further consultation in order to set the scope and level of detail required for the environmental assessments required to inform the ER.

3.1.11 Following on from screening, the Scoping Report was issued to Cas in January 2023 and finalised in March 2023. This report set out the key baseline information, other plans, policies and programmes which could influence the plan, key issues and opportunities for the ATS and set out the scope and level of detail required for the environmental assessments required to inform the ER. The Scoping Report can be found in **Appendix C** whilst the responses from the consultees are compiled in **Appendix E**.

## 3.2 Environmental Assessment Methodology

3.2.1 This stage of the SEA comprises the assessment of the draft ATS strategy (including the objectives and policies) and the proposed route options, against the SEA Appraisal Framework objectives identified within the Scoping Report and presented as Table 4.3 of the ER. The assessment has aided the development of draft Active Travel Strategy and its policies and proposed route options.

3.2.2 The assessment is reported in the ER (this document) which also provides an overview of the policy context and environmental baseline conditions that informed the SEA Appraisal Framework.

3.2.3 As per the SEA regulations, the ER also needs to consider and compare all reasonable alternatives as the strategy evolves and assess these against the baseline environmental, economic and social characteristics of Falkirk. Reasonable alternatives are the different realistic options considered by the strategy-maker in developing the policies in the strategy.

3.2.4 There aren't currently any alternative policies, therefore the ER has assessed a 'no ATS' scenario, whereby just the application of the forthcoming Local Transport Strategy (LTS) without the ATS has been assessed. There are proposed alternative route options, which have been assessed alongside the proposed route options.

3.2.5 This ER therefore covers the assessment of:

- Compatibility assessment of the ATS' vision and objectives with the SEA objectives;
- ATS draft policies;
- Alternative policy scenarios i.e. "no ATS scenario";
- Proposed route options; and
- Route options alternatives.

## Compatibility Assessment

3.2.6 Predicting and evaluating the potential environmental effects of the Strategy is essential to the SEA process and in understanding the likely effects on the environmental baseline when the Strategy is implemented.

3.2.7 In order to ensure that both the Strategy and the SEA are compatible, a compatibility assessment has been undertaken where the high-level vision and objectives of the draft ATS have been assessed against the SEA Objectives. This assessment has identified any recommendations for updates to the vision and objectives while taking into account the specific environmental objectives developed for the SEA.

## Assessment of Effects

3.2.8 The assessment of the ATS policies and options has been undertaken qualitatively using a matrix-based approach.

3.2.9 Each policy and option, and their alternatives, have been assessed against the SEA Appraisal Framework objectives as guided by the appraisal questions set out in the Appraisal Framework (see Table 4.3). This approach has been supplemented by a narrative on the likely significant effects.

3.2.10 The key to the matrix-based assessment is detailed in **Table 3-1** below. It includes the effect significance and the characteristics of the predicted effects.

## Legend

| **Explanation of symbols / letters** | **Key** |
|---|---|
| Significant positive effects | ++ |
| Minor positive effects | + |
| Minor negative effects | - |
| Significant negative effects | -- |
| Uncertain effects | ? |
| Mixed positive and negative effects | +/- |
| Negligible / No effect | 0 |
| Direct effect | D |
| Indirect effect | I |
| Local | L |
| Regional | R |
| National | N |
| Reversible | R |
| Irreversible | I |

| Explanation of symbols / letters | Key |
|---|---|
| Temporary | T |
| Permanent | P |
| Short Term | ST |
| Medium Term | MT |
| Long Term | LT |
| Not Applicable | N/A |

**Table 3-1 – Key to Assessment (Significance)**

| Effect Significance | Key |
|---|---|
| Potential for significant positive effects – The policy / option would be significantly beneficial to the SEA objective by resolving an existing environmental issue and / or maximising opportunities for environmental enhancement. | ++ |
| Potential for minor positive effects – The policy / option would be partially beneficial to the SEA objective by resolving an existing environmental issue and / or offering opportunities for some environmental enhancement. | + |
| Potential for minor negative effects – The policy / option would partly undermine the SEA objective by contributing to an existing environmental issue and / or partially undermine opportunities for environmental enhancement. | - |

| Effect Significance | Key |
|---|---|
| Potential for significant negative effects – The policy / option would severely undermine the SEA objective by contributing to an existing environmental issue and / or partially undermine opportunities for environmental enhancement. | - - |
| Uncertain effects – Uncertain or insufficient information on which to determine the appraisal at this stage | ? |
| Potential for both positive and negative effects | +/- |
| Negligible / No effect – The policy / option would have a negligible or no effect on the SEA objective. | 0 |

**Table 3-2 – Key to Assessment (Characteristics)**

| Effect Characteristic | Key |
|---|---|
| Nature of effect (direct / indirect). | D / I |
| Spatial Extent – local (within Falkirk) / regional (within Loch Lomond, Trossachs, Stirling and Forth Valley region) / National | L / R / N |
| Magnitude of effect<br>High (H) – Likely total loss of or major alteration to the receptor in question. The effects are predicted to be permanent and irreversible.<br>Medium (M) – Partial loss of/alteration/improvement to one or more key elements/features/characteristics of the receptor in question. The effects are predicted to be medium-long term but often reversible. | H / M / L |

| Effect Characteristic | Key |
|---|---|
| Low (L) – Minor loss/alteration/improvement to one or more key elements/features/characteristics of the receptor in question. The effects are often predicted to be reversible and short term. | |
| Reversibility of effect – Reversible or Irreversible | R / I |
| Permanence – Temporary or Permanent | T / P |
| Duration – short (the strategy period – up to 2028) / medium (2028-2033) / long term (beyond 2033). | ST / MT / LT |

## Cumulative Effects

3.2.11 The SEA Regulations require that cumulative effects are considered when identifying likely significant effects. Cumulative effects arise, for instance:

- Where several individual policies and preferred route options have a combined effect on an objective; or
- Where several policies and preferred route options each have insignificant effects but together have a significant effect.

3.2.12 The significance of cumulative effects resulting from a range of activities, or multiple incidences of one activity, may vary based on factors such as the nature of the proposed sites and policies and the sensitivity of the receiving communities and environment.

3.2.13 The cumulative effects assessment has considered how different proposed policies and route options of the ATS itself may interact and cause cumulative effects on a receptor or SEA Objective (Intra-project effects). It has also considered how the proposed ATS' policies and route options could cause cumulative effects in association with other strategies, policies and projects in Falkirk and neighbouring authorities (Inter-project effects).

3.2.14 The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment as a result of implementing the ATS. The measures are known as ‘mitigation’ measures.

3.2.15 Mitigation measures have been identified in relation to the assessment of policies, options and option alternatives. These include both proactive avoidance of adverse effects and actions taken after potential effects have been identified. These are set out in **Section 9** of this report.

3.2.16 **Section 9** also includes enhancement measures, which aim to optimise positive impacts and enhance sustainability. The mechanism for delivery will ensure the promotion, prevention, reduction and offset of any significant adverse effects or enhancement opportunities on the environment.

3.2.17 The SEA Regulations also require that monitoring is undertaken on a strategy so that the significant effects of implementation can be identified, and remedial action imposed. The purpose of the monitoring is to provide an important measure of the sustainability outcome of the final strategy, and to measure the performance of the strategy against sustainability objectives and targets. Monitoring is also used to manage uncertainty, improve knowledge, enhance transparency and accountability, and to manage sustainability information.

## 3.3 Assumptions and Limitations

3.3.1 The preparation of the ATS alongside the SEA has allowed an iterative process of assessment and refinement in the narrative and policies within the Strategy. Therefore, some of the recommendations set out in this report may already have been addressed in the ATS.

3.3.2 SEA is a qualitative high-level assessment aimed at highlighting potential environmental concerns. The data to be used in an SEA is based on high-level information which is readily available from existing sources, such as statutory organisations. No primary research or data collection has been carried out specifically to inform the SEA.

3.3.3 Future social and environmental baseline, where the projections across the various SEA topic areas vary in temporal scope and reliability are subject to considerable uncertainty.

3.3.4 The assessment of policies, proposed route options and alternatives, has therefore been undertaken as a desk-based exercise using the baseline information compiled during the preparation of the Scoping Report.

3.3.5 The high-level nature of this assessment undertaken at the draft ATS stage means that there is limited information on how the strategy will be implemented. Similarly, there no detailed design information for the proposed route options considered

3.3.6 Given the uncertainties there is inevitably a need to make some assumptions, however, these are made carefully and explained in detail within the assessment text.

3.3.7 In some instances, despite given reasonable assumptions, it is not possible to predict 'significant effects', but it is possible to comment on the potential positive and negative effects of the draft strategy and its alternatives in more general terms.

## 3.4 Habitats Regulations Assessment

3.4.1 As well as the SEA a Habitats Regulations Assessment (HRA) has also been undertaken. Although this assessment remains separate to the SEA, the outcomes of the HRA have fed into the assessment of biodiversity and natural capital.

3.4.2 Under the requirements of the European Council Directive 92/43/EEC 'The Habitats Directive and the Council Directive 79/409/EEC 'The Wild Birds Directive' it is necessary to consider whether a proposed project may have significant effects upon areas of nature conservation importance designated/classified under the Directives.

3.4.3 The EC Directives refer to Natura 2000 sites; the term 'European sites' is used to refer to sites in Scotland that are formerly part of EU's Natura 2000 network following the UK's exit from the EU. Refer to: Nature Scot, European Sites and are referred to as 'International Sites'. These sites are collectively referred to in Scotland as 'European sites'.

3.4.4 This requirement is translated into Scottish law through the Conservation (Natural Habitats &c.) Regulations 1994 (as amended in Scotland) (hereafter referred to as the Habitats Regulations) and has been retained following the December 2020 passing of the UK Withdrawal from the European Union (Continuity) (Scotland) Bill (hereafter the EU Continuity Bill) [online] Available at: Habitats Directive and Habitats Regulations. The amendments to the Habitats Regulations following EU Exit mean that the requirements of the Habitats and Birds Directives must continue to be applied to how International Sites are designated and protected.

3.4.5 A HRA is a four-stage process. Guidance on the Habitats Directive (European Commission, 2000) sets out the step-wise approach which should be followed to enable Competent Authorities to discharge their duties under the Habitats Directive and provides clarity on the interpretation of Articles 6(3) and 6(4). The four stages are as follows:

- **Stage 1**: Screening: the process which initially identifies the likely impacts upon a Natura 2000 site of a strategy or project, either alone or in combination with other strategies or projects, and considers whether these impacts are likely to be significant;
- **Stage 2**: Appropriate Assessment: the detailed consideration of the impact on the integrity of the Natura 2000 sites of the strategy or project, either alone or in combination with other strategies or projects, with respect to the site's conservation objectives and its structure and function. This is to determine whether there will be adverse effects on the integrity of the site;
- **Stage 3**: Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the strategies or projects that avoid adverse impacts on the integrity of the Natura 2000 site; and

- **Stage 4**: Assessment where no alternative solutions exist and where adverse impacts remain: an assessment of whether the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the Natura 2000 network.

3.4.6 The first stage of the Habitats Regulations Assessment (screening) has been undertaken alongside this ER Report. The HRA is driven by separate legislation to the SEA which means the HRA Report will be published separately and not included as an appendix to this ER.

# 4 Identification of Sustainability Issues and Opportunities

## 4.1 Review of Plans, Programmes and Strategies

4.1.1 In order to establish a clear scope for the SEA, it is necessary to review and develop an understanding of the environmental, social and economic objectives contained within international, national, regional and local legislation, policies and strategies that are of relevance to the ATS.

4.1.2 The SEA Regulations (2005 Act) requires information on:

*"The degree to which the plan or programme influences other plans and programmes including those in a hierarchy"* (Schedule 2, Paragraph 1(b)).

4.1.3 The review process ensures that the SEA complies with existing international, national, regional and local governance. The process entails identifying and reviewing those environmental protection objectives that are directly relevant to both the Strategy and the SEA.

4.1.4 **Appendix D** of this ER presents the findings of the PPS which are considered likely to be affect or be affected by the draft Strategy. The review comprises PPS from an International (European), National (Scotland) and Local (Falkirk). This task was undertaken as part of the Scoping Report and has since been updated following scoping consultation with the CAs.

4.1.5 The scoping task of identifying related legislation, policies and plans cannot yield an exhaustive or definitive list, therefore, the review has been focussed to ensure that only policies that are current and of direct relevance to the Strategy are included.

4.1.6 **Table 4-1** below outlines the key messages from the PPS review for each of the SEA topics.

**Table 4-1 – Key Messages from PPS Review**

| SEA Topic | Key Messages from PPS Review |
|---|---|
| Population and Equalities | • Physical activity can play a major role in improving outcomes and tackling inequalities across many different aspects of society.<br>• There is a need to seek to provide opportunities for all people at all ages and abilities to participate in physical activity with a priority towards addressing disparities and reducing inequalities.<br>• The delivery of new developments should not be of detriment to the interests of existing communities.<br>• Development should promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other.<br>• The Daily Mile initiative provides an important role in ensuring that school children are physically active, particularly for vulnerable and low income groups<br>• Disabled people can face barriers to their experience of, and interaction with, transport systems and travel. However, active travel has the potential to play a crucial role in increasing independence and accessibility. |

| SEA Topic | Key Messages from PPS Review |
|---|---|
| Human Health | • Environmental quality is central to health and wellbeing.<br>• Physical inactivity increases the risk of chronic conditions including heart disease, diabetes, and other obesity-related illnesses.<br>• Creating walkable places, with well-designed streets that link our open spaces and wider active travel networks, can deliver better environments for pedestrians and cyclists in town and city centres, and improve health and wellbeing.<br>• There is a need to promote and increase understanding of the many ways everyone can participate in sport and physical activity.<br>• The Covid-19 pandemic has had significant consequences for people's health outcomes in the short and longer term.<br>• Good placemaking is linked to a wider set of positive social, economic and environmental outcomes.<br>• People need to feel enabled to make healthy living choices to treat and prevent disease, address the impacts of sedentary lifestyles and reduce health inequalities. |
| Transport and Accessibility | • There is a need to improve access to active travel options to encourage a modal shift.<br>• There are urban and rural locations locally where the current level of public transport provision, including accessible transport, can act as barriers to accessing healthcare, employment, education or training opportunities.<br>• Currently, many people are choosing to travel by car instead of active travel and/or public transport due to the number of necessary interchanges on their journey. In some cases, journeys are not possible due to a lack of connections or accessible modes of transport. |

| SEA Topic | Key Messages from PPS Review |
|---|---|
| Community Safety | • It is no longer acceptable that anyone is killed or seriously injured on Scotland's roads.<br>• All road users must be free from road traffic harm as much as they are free to drive/ride/walk/travel.<br>• There is a need to reduce crime and the fear of crime, as well as encouraging reporting.<br>• Increasing the accessibility of active travel also increases the number of vulnerable road users.<br>• There appears to be a missing opportunity between the road safety benefits of supporting active travel and the benefits to active travel in supporting road safety.<br>• Safety and security are essential to successful, sustainable communities.<br>• There is a need to provide well-designed places where people feel safe and secure; where crime and disorder, or the fear of crime, doesn't undermine quality of life or community cohesion. |

| SEA Topic | Key Messages from PPS Review |
|---|---|
| Biodiversity and Natural Capital | • There is a need to protect, restore and enhance biodiversity on land and sea, including designated sites, priority species, habitats and ecological networks.<br>• Biodiversity is not just confined to rural areas – built environment, key infrastructure corridors and the greenspaces within our cities and towns also provide important habitats and can together contribute to a wider national ecological network.<br>• There is a need to minimise the impact on biodiversity and ensure net gain wherever possible.<br>• The Central Scotland Green Network remains a national priority.<br>• There is a need to maximise the benefits of a diverse natural environment and the services it provides, contributing to sustainable economic growth. |
| Landscape and Townscape | • Scotland's Landscapes contribute to place-making, quality of life, national identity and the visitor economy.<br>• There's a need to protect and enhance landscape character and enhance landscape quality.<br>• The delivery of new developments should not have adverse impacts on the quality of the natural and built environment.<br>• There's a need to provide greater access to greenspace, to help reconnect people to nature.<br>• Improving the quality of our urban and rural environments is vital if we are to deliver on our ambition to make Scotland a greener, wealthier and fairer, smarter, healthier, stronger and more resilient country. |

| SEA Topic | Key Messages from PPS Review |
|---|---|
| Cultural Heritage | • There's a need to encourage sensitive restoration and management of historic gardens and designed landscapes.<br>• Conserve and enhance nationally and locally designated cultural and historical assets as well as those which are undesignated.<br>• Enhance the beauty of the natural scenery and improving its environmental value while being sensitive to considerations of its heritage encourage engagement with the natural environment.<br>• If detrimental impact on the historic environment is unavoidable, it should be minimised.<br>• Decisions affecting the historic environment should contribute to the sustainable development of communities and places. |
| Climatic Factors | • New development needs to facilitate adaptation to climate change, reduce resource consumption and lower greenhouse gas emissions.<br>• Avoid increased vulnerability to the range of impacts arising from climate change.<br>• There is a need to reduce emissions of greenhouse gases that may cause climate change.<br>• There is a need to increase energy efficiency and move towards a low carbon economy.<br>• Communities need to feel inclusive, empowered, resilient and safe in response to the changing climate |

| SEA Topic | Key Messages from PPS Review |
|---|---|
| Air Quality | • Air pollution increases the risks of diseases such as asthma, respiratory and heart disease, particularly for those who are more vulnerable such as the very young and the elderly or those with existing health conditions.<br>• The impacts of poor air quality are not distributed evenly across the population.<br>• Additional opportunities to improve air quality or mitigate impacts should be identified, such as green infrastructure provision and enhancement. |
| Water Environment | • Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest flood risk<br>• Any 'essential infrastructure' proposed to be located in areas with a medium to high risk of flooding (fluvial, coastal or surface) should be designed and constructed to remain operational and safe for users in times of flood.<br>• Protect and improve the status of water bodies and reduce the pollution in groundwater across the City Region. |
| Material Assets | • Geodiversity underpins the landscape and provides important ecosystem services.<br>• Facilitate the sustainable use of minerals and minimise impacts on soil quality, considering any mitigation measures proposed.<br>• Consider land stability in respect of new development.<br>• Encourage a circular economy; and<br>• Continue to encourage recycling by promoting correct recycling practice and educating our residents |

## 4.2 Current and Future Baseline

4.2.1 The SEA Act requires that the ER includes a description of the relevant aspects of the current state of the environment and its likely evolution without the Strategy. The SEA Act also requires a description of existing environmental problems, in particular those relating to any areas of environmental sensitivity.

4.2.2 **Appendix C** sets out the relevant characteristics of the environment to which the Strategy relates, with the key environmental issues / opportunities and the evolution of environment without the Strategy set out below, for each of the SEA topics. The information presented has been used to develop the SEA Objectives and Appraisal Framework (**Section 4.4)**.

## 4.3 Sustainability Issues and Opportunities

4.3.1 The Scoping Report set out a number of issues and opportunities for the Active Travel Strategy, for each of the SEA topics outlined in the Scoping Report. These have been summarised in **Table 4-2** below.

**Table 4-2 - Issues and Opportunities**

| Topic | Issues and Opportunities |
|---|---|
| Population and Equalities | • The population of Falkirk is predicted to increase both in number and age profile. An expected increase in elderly residents will call for adequate support and greater access to services and facilities for the elderly population to be provisioned.<br>• Changing behaviours such as remote working habits and long-term shielding by the elderly may increase social isolation and increase reliance on alternative social interaction.<br>• Rural communities are likely to increase, which could also increase levels of social isolation. |

| Topic | Issues and Opportunities |
|---|---|
| Human Health | • Increases in poor health related with diet and physical activity are likely to be seen as a result of sedentary lifestyles brought about by the pandemic.<br>• Increases in loneliness are likely to be seen as a result of social isolation and loneliness, brought about by the pandemic.<br>• Covid-19 has exacerbated inequalities within Falkirk |
| Transport and Accessibility | • The Covid-19 pandemic has brought about the shift to home-working, reducing opportunities for active travel through commuting.<br>• Falkirk has a good existing active travel network, which could be further enhanced by the ATS.<br>• An ageing population in Falkirk will mean additional strain on transport infrastructure. |
| Community Safety | • Crime rates are on the rise nationally following the lifting of Covid-19 restrictions.<br>• There are opportunities to improve neighbourhoods and reduce the prevalence of antisocial behaviour.<br>• There are opportunities to increase the safety of active travel network.<br>• Vulnerable road users such as cyclists and pedestrians are more likely to be casualties. |

| Topic | Issues and Opportunities |
|---|---|
| Biodiversity and Natural Capital | • Light, air, and noise pollution from increasing urban development may put strains on nearby protected areas.<br>• There are opportunities to improve green infrastructure provision within Falkirk as part of active travel developments.<br>• There are opportunities for the ATS to reduce noise disturbance on biodiversity from roads and additional developments.<br>• Increasing population and associated developments may lead to fragmentation and urbanisation of natural habitats.<br>• Legislation regarding biodiversity conservation will require developments to implement demonstratable increases in biodiversity. |

| Topic | Issues and Opportunities |
|---|---|
| Landscape and Townscape | • Development has the potential to cause direct and indirect impacts on designated landscapes and townscapes, particularly altering the character of the landscape and townscape.<br>• Population growth and additional developments could risk compromising landscape and townscape character and features. However, a landscape-led design with green infrastructure principles in place could play a key role in the enhancement of the natural environment, visual amenity and physical and mental health of its people.<br>• There is opportunity to enhance the landscape through the incorporation of a landscape-led approach to design, to ensure the best placement and integration of the proposed development into the existing landscape and contribute to positive placemaking.<br>• There is opportunity to increase countryside access and provide connectivity through urban built form to the countryside. It can also bring new audiences to tourist attractions and enable better appreciation of historic landscape assets through creating new views and vistas, providing information, and enhancing access.<br>• The incorporation of landscape principles that are suitable for future challenges and landscape-led designs would help ensure infrastructure is designed for longevity in the 21st century, for both its people and its natural environment. |

| Topic | Issues and Opportunities |
|---|---|
| Cultural Heritage | • There are opportunities for enhancing the setting of heritage assets through the development of ATS schemes to reduce traffic noise and enhance accessibility through active modes and asset settings.<br>• There is potential for development to encroach on assets, particularly affecting the settings of assets through increased visual effects.<br>• Archaeological remains, whether designated or not, normally require preservation in situ. This clearly has implications and can represent a significant constraint to future scheme design, which should respect, retain and protect the remains (e.g. through avoidance and redesign).<br>• The ATS presents opportunities to reduce vehicle damage and pollution. This can adversely affect both listed buildings and scheduled monuments, so reducing vehicle movements within historic urban areas is also an important opportunity to achieve. |
| Climatic Factors | • Significant increases in hourly precipitation extremes in Scotland will result in an increase in risk to the built environment, infrastructure assets and systems, and services in the region.<br>• The scale of this increase in risk will be dependent on the level of adaptation actions included in the scheme, and the extent to which they lead to an overall increase in resilience, meaning there is an opportunity to reduce the scale of risk through measures implemented by the scheme.<br>• Increased frequency and severity of extreme weather events have the potential to bring greater disruption to travel in Falkirk. |

| Topic | Issues and Opportunities |
|---|---|
| Air Quality | • The ATS supports Government plans of reducing vehicle emissions and has the opportunity to encourage a modal shift away from private car use.<br>• More severe and frequent heat episodes as a result of climate change can contribute to the worsening of air quality.<br>• Air quality issues across Falkirk can be addressed via a modal shift towards less polluting methods of transport (low carbon transport initiatives) and inclusive of active transport (e.g. cycling, walking etc.) thereby leading to a higher standard of air quality. |
| Water Environment | • A growing population will also put strain on existing pressures on Falkirk's water bodies from industry and pollution.<br>• Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk. There is a need to strategy for and implement/facilitate climate change adaptation in response to this, to avoid adverse effects on the water quality, but also local receptors like people and transport. |
| Material Assets | • The growing population and associated need for development and infrastructure is likely to increase the use of mineral resources and waste generation.<br>• Falkirk's soil resources are likely to be negatively impacted by climate change, which could lead to reduced levels of productivity.<br>• There's a continued increase in renewable energy supplies across Falkirk. |

## 4.4 SEA Framework

4.4.1 The review of relevant plans, policies and programmes, collation of baseline information and identification of issues and opportunities, has been used to inform the SEA Appraisal Framework, which is set out in **Table 4-3** below.

4.4.2 The SEA Appraisal Framework was subject to statutory consultation with the Cas as part of the Scoping Stage.

**Table 4-3 - SEA Appraisal Framework**

| SEA Topic | SEA Objective | Supporting Questions |
|---|---|---|
| **Population and Equalities** | **SEA1:** To increase the connectivity and efficiency of Falkirk's active travel network to support demographic changes and improve access for all groups inclusively. | Will the policy or proposal:<br>• Help to reduce inequalities, particularly for those people and communities most vulnerable?<br>• Improve access to services, facilities and transport for all inclusively?<br>• Support diversity?<br>• Support existing initiatives such as the 'Daily Mile'?<br>• Increase rural connectivity? |
| **Human Health** | **SEA2:** To protect and enhance both physical and mental health and wellbeing through better access to active travel and encouraging healthy lifestyles. | Will the policy or proposal:<br>• Promote healthier lifestyles and reduce health-related illnesses?<br>• Improve quality, quantity and equality of access to green and blue space and increase opportunities for recreation?<br>• Promote health enhancing environments, behaviours and activities for local communities?<br>• Support the UK's levelling up agenda? |
| **Transport and Accessibility** | **SEA3:** To ensure that the active travel schemes are integrated with the existing transport network, increase connectivity and provide seamless travel. | Will the policy or proposal:<br>• Increase connectivity?<br>• Improve access to services, facilities and employment?<br>• Help to create an integrated transport network?<br>• Reduce demand for use of the private car and facilitate a modal shift?<br>• Support seamless travel? |
| **Community Safety** | **SEA4:** To ensure that active travel schemes are safe for all users and designed to deter crime and reduce the fear of crime and intimidation. | Will the policy or proposal:<br>• Improve safety?<br>• Ensure that residents feel safe, particularly after dark?<br>• Support designing out crime principles? |
| **Biodiversity and Natural Capital** | **SEA5:** To preserve, protect and enhance Falkirk's protected habitats, species, and the provision of ecosystem services from natural capital and contribute to environmental net gain. | Will the policy or proposal:<br>• Cause damage to locally and/or nationally designated sites though infrastructure provision, traffic or maintenance?<br>• Maintain and enhance biodiversity in the Council area?<br>• Seek opportunities for biodiversity net gain?<br>• Increase provision of ecosystem services from Falkirk's natural capital?<br>• Prevent fragmentation of habitats and promote ecological networks?<br>• Result in developments which will improve biodiversity on site?<br>• Support Central Scotland Green Network (CSGN) initiatives?<br>• Limit the spread on Invasive Non Native Species (INNS)? |

| SEA Topic | SEA Objective | Supporting Questions |
|---|---|---|
| **Landscape and Townscape** | **SEA6:** To conserve and enhance the quality of the Falkirk's landscapes and its character and ensure active travel routes promote access to the wider environment | Will the policy or proposal:<br>• Respect, maintain and strengthen local character and distinctiveness?<br>• Achieve high quality sustainable design for spaces and the public realm?<br>• Improve the quality and condition of the townscape and landscape?<br>• Improve the quality of parks and open spaces?<br>• Support CSGN initiatives? |
| **Cultural Heritage** | **SEA7:** To protect, enhance and promote the historic environment, including heritage assets (designated and undesignated) and their Settings | Will the policy or proposal:<br>• Conserve and/or enhance heritage assets, their setting and the wider historic environment? Encourage improvements to the setting and value of the Antonine Wall World Heritage Site?<br>• Improve the quality and condition of the historic environment?<br>• Respect, maintain and strengthen local character and distinctiveness?<br>• Improve access to heritage assets? |
| **Climatic Factors** | **SEA8:** To increase resilience to the impacts of climate change, including flood risk.<br>**SEA9:** To support a modal shift and reduce/limit emissions of greenhouse gases and ensure sustainable use of energy | Will the policy or proposal:<br>• Ensure climate resilient design?<br>• Support a modal shift?<br>• Reduce/limit emissions of greenhouse gases?<br>• Ensure sustainable use of materials?<br>• Ensure that design is resilient to the effects of climate change?<br>• Address flood risk (from river and coastal sources) through incorporation of protection measures and nature based solutions where possible?<br>• Increase surface runoff?<br>• Incorporate green/ blue infrastructure and SuDs?<br>• Support CSGN initiatives? |
| **Air Quality** | **SA10:** To protect and enhance air quality | Will the policy or proposal:<br>• Help to improve air quality?<br>• Support measures for the reduction of congestion and traffic levels particularly in AQMAs and congestion hot-spots? |
| **Water Environment** | **SEA11:** To maintain and enhance water quality. | Will the policy or proposal:<br>• Support the protection and enhancement of water bodies?<br>• Improve water quality? |

| SEA Topic | SEA Objective | Supporting Questions |
|---|---|---|
| **Material Assets** | **SEA12:** To ensure the efficient use of land and promote sustainable use of resources<br><br>**SEA13:** To protect geological and agriculturally important land. | Will the policy or proposal:<br>• Support the use of brownfield land?<br>• Result in the loss of important agricultural land?<br>• Support the use of sustainable materials?<br>• Minimise the amount of waste?<br>• Protect carbon rich soils? |

# 5 Compatibility Assessment of Vision and Objectives

## 5.1 Introduction

5.1.1 This section assesses the compatibility of the ATS' vision and objectives against the SEA Appraisal Framework objectives.

5.1.2 The vision and objectives have been individually tested against the SEA Appraisal Framework objectives to identify both potential synergies and inconsistencies. This information can help in developing and refining the objectives of the ATS.

5.1.3 **Table 5-1** below sets out the key to appraisal, whilst **Table 5-2** overleaf sets out the findings of the compatibility testing of the Strategic Policies and the Strategic Objectives.

**Table 5-1 – Key to Compatibility Assessment**

| Effect | Key |
|---|---|
| Compatible | **Compatible ✓** |
| Incompatible/ potential conflict | **Incompatible ✘** |
| No relationship | **No relationship 0** |
| Uncertain/ more than one potential outcome | **Uncertain ?** |

**Table 5-2 – Compatibility Assessment**

| ATS Element | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vision | Compatible ✓ | Compatible ✓ | Compatible ✓ | Compatible ✓ | No relationship 0 | Compatible ✓ | No relationship 0 | No relationship 0 | Compatible ✓ | Compatible ✓ | No relationship 0 | No relationship 0 | No relationship 0 |
| Thriving Communities | Compatible ✓ | Compatible ✓ | Compatible ✓ | Compatible ✓ | Uncertain ? | Compatible ✓ | Compatible ✓ | No relationship 0 | No relationship 0 | Compatible ✓ | No relationship 0 | No relationship 0 | No relationship 0 |
| Growing Economy | Compatible ✓ | Compatible ✓ | Compatible ✓ | Uncertain ? | Uncertain ? | Compatible ✓ | Compatible ✓ | Uncertain ? | Uncertain ? | Compatible ✓ | Uncertain ? | Uncertain ? | Uncertain ? |
| Sustainable Place | Compatible ✓ | Compatible ✓ | Compatible ✓ | Compatible ✓ | Compatible ✓ | Compatible ✓ | No relationship 0 | No relationship 0 | Compatible ✓ | Compatible ✓ | No relationship 0 | Compatible ✓ | No relationship 0 |

## 5.2 Compatibility Assessment Summary

5.2.1 **Table 5-2** above shows that the majority of the objectives and the vision are compatible with the SEA framework objectives. The assessment has not identified any incompatible effects, but some uncertainties have been identified.

5.2.2 The Strategy's overall vision is the most compatible, showing a positive relationship across the majority of SEA framework objectives. This is because the vision is people focused, with development supporting active travel choices and promoting active travel as the most popular transport mode. This aligns with population (SEA1), health (SEA2), transport and accessibility (SEA3), community safety (SEA4), landscape and townscape (SEA6), GHGs (SEA9) and air quality (SEA10) objectives.

5.2.3 Population and equalities (SEA1), human health (SEA2), transport and accessibility (SEA3), landscape and townscape (SEA6), and air quality (SEA10) result in the greatest number of compatibilities with the Strategy's vision and objectives. This is mainly due to the cross-cutting nature of these SEA framework objectives and the potential for the strategy's objectives to provide active travel infrastructure, increase connectivity to services and public transport, create greener and more attractive spaces, encourage a modal shift away from private car use, and having potential to bring about positive effects within the public realm.

5.2.4 Both the Thriving Communities and Growing Economy objectives have resulted in uncertainties. For biodiversity (SEA1) these have been identified where there is potential for development, which could result in land take and potential adverse effects. However, there is potential for these developments to bring about positive effects on these objectives through the incorporation of green infrastructure and habitat creation. The Growing Economy objective has resulted in the highest number of uncertainties as there is potential for a growing economy to result in development which may affect a number of SEA objectives.

5.2.5 The climate resilience (SEA8), water environment (SEA11) and protection of land (SEA13) objectives have the highest number of recorded 'no relationships'. This doesn't necessarily mean that there isn't a possibility for a relationship, however, as these are high level objectives specific design details are not incorporated which makes it difficult to predict outcomes.

# 6 Assessment of Policies and Alternatives

## 6.1 Assessment of Draft Policies

6.1.1 The assessment of the ATS policies is summarised below and presented in full in **Appendix A**.

6.1.2 A matrix approach has been used for the assessment which has used the significance criteria identified in **Table 6-1** below as described in **Table 3-1**. **Table 6-2** overleaf provides an overview on the performance of the Local policy themes against each SEA objective and **Tables 6-3** to **6-15** show the summary of significant effects based on each SEA objective.

**Table 6-1 - Significance of Effect**

| **Effect Significance** | **Key** |
|---|---|
| Potential for significant positive effects | ++ |
| Potential for minor positive effects | + |
| Potential for minor negative effects | - |
| Potential for significant negative effects | -- |
| Uncertain effects – Uncertain or insufficient information on which to determine the appraisal at this stage | ? |
| Potential for both positive and negative effects | +/- |
| Negligible / No effect | 0 |
| Nature of effect (direct / indirect). | D / I |
| Spatial Extent (local / regional / national) | L / R / N |

| Effect Significance | Key |
|---|---|
| Reversibility of effect (reversible / irreversible) | R / I |
| Permanence (Permanent / Temporary) | P / T |
| Duration (short / medium / long term). | ST / MT / LT |

**Table 6-2 - Summary of Effects - Draft Policies**

| Policy | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Identifying Strategic Routes | ++ | + | ++ | ++ | 0 | + | ? | ? | + | + | ? | ? | ? |
| Promoting Thriving High Streets | + | + | ++ | + | 0 | ++ | ? | ? | +/- | ++ | ? | ? | 0 |
| Creating Liveable Neighbourhoods | ++ | + | ++ | + | 0 | + | ? | ? | +/- | + | ? | ? | ? |
| Embracing Sustainability | + | + | + | + | ++ | + | 0 | 0 | + | + | 0 | 0 | 0 |

## SEA1: Population and Equalities

**Table 6-3 - Summary of Population and Equalities findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 2 | Significant positive effects have been identified for policies (Identifying Strategic Routes, Creating Liveable Neighbourhoods) that improve access to services, facilities and transport across the council area for all social groups inclusively, as well as providing active transport provision for the future population of Falkirk. |
| **Minor Positive (+)** | 2 | Minor positive effects have been identified for the Promoting Thriving High Streets policy. This has been identified where the policy improves active travel connectivity and provision for all social groups, however only within a limited area of the Falkirk Council area. The Embracing Sustainability policy has also resulted in minor positive effects due to the increased awareness amongst the general population and children about active travel choices. |

## SEA2: Human Health

**Table 6-4 - Summary of Human Health findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 4 | Minor positive effects have been identified for all policies (Embracing Sustainability, Creating Liveable Neighbourhoods, Promoting Thriving High Streets, and Identifying Strategic Routes). This has been identified as policies promote healthy lifestyles, largely through encouraging physical exercise due to active travel promotion. Additionally, improving the access to, quality and quantity of greenspace improves health through mental and physical wellbeing. |

## SEA3: Transport and Accessibility

**Table 6-5 - Summary of Transport and Accessibility findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 3 | Significant positive effects have been identified for Creating Liveable Neighbourhoods, Promoting Thriving High Streets, and Identifying Strategic Routes as these policies develop the connectivity within the Falkirk council area and increase access to services, facilities and employment within the council area, therefore encouraging a modal shift away from private car use. The Promoting Thriving High Streets policy specifically focuses on improving access within Falkirk's town centres and Grangemouth Investment Zone. Additionally, policy Creating Liveable Neighbourhoods contributes to integrating the transport network with the ATS. These policies also result in positive effects upon inclusion as active travel provides access to all social groups, including those who do not have private vehicle, children and young people, and those with disabilities. |
| **Minor Positive (+)** | 1 | Minor positive effects have been identified for the Embracing Sustainability policy as this indirectly improves transport and accessibility through contributing to reducing the demand for private cars and encouraging a modal shift towards active transport. |

## SEA4: Community Safety

**Table 6-6 - Summary of Community Safety findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 1 | Significant positive effects have been identified for the Identifying Strategic Routes policy as it contributes to improving the physical safety of active travel routes, as well as improving the feeling of safety within active travel routes, particularly at night-time. In addition, public realm improvements may contribute to reducing crime and improving safety for this policy. |
| **Minor Positive (+)** | 3 | Minor positive effects have been identified for policies that contribute to improving the feeling of safety indirectly through public realm improvements. The Promoting Thriving High Streets policy improves community safety through this method. Minor positive effects have also been identified for Creating Liveable Neighbourhoods as this policy prioritises safety, reducing accidents. Embracing Sustainability also results in minor positive effects through improving the awareness and therefore the safety of users. |

## SEA5: Biodiversity and Natural Capital

**Table 6-7 - Summary of Biodiversity and Natural Capital findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 1 | Significant positive effects have been identified for SEA5 (biodiversity and natural capital) as a result of the Embracing Sustainability policy. Significant positive effects have been identified as this policy ensures biodiversity net gain is included within the active travel network developments. This provides opportunities for habitat enhancement and increased connectivity, providing habitats for species, as well as improving natural capital within Falkirk. |

## SEA6: Landscape and Townscape

**Table 6-8 - Summary of Landscape and Townscape findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 1 | Significant positive effects have been identified for the Promoting Thriving High Streets policy in relation to SEA6 (landscape and townscape). These effects have been identified as this policy contributes to improving placemaking within Falkirk's town centres and enhancing the public realm. |
| **Minor Positive (+)** | 3 | Minor positive effects have been identified for policies (Identifying Strategic Routes, Embracing Sustainability and Creating Liveable Neighbourhoods) that indirectly improve the public realm through improvements to the active travel network. Policy Creating Liveable Neighbourhoods improves the public realm due to the review of footway clutter and relocation of unnecessary clutter. This removes unsightly and unnecessary features on Falkirk's streets and enhances the townscape. Additionally, Embracing Sustainability includes 10% biodiversity net gain, improving the landscape and public realm. |

## SEA7: Cultural Heritage

**Table 6-9 - Summary of Cultural Heritage findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 3 | Uncertain effects have been identified for both the Identifying Strategic Routes and the Promoting Thriving High Streets policies. Uncertain effects have been identified for Identifying Strategic routes as any effects on cultural heritage are likely to be largely determined by the schemes that may come forward as a result of the policy. There are multiple heritage assets located within Falkirk's town centre however, the effects of the Promoting Thriving High Streets policy are uncertain as any effects on heritage assets are largely determined by individual schemes and their design. There are opportunities for the ATS to consider heritage assets within their design and utilise sensitive design to improve the setting and access to heritage assets in Falkirk. |

## SEA8: Climate Resilience

**Table 6-10 - Summary of Climate Resilience findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 3 | Uncertain effects have been identified for policies where climate resilience will be determined by individual scheme design, particularly in relation to mitigating flood and heating risk. |

## SEA9: Greenhouse Gases (GHGs)

**Table 6-11 - Summary of Greenhouse Gases (GHGs) findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 2 | Minor positive effects have been identified for policies (Identifying Strategic Routes and Embracing Sustainability) that result in encouraging a modal shift and a reduction in private vehicle use, reducing transport related GHG emissions. |
| **Mixed (+/-)** | 2 | Mixed positive and negative effects have been identified for both Promoting Thriving High Streets and Creating Liveable Neighbourhood policies. These policies encourage a modal shift away from private car use and a reduction in emissions. However, there are likely to be construction emissions from infrastructure development associated with these policies, contributing to negative effects. |

**Table 6-12 - Summary of Air Quality findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 1 | Significant positive effects have been identified for the Promoting Thriving High Streets policy. Significant effects are attributed to the policy reducing private car use and therefore improving air quality within the council area, as well as improving active travel connectivity within the Grangemouth Investment Area. The improvement in active travel connectivity and reduction in emissions in Grangemouth is likely to have a significant improvement to air quality within the Grangemouth AQMA. |
| **Minor Positive (+)** | 3 | Indirect minor positive effects have been identified for the Creating Liveable Neighbourhoods, Embracing Sustainability and Identifying Strategic Routes policies due to encouraging a modal shift away from private car use, reducing emissions and improving air quality within the council area. |

## SEA11: Water Environment

**Table 6-13 - Summary of Water Environment findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 3 | Uncertain effects have been identified for the Identifying Strategic Routes, Promoting Thriving High Streets and Creating Liveable Neighbourhoods policies as these policies include the development of infrastructure. It is currently uncertain where the location of developments may be, and therefore any effects on the water environment and water quality. |
| **Negligible (0)** | 1 | The Embracing Sustainability policies within the ATS result in negligible effects upon SEA11 (water quality) as the policy does not address the water environment within the Falkirk council area. |

## SEA12: Efficient use of Resources

**Table 6-14 - Summary of Efficient use of Resources findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 3 | Uncertain effects have been identified for both the Promoting Thriving High Streets, Creating Liveable Neighbourhoods, and the Identifying Strategic Routes policies as effects are largely determined by individual schemes that may come forward as a result of the policy. |

## SEA13: Protection of Land

**Table 6-15 - Summary of Protection of Land findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 2 | Uncertain effects have been identified for Identifying Strategic Routes and Creating Liveable Neighbourhoods as effects will be determined by individual developments that may come forward as a result of the policy. |

## 6.2 Assessment of Policy Alternatives

6.2.1 The SEA Regulations require an assessment of the strategy and its “reasonable alternatives”, in addition to those proposed within the ATS. Without this, there cannot be a proper environmental evaluation of the preferred strategy.

6.2.2 The assessment of reasonable alternatives does not need include all possible alternatives, but only those that are realistic. The assessment of alternatives has looked at alternative policy scenarios.

6.2.3 The development of the ATS policies has not at this stage identified specific alternative policies alternatives, so the assessment of policy alternatives has assessed just the application of the forthcoming Local Transport Strategy (LTS) policies without the ATS (no ATS scenario).

6.2.4 **Table 6-16** below provides a summary of the appraisal of the LTS policies. It uses the same key to effects outline in **Table 3-1**.

6.2.5 The LTS priorities and policies are as follows:

- **Active and Sustainable Travel** - Develop a sustainable travel network that allows shorter everyday trips to be made by walking, wheeling, or cycling; with slightly longer trips being made by other sustainable modes.
- **Accessible Transport** - Establish an inclusive transport system that makes active and sustainable transport accessible, promoting social inclusion across the local area.
- **Safety in Transport** - Enhance safety across the local transport system to provide users with confidence when travelling and improve the accessibility of active and sustainable travel.
- **The Growth Deal** - Ensure Grangemouth is accessible via active travel and sustainable transport as part of the delivery of climate change targets.
- **Town Centre Regeneration and Transport -** Enhance the vitality and economic viability of local town centres through the promotion of accessible and safe, active, and sustainable travel modes.

- **Public Transport -** Reduce the use of single-occupancy vehicles through the delivery of an integrated, accessible, safe and efficient public transport network.
- **Electric Vehicles -** Promote the use of Electric Vehicles across the Council area to accelerate the shift to more sustainable modes of transport.
- **Road Safety and Network -** Maintain a road network that facilitates sustainable and active travel options, improves safety for all users, and reduces congestion in the local area.
- **Parking -** Support parking management that reallocates public space to create a shift to active and sustainable modes of transport, whilst acknowledging the importance of accessible parking to ensure social inclusion.
- **Freight -** Acknowledge the role of freight and logistics for the local and national economy whilst encouraging the modal shift to more sustainable modes for the movement of goods and logistics.
- **Digital Innovation -** Harness digital innovations where appropriate to promote the use of sustainable modes across the local area.

6.2.6 Policy alternatives have performed broadly similarly to ATS draft policies for SEA1 (population and equalities), SEA2 (human health), SEA3 (transport and accessibility), SEA4 (community safety), SEA8 (climate resilience), SEA9 (greenhouse gases), and SEA10 (air quality). The effects upon these SEA objectives are largely similar due to the joint focuses of both the ATS and the draft LTS. Both strategies focus on improving infrastructure within Falkirk, which benefits health, accessibility, and population. As well as also focussing on reducing emissions and improving both air quality and climate resilience within the area. However, the draft ATS has performed better than the draft LTS for all other SEA objectives. The ATS has performed better than the LTS due to the nature of policies and an absence of consideration for factors such as biodiversity, the water environment, and land use. There are a number of uncertain effects identified as a result of policy alternatives, particularly with relation to SEA5 (biodiversity and natural capital), SEA6 (landscape and townscape, and SEA7 (cultural heritage). These effects are likely to be largely determined by individual schemes that may arise as a result of the LTS and their location. Additionally, the draft LTS is likely to result in increased development that may increase flood risk, land take, and use of resources, resulting in minor negative effects identified for SEA11 (water environment), SEA12 (efficient use of resources) and SEA13 (protection of land).

6.2.7 The draft ATS has therefore performed better overall than the alternative LTS policies through its consideration of natural resources such as land and biodiversity, as well as the identification for positive development within Falkirk, benefitting factors such as the landscape and heritage assets.

**Table 6-16 - Assessment of Policy Alternative Scenarios**

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA1: Population and Equalities** | Falkirk's draft LTS aims to enhance the area's existing transport infrastructure and improve inclusion within transport modes. The LTS proposes maximising the utilisation of sustainable transport modes, including active travel. This aims to provide more inclusive access across the Falkirk council area. The Safety in Transport policy also aims to ensure that the capacity of the transport network in Falkirk reflects the projected population growth in the area, particularly with regard to the rise in elderly population.<br><br>Increasing access to sustainable and active travel modes will improve inclusivity and access to employment, health, recreation, and other basic facilities, especially for those on low incomes who do not own a private car, or those who cannot drive. Policies within the draft LTS also aim to improve inclusivity for those who may be elderly, disabled, or unable to access sustainable transport modes. | + |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA2: Human Health** | The draft LTS aims to improve and encourage sustainable transport, including active transport modes such as walking and cycling. This will have a positive impact on the population's physical and mental health by encouraging a more active lifestyle.<br>The reduction in the number of vehicles on the road and the transition to more sustainable transport modes will also improve air quality and reduce noise pollution, both of which will have beneficial effects to the health and wellbeing of the population in Falkirk. | ++ |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA3: Transport and Accessibility** | The draft LTS addresses the need to improve sustainable transport and accessibility across Falkirk. Multiple policies, including Active and Sustainable Travel, Accessible Transport, Town Centre Regeneration and Transport and Public Transport, all address improving sustainable transport modes and improving accessibility across the council area. The proposed policies also include the integration of transport modes, encouraging use of sustainable modes and improving accessibility to the wider area.<br><br>Additionally, policy Accessible Transport will help to improve accessibility of transport modes, including promoting equal access to groups such as disabled and lower income groups.<br><br>In light of the Covid-19 pandemic, more people are seeking alternative ways to travel other than public transport, due to reduced confidence. The draft LTS encourages the development of infrastructure to support the use of active travel modes. Additionally, the draft LTS aims to encourage the use of public transport and ensure services meet the needs of the population. | ++ |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA4: Community Safety** | The Safety in Transport policy within the draft LTS addresses the need to improve the safety of the transport network. This policy aims to physically improve the safety of roads through reduced speed limits and increased signage. A reduction in speed limits on roads will help to reduce accidents and collisions on the road network, improving user safety. This will particularly improve the safety of non-motorised road users, including cyclists, motorcyclists and pedestrians.<br><br>The draft LTS also aims to improve the feeling of safety of all users through improved lighting along routes and at bus shelters and bus stops. Improved lighting is likely to improve the feeling of safety and reduce intimidation along routes, particularly after dark. | ++ |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA5: Biodiversity and Natural Capital** | The draft LTS seeks to increase the sustainable transport modes which will have indirect benefits to the biodiversity and habitats in the council area. The reduction in private car usage will improve air quality through a reduction of emissions and reduce noise pollution, therefore, lessening the disturbance to Falkirk's habitats and biodiversity.<br><br>However, new development which may come forward as a result of the LTS, has the potential to negatively impact habitats, species and ecological networks, through land take and disturbance during both construction and operational phases. These developments may be in areas of high ecological value. Effects will be dependent upon the schemes that come forward, their location and design.<br><br>Biodiversity and natural capital is also under threat from climate change, with changing temperatures and extreme weather events resulting in the loss, degradation and movement of species and habitats. Increased frequency and severity of flooding will be a particular threat to Falkirk. The LTS does not include a climate change policy, however, the goals of other policies, such as The Growth Deal, and Electric Vehicles, contribute to improving climate change within Falkirk. | **?** |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA6: Landscape and Townscape** | The draft LTS aims to enhance the built environment, by freeing up valued public space (policy Parking) and encouraging accessibility into Falkirk's town centre (policy Town Centre Regeneration and Transport). Improving accessibility is likely to encourage tourism and residents into the town centre and result in regeneration of the area through economic growth.<br><br>However, new development and improving connectivity to rural areas may affect the tranquillity and setting of the landscape due to the increased traffic, construction and operation phase disturbance (light, noise, and air pollution), and visitor pressure. Development may also require land take which could result in negative effects on Falkirk's landscape. | **?** |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA7: Cultural Heritage** | The transition to sustainable transport modes as part of the LTS will help to reduce emissions and the number of vehicles on the road which will result in improving the air quality and noise pollution. As air pollution is a key factor in the degradation of surfaces of historical buildings and monuments, action to improve air quality has the potential to indirectly benefit the historic environment. The reduction in noise pollution will help to improve tranquillity and unique setting of the heritage assets.<br><br>The draft LTS encourages access to the historic environment, particularly the area of Bo'ness. This is likely to improve access to visitors and residents to heritage assets in this area.<br><br>However, the LTS could give rise to development which could be insensitively designed, and require large land taken leading to the degradation of historic environment. This is particularly notable given the World Heritage Site of the Antione Wall is located within the Falkirk council area. | **?** |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA8: Climate Resilience** | Most of the policies in the draft LTS that encourage or improve sustainable and active transport modes and support the transition to low carbon technologies will help to improve climate resilience across the transport network in Falkirk.<br><br>The LTS focuses on tackling climate change and addressing the climate emergency that was declared by Falkirk Council in 2019.<br><br>Due to the location of Falkirk bordering the Forth Estuary, and multiple rivers within the council area, many areas are susceptible to flooding, especially the coastal regions such as Grangemouth and Bo'ness. This risk is only going to increase with climate change, particularly with the increases and changes to rainfall patterns. The draft LTS does not consider the significant threat that flooding poses and is unlikely to reduce flood risk. | **+/-** |
| **SEA9: Greenhouse Gases (GHGs)** | Most of the policies in the draft LTS that encourage or improve sustainable and active transport modes and support the transition to low carbon technologies will help to reduce greenhouse gas emissions.<br><br>The draft LTS works towards achieving the goals set out in the Scottish Government Climate Change Plan of reducing carbon emissions to net zero by 2045. | **+** |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA10: Air Quality** | Most of the policies in the draft LTS aim to encourage or improve sustainable and active transport modes and support the transition to low carbon technologies will have a positive impact on the air quality in Falkirk. The increased use of public transport, walking and cycling will help to reduce the number of vehicles on the road, in particular the number of private cars, resulting in a reduction in emissions and therefore, an improvement on the air quality.<br>Additionally, the shift from diesel rail freight to electrified freight is likely to improve air quality, particularly in the Grangemouth area. However, increasing rail freight in this area, and the continued use of HGVs for freight, may result in localised reductions in air quality. | + |
| **SEA11: Water Environment** | Developments that may come forward have the potential to negatively impact water quality during construction where schemes intersect water bodies, or are located close to the Forth Estuary. | - |
| **SEA12: Efficient use of Resources** | Transport development which may come forward, has the potential to be resource intensive and result in large land take. Although there is potential for scheme level design to incorporate efficient use of land and resources, there is no consideration of this within the LTS. | - |

| SEA Objective | Application of Local Transport Strategy Summary of Effects | Significance |
|---|---|---|
| **SEA13: Protection of Land** | Transport developments which may come forward, have the potential to negatively impact agriculturally and geologically important land through land take, sterilisation, contamination and disturbance during both construction and operational phases. These developments could result in the loss of Falkirk's best land capability for agriculture or in adverse effects on other land resources. | **-** |

# 7 Assessment of ATS Options and Alternatives

## 7.1 Assessment of Draft Options

7.1.1 The assessment of the preferred options included in the ATS is summarised below and presented in full in separate document **Appendix B**

7.1.2 A matrix approach has been used for the assessment which has used the significance criteria identified in **Table 6-1** above. **Table 7-1** overleaf provides an overview on the performance of the options against each SEA objective and **Tables 7-2** to **7-15** show the summary of significant effects based on each SEA objective.

7.1.3 **Appendix B** (separate document) shows the locations of the proposed route options.

### Legend

| **Explanation of symbols / letters** | **Key** |
|---|---|
| Significant positive effects | ++ |
| Minor positive effects | + |
| Minor negative effects | - |
| Significant negative effects | -- |
| Uncertain effects | ? |
| Mixed positive and negative effects | +/- |
| Negligible / No effect | 0 |
| Direct effect | D |
| Indirect effect | I |
| Local | L |

| Explanation of symbols / letters | Key |
|---|---|
| Regional | R |
| National | N |
| Reversible | R |
| Irreversible | I |
| Temporary | T |
| Permanent | P |
| Short Term | ST |
| Medium Term | MT |
| Long Term | LT |
| Not Applicable | N/A |

**Table 7-1 - Summary of Effects - Draft Options**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grahams Road – A308 to Retail Park/George Street Roundabout | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| Grahams Road – Retail Park/George Street Roundabout to Main Street | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| Main Street to Carron Road | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| Carron Road – Main Street to Lidl | +/- | ++ | ++ | + | 0 | + | 0 | ? | +/- | + | ? | ? | 0 |
| Carron Road – Lidl to New Carron Road | + | ++ | ++ | +/- | 0 | + | 0 | ? | +/- | + | ? | ? | 0 |
| New Carron Road to Carron Roundabout | +/- | ++ | ++ | + | +/- | +/- | 0 | ? | +/- | + | - | ? | 0 |
| New Carron Road – Carron Roundabout to Bellsdyke Road | ? | ++ | ++ | +/- | +/- | +/- | 0 | ? | +/- | + | ? | ? | 0 |
| Corporation Street Roundabout to Bellsmeadow Road Roundabout | ? | ++ | ++ | + | - | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| Bellsmeadow Road Roundabout to Callendar Boulevard Roundabout | + | ++ | ++ | + | - | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| Callendar Boulevard Roundabout to B805 Roundabout | +/- | ++ | ++ | + | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| B805 Roundabout to Sandy Loan | +/- | ++ | ++ | + | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| Sandy Loan to Westquarter Avenue | + | ++ | ++ | +/- | - | +/- | +/- | - | +/- | + | - | ? | 0 |
| A803 – Westquarter Avenue to Salmon Inn Road | + | ++ | ++ | + | +/- | ? | +/- | ? | +/- | + | ? | ? | 0 |
| A803 – Salmon Inn Road to Polmont Park | ? | ++ | +/- | +/- | - | +/- | +/- | - | + | + | - | ? | - |
| Cow Wynd – Conchrane Avenue to Gartcows Road | +/- | ++ | +/- | ? | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Glen Brae – Gartcows Road to Salmannan Road | +/- | ++ | ++ | + | +/- | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| Glen Brae to Pedestrian Access to Orkney Place | +/- | ++ | ++ | + | - | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| Glen Brae Pedestrian Access to Orkney Pl to Falkirk Road Roundabout | +/- | ++ | ++ | + | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| Stirling Road – A9 Roundabout to Camelon Train Station | + | ++ | ++ | + | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| Stirling Road – Camelon Train Station to Larbert Bus Depot | ? | ++ | ++ | +/- | +/- | +/- | 0 | - | +/- | + | - | ? | - |
| Park from Dorrator Bridge to Carronvale Road | ? | ++ | + | +/- | +/- | +/- | 0 | - | +/- | + | - | ? | - |
| Carronvale Road to B905 | + | ++ | + | +/- | 0 | + | 0 | ? | + | + | ? | ? | 0 |
| B905 – Carronvale Road to Foundry Loan | + | + | ++ | +/- | 0 | + | 0 | ? | + | + | ? | ? | 0 |
| Foundry Loan | + | ++ | ++ | +/- | 0 | + | 0 | ? | + | + | ? | ? | 0 |
| Old Bellsdyke Road | + | ++ | +/- | +/- | + | + | 0 | ? | + | +/- | ? | ? | 0 |
| Old Denny Road | + | ++ | +/- | +/- | +/- | + | 0 | ? | + | +/- | ? | ? | 0 |

## SEA1: Population and Equalities

**Table 7-2 - Summary of Population and Equalities findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 10 | Minor positive effects have been identified where options have provided greater access to facilities, and the wider community through integration of transport modes. Options have also provided access to low-income groups and those who rely on public or active travel modes. |
| **Uncertain (?)** | 5 | Uncertain effects have been identified for options where effects on population and equalities are likely to be determined by scheme level design. For example, where cycle track width may have a narrowing or pinch point and exact width will be determined during the design stage. |
| **Mixed (+/-)** | 11 | Mixed positive and negative effects have been identified where inclusive access and greater accessibility are promoted. However, these options have constraints on the routes, such as pinch points and cycle tracks narrower than 2m in each direction, which could limit certain user groups, particularly disabled cyclists, wheelchair users, and those with trikes. |

## SEA2: Human Health

**Table 7-3 – Summary of Human Health findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 26 | Significant positive effects have been identified for all ATS options. All options promote walking and cycling, which are important sources of everyday activity and are independently associated with a wide range of health benefits. The safety of routes is likely to encourage residents and visitors to use active travel routes and encourage walking and cycling to become the default transport mode. Some routes (such as the A803 – Westquarter Avenue to Salmon Inn Road, Glen Brae – Gartcows Road to Slamannan Road, and Stirling Road – A9 Roundabout to Camelon Train Station), Encouraging active travel is also likely to improve mental health through increasing the accessibility of open space. |
| **Minor Positive (+)** | 1 | The B905 – Carronvale Road to Foundry Loan option has resulted in minor positive effects for SEA2 (human health) due to its location in close proximity to both the road and railway line, reducing health benefits, as well as reducing user safety. However, the route encourages active travel and therefore improves physical activity rate. |

**Table 7-4 – Summary of Transport and Accessibility findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Significant Positive (++)** | 20 | Significant positive effects have been for most options as they encourage a modal shift away from private transportation and encourage active travel. These options also improve accessibility to multiple areas within Falkirk, and the wider area through opportunities for integration with other transport modes. |
| **Minor Positive (+)** | 2 | Minor positive effects have been identified for the Park from Dorrator Bridge to Carronvale Road and Carronvale Road to B905 options due to the limited connectivity these routes offer to the wider region and their narrow routes which could restrict some users. |
| **Mixed (+/-)** | 4 | Mixed positive and negative effects have been identified for the A803 – Salmon Inn Road to Polmont Park, Cow Wynd – Conchrane Av to Gartcows Road, Old Bellsdyke Road, and Old Denny Road options. These options improve accessibility to the area, however these options have multiple constraints, like pinch points and gradients, which could affect the overall accessibility of the route. |

## SEA4: Community Safety

**Table 7-5 - Summary of Community Safety findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 14 | Minor positive effects result for options where user safety is improved, particularly through hard segregation, and there are limited junctions, and collision risks along the route. |
| **Uncertain (?)** | 1 | Uncertain effects have been identified for the Sandy Loan to Westquarter Avenue option. This option is likely to require additional designing out crime principles, such as lighting, that are largely determined at scheme level design. |

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Mixed (+/-)** | 11 | Mixed positive and negative effects have been identified for Carron Road – Lidl to New Carron Road, New Carron Road – Carron Roundabout to Bellsdyke Road, B905 – Carronvale Road to Foundry Loan, and Foundry Loan options. These options reduce fear and intimidation along the route through segregating cycle track users from the road, as well as improving safety of users through restricting vehicle and cyclist interactions.. The Carron Road – Lidl to New Carron Road route also intersects with multiple junctions that experience high volumes of traffic, reducing user safety. Junctions present an increased risk to cycle track users due to increased interactions with vehicles and an increased risk of collisions.<br><br>The remaining options all result in mixed effects due to increased interactions between vehicles and cycle track users, as well as cyclists and walkers. Different user groups traveling at different speeds present increased risk of collisions between users. |

## SEA5: Biodiversity and Natural Capital

**Table 7-6 - Summary of Biodiversity and Natural Capital findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 1 | The Old Bellsdyke Road option results in minor positive effects due to its potential for biodiversity net gain, and the improvement of natural capital. |
| **Mixed (+/-)** | 7 | Mixed positive and negative effects have been identified for options that are located next to green space, or large green verges, that provide opportunities for habitats. These options also have potential for positive effects through the incorporation of green infrastructure. However, there is potential that verges may be lost within the development of the options. |
| **Minor Negative (-)** | 5 | Minor negative effects have been identified for options that result in loss of green space, greenbelt land, or the potential for loss of trees in ancient woodland. This has largely occurred for options that are remote from the carriageway or in close proximity to an area of ancient woodland. |

## SEA6: Landscape and Townscape

**Table 7-7 - Summary of Landscape and Townscape findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 12 | Minor positive effects have been attributed to options where the location is of relatively low landscape and townscape value. These options provide opportunities for positive placemaking through the design of routes. Additionally, options such as Carron Road – Main Street to Lidl, may also reduce traffic levels along the route, improving tranquillity and the landscape and townscape. |
| **Uncertain (?)** | 1 | Uncertain effects have been identified for options where the effects upon landscape and townscape are more likely to be determined by scheme level design. This has occurred for the A803 – Westquarter Avenue to Salmon Inn Road option, where the route is bounded by a cemetery and residential property. Any land take for this option to develop the cycle way is therefore likely to impact these areas. |
| **Mixed (+/-)** | 9 | Mixed positive and negative effects for SEA6 (landscape and townscape) have been identified where options have the potential to impact the setting of the landscape and townscape through |

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| | | insensitive design principles. However, these schemes may also contribute to positive placemaking, positively impacting the local landscape and townscape. |

## SEA7: Cultural Heritage

**Table 7-8 - Summary of Cultural Heritage findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Mixed (+/-)** | 10 | Mixed positive and negative effects have been identified for options that have the potential to negatively impact upon the setting of heritage assets, particularly scheduled monuments such as the Forth and Clyde Canal: Castlecary – M9 Motorway, and the World Heritage Site of the Antonine Wall, if insensitively designed.<br>However, options do present opportunities to reduce air pollution, which is associated with degradation of heritage assets. Potential for positive placemaking may also improve the setting of heritage assets. |

## SEA8: Climate Resilience

**Table 7-9 - Summary of Climate Resilience findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 22 | Uncertain effects have been identified for the majority of polices as climate resilience and adaptation is likely to be determined by individual scheme design. |
| **Minor Negative (-)** | 4 | Minor negative effects have been identified for options that are located within a high or medium risk flood zone. Development in this area and increase in hardstanding, whether during construction or operation, is therefore likely to exacerbate flood risk in the area. |

## SEA9: Greenhouse Gases (GHGs)

**Table 7-10 - Summary of Greenhouse Gases (GHGs) findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 6 | Minor positive effects have been identified for options where there is likely to be a reduction in GHGs through the modal shift away from private transportation. |
| **Mixed (+/-)** | 20 | Mixed positive and negative effects have been identified for options where a modal shift away from private transportation is promoted. However, these options are likely to have high levels of embodied carbon associated with their construction. |

**Table 7-11 - Summary of Air Quality findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Positive (+)** | 19 | Minor positive effects have been attributed to schemes that contribute to improving air quality within Falkirk. This is through the encouragement of a modal shift away from private vehicles and towards active travel, reducing emissions across the option area. |
| **Mixed (+/-)** | 7 | Mixed positive and negative effects have been attributed to schemes that improve air quality during their operational phase. Schemes may however result in increased emissions during the construction phase, resulting in negative effects. |

**Table 7-12 - Summary of Water Environment findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 21 | Uncertain effects have been identified for all options with regard to SEA11 (water environment) as these effects are likely to be determined by individual scheme level design. It is notable that some options are located within flood zones, therefore requiring additional design consideration. |
| **Minor Negative (-)** | 5 | Minor negative effects have been identified for options that intersect, or are in close proximity to, rivers. These main rivers intersected by routes are the River Carron and Polmont Burn. There is potential for construction effects to negatively impact water quality in the area through the contamination of water bodies. |

## SEA12: Efficient use of Resources

**Table 7-13 - Summary of Efficient use of Resources findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Uncertain (?)** | 26 | Uncertain effects have been identified for all options with regard to SEA12 (efficient use of resources) as these effects are likely to be determined by individual scheme level design, levels of land take required, and the use of materials. |

## SEA13: Protection of Land

**Table 7-14 - Summary of Protection of Land findings**

| Effect | No. of Effects | Significant Assessment Findings |
|---|---|---|
| **Minor Negative (-)** | 3 | Minor negative effects have been identified for the A803 – Salmon Inn Road to Polmont Park, Stirling Road – Camelon Train Station to Larbert Bus Depot, and Park from Dorrator Bridge to Carronvale Road options. These options are located within green belt land and require land take from the green belt. However, this is likely to be small scale land take, resulting in minor negative effects. |

## 7.2 Assessment of Alternative Options

7.2.1 The assessment of reasonable alternatives has looked at alternative options for the ATS that have been screened out initially. However, these options are still feasible and have therefore been identified as alternatives.

7.2.2 These option alternatives have been assessed in the same level of detail as the proposed route options and the full assessment can be found in separate document **Appendix B**. The tables overleaf set out the summary of the findings from the assessment of alternative options.

7.2.3 Overall, the draft ATS options have performed better than the alternative options across all SEA objectives. However, alternative options have performed broadly similarly to their respective preferred options across the majority of SEA objectives. This is due to the same route location being utilised for both preferred and alternative options.

7.2.4 Alternative options have performed worse than preferred options for SEA5 (biodiversity and natural capital) where alternative options have resulted in minor negative effects. This is particularly for alternatives, such as uni-directional stepped cycle track on both sides, that require cycle tracks on both sides of the existing carriageway. These alternatives are likely to require more land take, resulting in negative effects on SEA5 (biodiversity and natural capital).

7.2.5 Remote from carriageway shared use path alternative options have resulted in an increased number of uncertain effects, particularly for SEA4 (community safety), SEA5 (biodiversity and natural capital), SEA6 (landscape and townscape), SEA7 (cultural heritage), and SEA13 (protection of land) when compared to their preferred options. These uncertain effects are as a result of uncertainty surrounding the location of the remote from carriageway routes.

7.2.6 Alternative options have also resulted in differences in SEA4 (community safety) depending on the nature of the alternative. For example, shared use paths and light segregation alternatives have resulted in mixed positive and negative effects. These effects are attributed to reduced user safety, through interactions between users at different speeds, as well as reduced segregation from the carriageway.

**Table 7-15 – Proposed Option Alternatives Assessment Summaries - Grahams Road – A308 to Retail Park/George Street Roundabout**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on both sides with light segregation** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-16 – Proposed Option Alternatives Assessment Summaries - Grahams Road – Retail Park/George Street Roundabout to Main Street**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on both sides with light segregation** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-17 – Proposed Option Alternatives Assessment Summaries – Main Street to Carron Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Remote from carriageway shared use path** | +/- | ++ | ++ | ? | ? | ? | ? | ? | +/- | + | ? | ? | 0 |
| **Uni-directional carriageway level cycle lanes on both sides with light segregation** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |
| **Bi-directional carriageway level cycle lanes with hard segregation** | +/- | ++ | ++ | + | 0 | +/- | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-18 – Proposed Option Alternatives Assessment Summaries – Carron Road – Main Street to Lidl**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with hard segregation** | +/- | ++ | ++ | + | 0 | + | 0 | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | 0 | + | 0 | ? | +/- | + | ? | ? | 0 |

**Table 7-19 – Proposed Option Alternatives Assessment Summaries – Carron Road – Lidl to New Carron Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with hard segregation** | + | ++ | ++ | ? | 0 | + | 0 | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | 0 | + | 0 | ? | +/- | + | ? | ? | 0 |
| **Bi-directional stepped cycle track** | + | ++ | ++ | + | 0 | + | 0 | ? | +/- | + | ? | ? | 0 |

**Table 7-20 – Proposed Option Alternatives Assessment Summaries – New Carron Road to Carron Roundabout**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Shared use path next to carriageway** | +/- | ++ | ++ | - | +/- | +/- | 0 | ? | +/- | + | ? | ? | 0 |
| **Bi-directional cycle track at footway level** | +/- | ++ | ++ | +/- | +/- | +/- | 0 | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | +/- | +/- | 0 | ? | +/- | + | ? | ? | 0 |
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | + | +/- | +/- | 0 | ? | +/- | + | ? | ? | 0 |

**Table 7-21 – Proposed Option Alternatives Assessment Summaries – New Carron Road – Carron Roundabout to Bellsdyke Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional cycle track at footway level** | +/- | ++ | ++ | +/- | - | 0 | 0 | ? | +/- | + | ? | ? | 0 |
| **Uni-directional carriageway level cycle lanes on both sides with hard segregation** | +/- | ++ | ++ | +/- | - | 0 | 0 | ? | +/- | + | ? | ? | 0 |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | - | 0 | 0 | ? | +/- | + | ? | ? | 0 |
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | + | - | 0 | 0 | ? | +/- | + | ? | ? | 0 |

**Table 7-22 – Proposed Option Alternatives Assessment Summaries – Corporation Street Roundabout to Bellsmeadow Road Roundabout**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on both sides with hard segregation** | + | ++ | ++ | +/- | - | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Bi-directional carriageway level cycle lanes with hard segregation** | + | ++ | ++ | +/- | ? | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | + | ++ | ++ | + | - | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Bi-directional stepped cycle track** | + | ++ | ++ | + | ? | 0 | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-23 – Proposed Option Alternatives Assessment Summaries – Bellsmeadow Road Roundabout to Callendar Boulevard Roundabout**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional stepped cycle track** | + | ++ | ++ | + | ? | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | + | ++ | ++ | + | - | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Bi-directional carriageway level cycle lanes with hard segregation** | + | ++ | ++ | + | ? | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Shared use path next to carriageway** | + | ++ | ++ | +/- | ? | 0 | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-24 – Proposed Option Alternatives Assessment Summaries – Callendar Boulevard Roundabout to B805 Roundabout**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | + | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with hard segregation** | +/- | ++ | ++ | + | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Shared use path next to carriageway** | +/- | ++ | ++ | +/- | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-25 – Proposed Option Alternatives Assessment Summaries – B805 Roundabout to Sandy Loan**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on one side with hard segregation** | - | +/- | +/- | +/- | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Upgrade footways to only 1.5m on both sides** | +/- | ++ | ++ | - | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on one side** | +/- | ++ | ++ | + | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | + | 0 | 0 | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-26 – Proposed Option Alternatives Assessment Summaries – Sandy Loan to Westquarter Avenue**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with hard segregation** | + | ++ | ++ | ++ | ? | ? | +/- | - | +/- | + | - | ? | 0 |
| **Bi-directional stepped cycle track** | + | ++ | ++ | + | ? | ? | +/- | - | +/- | + | - | ? | 0 |
| **Uni-directional carriageway level cycle lanes on one side with hard segregation** | +/- | + | +/- | ++ | ? | ? | +/- | - | +/- | + | - | ? | 0 |
| **Uni-directional stepped cycle track on one side** | +/- | + | +/- | + | ? | ? | +/- | - | +/- | + | - | ? | 0 |

**Table 7-27 – Proposed Option Alternatives Assessment Summaries – A803 – Westquarter Avenue to Salmon Inn Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional stepped cycle track** | + | ++ | ++ | + | +/- | ? | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional carriageway level cycle lanes on one side with hard segregation** | +/- | + | +/- | ++ | +/- | ? | +/- | ? | +/- | + | ? | ? | 0 |
| **Uni-directional stepped cycle track on one side** | +/- | + | +/- | + | +/- | ? | +/- | ? | +/- | + | ? | ? | 0 |

**Table 7-28 – Proposed Option Alternatives Assessment Summaries – A803 – Salmon Inn Road to Polmont Park**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with hard segregation** | + | ++ | + | ++ | - | +/- | +/-- | - | + | + | - | ? | - |
| **Bi-directional stepped cycle track** | + | ++ | + | + | - | +/- | +/-- | - | + | + | - | ? | - |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on one side with hard segregation** | + | ++ | + | ++ | - | +/- | +/-- | - | + | + | - | ? | - |
| **Uni-directional stepped cycle track on one side** | + | ++ | + | + | - | +/- | +/-- | - | + | + | - | ? | - |

**Table 7-29 – Proposed Option Alternatives Assessment Summaries – Cow Wynd – Conchrane Avenue to Gartcows Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on one side with hard segregation** | +/- | + | +/- | + | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Bi-directional carriageway level cycle lanes with hard segregation** | +/- | ++ | +/- | + | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Uni-directional stepped cycle track on one side** | +/- | + | +/- | +/- | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | +/- | +/- | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |

**Table 7-30 – Proposed Option Alternatives Assessment Summaries – Glen Brae – Gartcows Road to Salmannan Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on one side with hard segregation** | +/- | ++ | ++ | + | +/- | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Bi-directional carriageway level cycle lanes with hard segregation** | +/- | ++ | ++ | + | +/- | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Uni-directional stepped cycle track on one side** | +/- | ++ | ++ | +/- | +/- | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | +/- | +/- | + | 0 | ? | +/- | +/- | ? | ? | 0 |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | +/- | +/- | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Remote from carriageway shared use path** | +/- | ++ | ++ | +/- | ? | ? | 0 | ? | +/- | +/- | ? | ? | ? |

**Table 7-31 – Proposed Option Alternatives Assessment Summaries – Glen Brae to Pedestrian Access to Orkney Place**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with hard segregation** | +/- | ++ | ++ | + | - | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | +/- | - | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | +/- | - | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Shared use path next to carriageway** | +/- | ++ | ++ | - | - | + | 0 | ? | +/- | +/- | ? | ? | ? |

**Table 7-32 – Proposed Option Alternatives Assessment Summaries – Glen Brae Pedestrian Access to Orkney Place to Falkirk Road Roundabout**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with hard segregation** | +/- | ++ | ++ | + | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | +/- | ++ | ++ | +/- | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Bi-directional stepped cycle track** | +/- | ++ | ++ | +/- | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Shared use path next to carriageway** | +/- | ++ | ++ | - | 0 | + | 0 | ? | +/- | +/- | ? | ? | ? |
| **Remote from carriageway shared use path** | +/- | ++ | ++ | +/- | ? | ? | 0 | ? | +/- | +/- | ? | ? | ? |

**Table 7-33 – Proposed Option Alternatives Assessment Summaries – Stirling Road – A9 Roundabout to Camelon Train Station**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on both sides with light segregation** | + | ++ | ++ | +/- | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bi-directional carriageway level cycle lanes with light segregation** | + | ++ | ++ | +/- | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |
| **Uni-directional stepped cycle track on both sides** | + | ++ | ++ | +/- | 0 | + | 0 | ? | +/- | +/- | ? | ? | 0 |

**Table 7-34 – Proposed Option Alternatives Assessment Summaries – Stirling Road – Camelon Train Station to Larbert Bus Depot**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Uni-directional carriageway level cycle lanes on both sides with light segregation** | ? | ++ | ++ | +/- | +/- | +/- | 0 | - | +/- | + | - | ? | - |
| **Bi-directional carriageway level cycle lanes with light segregation** | ? | ++ | ++ | +/- | +/- | +/- | 0 | - | +/- | + | - | ? | - |
| **Bi-directional carriageway level cycle lanes with** | ? | ++ | ++ | + | +/- | +/- | 0 | - | +/- | + | - | ? | - |

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **hard segregation** | | | | | | | | | | | | | |
| **Uni-directional stepped cycle track on both sides** | ? | ++ | ++ | - | +/- | +/- | 0 | - | +/- | + | - | ? | - |
| **Shared use path next to carriageway** | ? | ++ | ++ | +/- | +/- | +/- | 0 | - | +/- | + | - | ? | - |

**Table 7-35 – Proposed Option Alternatives Assessment Summaries – Park from Dorrator Bridge to Carronvale Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No Alternative for this option** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Table 7-36 – Proposed Option Alternatives Assessment Summaries – Carronvale Road to B905**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No Alternative for this option** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Table 7-37 – Proposed Option Alternatives Assessment Summaries – Carronvale Road to B905**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traffic calmed on-carriageway cycling/Quiet street** | + | + | ++ | +/- | 0 | + | 0 | ? | ++ | + | ? | ? | 0 |

**Table 7-38 – Proposed Option Alternatives Assessment Summaries – Foundry Loan**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traffic calmed on-carriageway cycling/Quiet street** | + | ++ | ++ | +/- | + | + | 0 | ? | ++ | + | ? | ? | 0 |

**Table 7-39 – Proposed Option Alternatives Assessment Summaries – Old Bellsdyke Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No Alternative for this option** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Table 7-40 – Proposed Option Alternatives Assessment Summaries – Old Denny Road**

| Option | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **No Alternative for this option** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

# 8 Cumulative Effects

## 8.1 Introduction

8.1.1 The SEA Regulations require that cumulative effects are considered when identifying likely significant effects. Cumulative effects arise, for instance:

- Where several individual policies and options have a combined effect on an objective; or
- Where several policies and options each have insignificant effects but together have a significant effect.

8.1.2 The significance of cumulative effects resulting from a range of activities, or multiple incidences of one activity, may vary based on factors such as the nature of the proposed options and policies and the sensitivity of the receiving communities and environment.

8.1.3 This section therefore presents the findings of the following:

- Consideration of how different proposed ATS policies and options within the Falkirk Council area may interact and cause cumulative effects on a receptor (intra-project effects); and
- How the proposed Falkirk ATS' policies and options could cause cumulative effects in association with other plans, policies and projects in the surrounding area (inter-project effects).

## 8.2 Intra-Project Effects

8.2.1 The SEA assessment of both the ATS' policies and options drew out potential intra-project cumulative effects. These have been identified in **Tables 8-2** below.

8.2.2 **Table 8-1** below outlines the key to effects for intra-project cumulative effects.

**Table 8-1 – Key to Cumulative Effects**

| Effect | Key |
|---|---|
| Positive cumulative effect | + |
| Negative cumulative effects | - |

| Effect | Key |
|---|---|
| Mixed cumulative effects | +/- |
| No overall cumulative effects | 0 |

**Table 8-2 – Intra-Project Cumulative Effects Summary**

| SEA Objective | Identifying Strategic Routes | Promoting Thriving High Streets | Creating Liveable Neighbourhoods | Embracing Sustainability | ATS Options | Summary |
|---|---|---|---|---|---|---|
| **SEA1: Population and Equalities** | + | + | + | + | +/- | Potential positive cumulative effects are anticipated for population and equalities through the improved access to facilities, services across the Falkirk council area. Improvements to existing routes, and the development of new routes, is also likely to improve access for disabled users. Additionally, all policies within the ATS include specific references to inclusivity and ensuring access across a variety of social groups. There are also potential positive cumulative effects through integration of transport modes (Creating Liveable Neighbourhoods), improving accessibility for all users. Some proposed route options have potential to disproportionately affect some groups (e.g., narrow routes, steep gradients and pinch points). If multiple routes include sections which are less accessible, it could lead to a less joined up and equitable active travel network. |
| **SEA2: Human Health** | + | + | + | + | + | There is potential for positive cumulative effects upon human health as a result of all ATS policies and options. Policies and options contribute to developing infrastructure and encouraging physical activity through walking and cycling. Additionally, developing active travel routes improves connectivity within Falkirk, providing increased access to open spaces (such as the park from Dorrator Bridge to Carronvale Road and Callendar Park). Improving access to open spaces benefits both physical and mental health, reducing anxiety and stress. |
| **SEA3: Transport and Accessibility** | + | + | + | + | + | Positive cumulative effects have been identified for transport and accessibility. Identifying Strategic Routes, Promoting Thriving High Streets and Creating Liveable Neighbourhoods policies all aim to develop new active travel routes. Alongside the options, this contributes to improving accessibility from active travel modes across Falkirk, making walking and cycling more appealing and accessible to the population. Additionally, all policies include specific references to improving the inclusivity of active travel options to a variety of social groups. Access to public transport (bus and rail) will also be improved as part of the developments through increase connectivity. |
| **SEA4: Community Safety** | + | + | + | + | +/- | Potential positive cumulative effects have been identified for community safety, largely attributed to a reduction in fear of crime and improvement to the feeling of safety within Falkirk. As detailed in Promoting Thriving High Streets, the development of secure cycle storage and making areas welcoming and accessible, combined with Identifying Strategic Routes' prioritisation of street lighting and safe routes is likely to reduce fear and intimidation on routes and increase active travel uptake.<br><br>The development of new active travel infrastructure is also likely to reduce accidents and collisions between users. However, potential negative cumulative effects may arise if multiple options were to come forward where users are not safely segregated or pinch point carefully managed, which could increase accidents and collisions involving walkers and cyclists. |

| SEA Objective | Identifying Strategic Routes | Promoting Thriving High Streets | Creating Liveable Neighbourhoods | Embracing Sustainability | ATS Options | Summary |
|---|---|---|---|---|---|---|
| **SEA5: Biodiversity and Natural Capital** | **+/-** | **+/-** | **+/-** | **+** | **+/-** | There is the potential for negative cumulative effects on biodiversity if multiple active travel schemes were to come forward requiring land take. Depending on their proposed location, there is potential for a cumulative loss of land, which could lead to damaged and segregated habitats.<br><br>However, there is the potential for positive cumulative effects. These developments, supported by Embracing Sustainability policy may provide biodiversity enhancements. Natural capital enhancements are possible through the connection of green spaces and protection of habitats linking population centres which may otherwise be lost of severed through a lack of maintenance or through other development. |
| **SEA6: Landscape and Townscape** | **+/-** | **+** | **+** | **+** | **+/-** | There is the potential for negative cumulative effects on townscapes and landscapes if multiple routes developments were to come forward in close proximity to parks and open spaces, and areas of high townscape or landscape value. During construction of these new developments there is the potential for disturbance to the setting and tranquillity of these areas, particularly if multiple developments were to be constructed concurrently. ATS infrastructure development can often include multiple components (e.g signage and street furniture) which cumulatively could erode the landscape and heritage character in areas of high landscape value.<br><br>However, positive cumulative effects may arise due to improvements to the public realm and sensitive design of the proposed route options, as well as improvements to the natural environment, as per the commitment within Embracing Sustainability. |
| **SEA7: Cultural Heritage** | **+/-** | **+** | **0** | **0** | **+/-** | There is the potential for negative cumulative effects on the historic environment if multiple options were to come forward in close proximity to heritage assets, specifically the Antonine Wall World Heritage Site and scheduled monument, and local park. ATS infrastructure development can often include multiple components (e.g. signage and street furniture) which cumulatively could erode the heritage character.<br><br>During construction of these new developments there is the potential for disturbance to the historic environment due to noise, vibration and temporary reductions in air pollution (dust soiling) particularly if multiple developments were to be constructed concurrently.<br><br>However, positive cumulative effects may arise as reductions in air pollution are likely to reduce degradation of heritage assets. Additionally, the ATS may provide greater access and accessibility to heritage assets. There is also potential that sensitive design may enhance the setting of heritage assets within Falkirk. |

| SEA Objective | Identifying Strategic Routes | Promoting Thriving High Streets | Creating Liveable Neighbourhoods | Embracing Sustainability | ATS Options | Summary |
|---|---|---|---|---|---|---|
| **SEA8: Climate Resilience** | 0 | 0 | 0 | + | +/- | The routes options could increase hard standing surfaces as part of the proposed route options could increase surface water runoff. A number of routes, particularly along the A9 and A803 are located in areas of high likelihood of surface water flooding. Therefore, there may be potential negative cumulative effects on flooding, particularly for those sites located in areas of high flood likelihood.<br><br>However, policies are likely to increase resilience to climate change, particularly through Embracing Sustainability, as increasing biodiversity within the council area can contribute to reducing flood risk. Additionally, there is potential that developments may include drainage measures, although this is likely to be dependent on individual options. |
| **SEA9: Greenhouse Gases (GHGs)** | + | + | + | 0 | +/- | The ATS and its options provide opportunities for a significant modal shift across Falkirk, decarbonising the transport network and helping to achieve net zero ambitions.<br><br>If multiple options were to come forward concurrently there is the potential for temporary negative cumulative effects on greenhouse gases, due to the increased emissions produced during the construction phase of developments. These options will also have high levels of embodied carbon.<br><br>However, Identifying Strategic Routes, Promoting Thriving High Streets and Creating Liveable Neighbourhoods policies set support a reduction in greenhouse gas emissions through encouraging active transport modes, reducing private car use and therefore transport related emissions within Falkirk. |
| **SEA10: Air Quality** | + | + | + | + | +/- | Temporary negative cumulative effects have the potential to result during the construction phase, if multiple options, with overlapping construction periods, were to come forward. Construction of these schemes may reduce the air quality through an increase in particulate matter and dust.<br><br>However, the development of these options provides increased connectivity reducing private car use and helping to improve air quality. Therefore, there is also the potential for positive cumulative effects. All policies also help to improve air quality, increase accessibility and increase biodiversity which will help to reduce air pollution. |
| **SEA11: Water Environment** | +/- | +/- | +/- | 0 | +/- | There is potential for cumulative increase in surface water runoff and flood risk, and impacts on surface water and groundwater, particularly from physical alteration as a result of development of options as well as policies involving town centre developments. Drainage and water quality measures are likely to be specific to each development, but there may be cumulative benefits if implemented Falkirk-wide. Additionally, there is the potential for developments to result in negative effects upon water quality through construction related pollution. |

| SEA Objective | Identifying Strategic Routes | Promoting Thriving High Streets | Creating Liveable Neighbourhoods | Embracing Sustainability | ATS Options | Summary |
|---|---|---|---|---|---|---|
| **SEA12: Efficient use of Resources** | **+/-** | **+/-** | **+/-** | **0** | **+/-** | The ATS, specifically policy Promoting Thriving High Streets, aims to increase the flexibility of land use, providing use of previously developed land and brownfield sites where possible, providing potential cumulative positive effects.<br>There is potential for negative cumulative effects upon materials if multiple developments come forward concurrently, increasing material usage. |
| **SEA13: Protection of Land** | **+/-** | **+/-** | **+/-** | **0** | **+/-** | Most site allocations are located on urban land and within the existing road space, resulting in positive cumulative effects. However, those developments located on Glen Brae are located in land of high agricultural value (grade 3.2 land capability for agriculture). Potential cumulative negative effects may therefore arise if multiple developments come forward along this route that require land take.<br>Some other developments which may arise out of the identifying strategic routes, promoting thriving high streets, and creating liveable neighbourhoods' policies could result in developments which may not occur on previously developed land or brownfield sites and could result in a cumulative loss of greenfield land. |

## 8.3 Inter-Project Effects

8.3.1 **Table 8-3** below outlines the sources of potential inter-cumulative effects, whilst **Table 8-4** details the cumulative effects identified for each of the SEA Topics in relation to these policies and plans. This uses the same key to effects as set out in **Table 8-1** above.

**Table 8-3 – Sources of Inter-Cumulative Effects**

| Policy or Plan | Plan Details |
|---|---|
| Scotland's Railway, Delivery Plan | This plan sets out the measures for improvements to Scotland's railway services, including the decarbonisation of the network. The plan also outlines the vision, purpose and role of the network, as well as maintaining and improving rail services across Scotland, including improving their climate resilience. The improvements to the railway network are likely to influence rail services within the Falkirk Council area. |

| Policy or Plan | Plan Details |
|---|---|
| Transport Scotland, Active Travel Framework | The framework brings together key policy approaches to improving the uptake of active travel within Scotland, with the vision that by 2030, active travel is the most popular transport mode for short, everyday journeys.<br><br>The framework model identifies five high level outcomes that will contribute to realising the long-term vision and achieving the strategic objectives for active travel policy at both a national and local level:<br><br>▪ Increase the number of people choosing walking, cycling and wheeling in Scotland;<br>▪ High quality walking, cycling and wheeling infrastructure is available to all;<br>▪ Walking, cycling and wheeling is safer for all;<br>▪ Walking, cycling and wheeling is available to all; and<br>▪ Delivery of walking, cycling and wheeling is promoted and supported by a range of partners. |

| Policy or Plan | Plan Details |
|---|---|
| Scottish Government, National Transport Strategy Delivery Plan (NTS2) 2022-2023 | The NTS2 was published in February 2020, setting out the vision for Scotland's transport system over the next two decades. The plan outlines four priorities for the transport system: reduces inequalities; takes climate action; helps deliver inclusive economic growth; and improves our health and wellbeing. The second NTS2 Delivery Plan covers the period 2022 to 2023 and sets out practical actions which are underway, or due to begin, across Scottish Government to deliver the vision, providing a coordinated overview to transport investments and projects.<br><br>The NTS2 recognises the key role that transport has in reducing inequalities, delivering inclusive economic growth, improving our health and wellbeing, and tackling the climate emergency. At the heart of the Strategy is the recognition to deliver attractive, affordable, accessible and sustainable travel options. |
| Falkirk Local Development Plan 3 | The new Local Development Plan (LDP3) will guide growth and change within Falkirk's communities. The plan will indicate where new development should take place, what infrastructure is needed to support growth, and how Falkirk's environment and greenspace can be improved. |
| Neighbouring Active Travel Plans | Active Travel plans in neighbouring local authorities (North Lanarkshire, Stirling, and West Lothian) influence cross-boundary active travel network improvements.<br><br>The plans include:<br><br>▪ West Lothian Active Travel Plan;<br>▪ Stirling Council, Active Travel Action Plan; and<br>▪ North Lanarkshire Active Travel Strategy. |

| Policy or Plan | Plan Details |
|---|---|
| Neighbouring Local Transport Plans, Local Plans, Strategies and Development Plans | Local Transport Plans enable Local Authorities to plan for transport in their areas. They can identify both strategic policy and implementation plans for delivering this policy. They outline policy options for implementing transport improvements, including different modes of transport. They also prioritise areas and schemes for development over the plan period.<br><br>Local Development Plans in neighbouring council areas (North Lanarkshire, Stirling, and West Lothian) influence cross-boundary transport and development improvement.<br><br>The plans include:<br><br>■ The Stirling Plan, 2017-2027;<br>■ The Plan for North Lanarkshire;<br>■ North Lanarkshire Council, Local Development Plan;<br>■ Stirling Council, Local Development Plan 2018;<br>■ West Lothian Council, Local Development Plan 2 (due for adoption 2026);<br>■ North Lanarkshire, Local Transport Strategy;<br>■ Stirling Council, Local Transport Strategy 2017-2027;and<br>■ West Lothian Strategic Plan 2019-2023. |

**Table 8-4 – Intra-Project Cumulative Effects Summary**

| SEA Objective | Railway Delivery Plan | Active Travel Framework | Falkirk Local Development Plan 3 | National Transport Strategy Delivery Plan | Neighbouring Active Travel Plans | Neighbouring Local Plans and Transport Plans | Summary |
|---|---|---|---|---|---|---|---|
| **SEA1: Population and Equalities** | + | + | + | + | + | + | There is potential for positive cumulative effects upon population and equalities if multiple developments or interventions were to come forward. These services would increase accessibility across Falkirk and the wider area, improving access to those on lower incomes, as well as disabled users. |
| **SEA2: Human Health** | 0 | + | + | `+ | + | +/- | The provision and improvements to the active travel network provide positive cumulative effects upon health through increased physical activity rates. Additionally, public realm and open spaces improvements within neighbouring local plans, will result in positive effects on the health and wellbeing of the population.<br>Access to greenspace can provide better mental health and wellbeing outcomes including reduced levels of depression, anxiety and enhanced quality of life, as well as helping to bind communities together, reduce loneliness, and mitigate the negative effects of air pollution and excessive noise.<br>However, if multiple developments or interventions were to come forward, then construction emissions may reduce air quality in this area, negatively effecting health. |
| **SEA3: Transport and Accessibility** | + | + | + | + | + | + | There is the potential for positive cumulative effects on transport and accessibility if multiple transport schemes were to come forward, particularly through the national transport strategy delivery plan and neighbouring local transport/active travel plans. These developments will help to increase and improve the offering and connectivity of sustainable transport modes in the region. |
| **SEA4: Community Safety** | + | + | + | 0 | + | + | There is potential for positive cumulative effects upon community safety if multiple developments or interventions are to come forward. These improvements would be attributed to public realm improvements, reducing the fear of crime, as well as improvements to the transport network reducing the likelihood of accidents and collisions. |

| SEA Objective | Railway Delivery Plan | Active Travel Framework | Falkirk Local Development Plan 3 | National Transport Strategy Delivery Plan | Neighbouring Active Travel Plans | Neighbouring Local Plans and Transport Plans | Summary |
|---|---|---|---|---|---|---|---|
| **SEA5: Biodiversity and Natural Capital** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | Potential for cumulative loss, damage or fragmentation of statutory and non-statutory sites and habitats if multiple developments or interventions, across similar timeframes were to come forward. Although it is assumed that protected species would be mitigated at a project level, there are wider impacts on biodiversity. There are potential positive effects through the incorporating green infrastructure (Active Travel Framework and Local Strategies) and biodiversity net gain. |
| **SEA6: Landscape and Townscape** | **0** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | The provision of public realm improvements through the Active Travel Framework and Local Strategies and transport/implementation strategies could help to increase and improve the open space offering as well as the setting of the council's townscape and landscape. This will result in positive cumulative effects; however, multiple interventions (in particular housing developments in neighbouring boroughs, or multiple road schemes) could result in a cumulative loss of open spaces and/or effects on landscape and visual amenity. |
| **SEA7: Cultural Heritage** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | There is potential for both positive and negative, direct and indirect cumulative effects on international, national and locally designated heritage assets, and their unique settings. This is in addition to cumulative effects on undesignated and unknown assets, which are also important. However, well-designed developments and infrastructure could present opportunities to enhance the quality of visual amenity of heritage assets and their settings by managing public access to or from the historic features. The development of infrastructure could also improve access to heritage assets within Falkirk. This could have additional cumulative benefits for identity, health and wellbeing and placemaking. |
| **SEA8: Climate Resilience** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | Climate change adaptation measures are likely to be specific to each development and intervention, but there may be cumulative benefits if implemented across multiple plans (as set out in the Active Travel Framework, National Transport Strategy Delivery Plan, neighbouring Active Travel and Local Plans). |

| SEA Objective | Railway Delivery Plan | Active Travel Framework | Falkirk Local Development Plan 3 | National Transport Strategy Delivery Plan | Neighbouring Active Travel Plans | Neighbouring Local Plans and Transport Plans | Summary |
|---|---|---|---|---|---|---|---|
| **SEA9: Greenhouse Gases (GHGs)** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | There may be cumulative benefits from transport initiatives (railway delivery framework, active travel framework, national transport strategy delivery plan, , and neighbouring active travel plans and transport plans) and low carbon developments (as set out in neighbouring local plans) in reducing greenhouse gases, however, increased development is also likely to increase transport related greenhouse gas emissions, particularly where this leads to increases in vehicular traffic as well as embodied carbon due to development. |
| **SEA10: Air Quality** | **+** | **+** | **+/-** | **+/-** | **+** | **+/-** | Temporary negative cumulative effects have the potential to result during the construction phase, if multiple developments were to come forward. Construction of these developments may reduce the air quality through an increase in particulate matter and dust.<br>Positive cumulative effects will result through the development of sustainable transport schemes (including the Railway Delivery Scheme). In combination with the ATS, this will increase access to sustainable transport modes, reducing the use of private cars, and therefore emissions such as nitrogen dioxide ($NO_2$), which in turn will result in an improvement in the local air quality. Further positive cumulative effects will result from the reduction in journey times and congestion on the highway network. |
| **SEA11: Water Environment** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | There is potential for cumulative increase in surface water runoff and flood risk, and impacts on surface water and groundwater, particularly from physical alteration as a result of development. Drainage and water quality measures are likely to be development / scheme specific, but there may be cumulative benefits if implemented across the region. |
| **SEA12: Efficient use of Resources** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | **+/-** | Efficient use of resources is likely to be scheme specific. However, there is potential for cumulative benefits to arise if developments and interventions implement reduction and re-using of resources. However, if multiple developments were to come forward simultaneously, alongside the ATS, then there are potential negative effects upon resources. |

| SEA Objective | Railway Delivery Plan | Active Travel Framework | Falkirk Local Development Plan 3 | National Transport Strategy Delivery Plan | Neighbouring Active Travel Plans | Neighbouring Local Plans and Transport Plans | Summary |
|---|---|---|---|---|---|---|---|
| **SEA13: Protection of Land** | **+/-** | **0** | **+/-** | **+/-** | **+/-** | **+/-** | There is potential for negative cumulative effects on the protection of land as if multiple interventions and / or developments were to come forward, coupled with other development in the council area, there is potential for a large cumulative loss of land, some of which may not be brownfield land. However, positive cumulative effects could arise if the majority of the of proposed developments are situated on brownfield sites. |

# 9 Mitigation, Enhancement and Monitoring

## 9.1 Mitigation and Enhancement Measures

9.1.1 Mitigation of significant negative effects of the strategy and enhancement of positive effects are a key purpose of SEA. The SEA Regulations require that mitigation measures are considered to prevent, reduce or offset any significant adverse effects on the environment of implementing the strategy. The measures are known as ‘mitigation’ measures. Mitigation measures include both proactive avoidance of adverse effects and actions taken after potential effects are identified.

9.1.2 The mitigation measures proposed in **Table 9-1** are designed to avoid or reduce the effects identified as potentially negative through the policy assessments on the SEA Objectives. Applicable SEA Objectives have been identified for each mitigation measure, alongside the mechanism and lead authority. The table also includes enhancement measures, that aim to optimise positive impacts and enhance sustainability.

9.1.3 In addition to **Table 9-1**, additional option specific mitigations have been provided for each option, presented in separate document **Appendix B**.

**Table 9-1 – Proposed Mitigation and Enhancement Measures**

| SEA Objective | Mitigation/Enhancement | Mechanism | Lead Authority |
|---|---|---|---|
| SEA5: Biodiversity and Natural Capital<br>SEA6: Landscape and Townscape<br>SEA7: Cultural Heritage<br>SEA12: Efficient use of Resources<br>SEA13: Protection of Land | In order to maximise sustainability benefits, transport interventions must commit to biodiversity net gain and make use of the natural capital approach to ensure environmental net gain over and above that of decarbonisation.<br>Development should avoid removing any habitats associated with green verges and should consider incorporating small scale green infrastructure.<br>Where practicable, land take from green belt or high value land should be minimised. | Embedded into all ATS policies and narrative<br>Project level design and assessment | Falkirk Council |
| SEA5: Biodiversity and Natural Capital<br>SEA13: Protection of Land | Interventions should aim to minimise soil disturbance and to retain as many ecosystem services as possible through careful soil management during the construction process. | Project level design and assessment | Falkirk Council |
| SEA5: Biodiversity and Natural Capital<br>SEA6: Landscape and Townscape | Interventions should consider impacts on international, national and local important sites (including sites such as SACs, AONBs, SSSIs and local nature reserves). This includes the potential impacts of noise, air and light pollution. | Project level design and assessment | Falkirk Council |
| SEA5: Biodiversity and Natural Capital<br>SEA2: Human Health<br>SEA6: Landscape and Townscape | The incorporation of natural features such as tree planting, hedgerows and wildflower planting along walk/cycleways to enhance connections to nature and reduced stress levels, contributing to mental health and wellbeing benefits.<br>Infrastructure schemes should incorporate design measures to lessen the impact on biodiversity and ensure biodiversity net gain.<br>Where a transport project is likely to have a significant effect on the natural environment the avoidance-mitigation-compensation hierarchy applies, for example, less damaging alternatives should be sought with regards impacts to high value ecological and landscape receptors. | Project levels biodiversity net gain assessment | Falkirk Council |

| SEA Objective | Mitigation/Enhancement | Mechanism | Lead Authority |
|---|---|---|---|
| SEA8: Climate Resilience<br>SEA12: Efficient use of Resources<br>SEA13: Protection of Land<br>SEA11: Water Quality | All interventions should consider climate change resilience and adaptation from early design.<br>Any form of construction and operation should be undertaken as sustainably as possible, making use of tools and processes, such as circular economy, waste hierarchy, CEEQUAL and BREEAM.<br>Sustainable design and construction techniques should be promoted such as low energy lighting and low noise road surfaces.<br>Where land take is required, preference should be given to brownfield land/ previously developed land and avoidance of the best and valuable land. | Policy and option development<br>Project level design and assessment | Falkirk Council |

| SEA Objective | Mitigation/Enhancement | Mechanism | Lead Authority |
|---|---|---|---|
| SEA6: Landscape and Townscape<br><br>SEA7: Cultural Heritage | Transport solutions must seek to maximise sustainability benefits from existing landscape, townscape and heritage assets by valuing them inherently and for the wider services they provide.<br><br>Promoters and designers should liaise closely with Falkirk Council and Historic Environment Scotland to avoid or minimise negative impacts, such as land take and light pollution, whilst seeking to maximise benefits, such as tranquillity. This is particularly notable for those interventions in close proximity to protected heritage assets, such as the Antonine Wall World Heritage Site and scheduled monument.<br><br>Where transport infrastructure is being built and/or improved within, or within the zone of influence of a designated landscape, a landscape and visual impacts assessment should be undertaken to determine magnitude of impact and possible mitigation.<br><br>Infrastructure should be sensitively designed to avoid any adverse effects on the surrounding landscape and townscape. View across the bridge over the river Carron should be protected and enhanced.<br><br>Consideration should be given to ensure that routes are carefully designed in order to ensure that they do not detract from the unique setting of heritage assets such as listed buildings, and scheduled monuments, and the Antonine Wall World Heritage Site. | Historic Landscape Characterisation<br><br>Project level design and assessment<br><br>Landscape and Visual Impact Assessment | Falkirk Council |
| SEA1: Population and Equalities | Design of routes should take into account the measures set out in the Department for Transport's (DfT) Cycle Infrastructure Design Local Transport Note 1/20 [online] Available at: Cycle Infrastructure Design Local Transport Note, to ensure that the route is accessible to all users. | Protect level design and Equality Impact Assessment (EqIA) assessment | Falkirk Council |
| SEA3: Transport and Accessibility | Routes could identify opportunities to link with Falkirk Grahamston Railway Station, to form an interchange hub, to encourage seamless integration of transport modes. This could also include electric bike hire. | Project level design and assessment | Falkirk Council |

| SEA Objective | Mitigation/Enhancement | Mechanism | Lead Authority |
|---|---|---|---|
| SEA4: Community Safety | Clear signage, use of tactile paving and segregation should be considered to reduce conflicts between users. Use of rumble strips and speedbumps may also help to reduce speeds of cyclists, making the route safer for all users. | Project level design and assessment<br>Protect level community safety assessment and EqIA | Falkirk Council |
| SEA8: Climate Resilience | Consideration should be given to flood risk within design and include suitable drainage measures to minimise flood risk in the area. | Flood Risk Assessment<br>Project level design and assessment | Falkirk Council |
| SEA9: Greenhouse Gases (GHGs)<br>SEA10: Air Quality | Create a construction management plan to prepare and limit the effects that construction will have on the area. | Construction Environmental Management Plan (CEMP) | Falkirk Council |
| SEA11: Water Quality | Design should consider incorporating drainage measures, specifically SuDS, to minimise flood risk along the route. | Project level design and assessment | Falkirk Council |

9.1.4 Despite mitigation measures some residual uncertain effects have remained which may require monitoring. These are as follows:

- SEA1: The potential for routes to be inaccessible to disabled users;
- SEA5: The potential loss and fragmentation of habitats, natural capital and ecosystem services;
- SEA6: The potential loss of landscape and visual amenity;
- SEA7: The potential degradation of the historic environment;
- SEA8: The potential for increased flood risk along routes;
- SEA12: The potential waste of materials and resources; and
- SEA12/13: The loss of land and efficient use of resources.

## 9.2 Monitoring Measures

9.2.1 The SEA Regulations require that monitoring is undertaken on a strategy so that the significant effects of implementation can be identified, and remedial action imposed. The purpose of the monitoring is to provide an important measure of the sustainability outcome of the final strategy, and to measure the performance of the strategy against sustainability objectives and targets. Monitoring is also used to manage uncertainty, improve knowledge, enhance transparency and accountability, and to manage sustainability information.

9.2.2 The aim of monitoring is to check whether the strategy is having the significant effects that were predicted in the SEA, and to deal with any unforeseen problems.

9.2.3 **Table 9-2** below sets out those monitoring measures which would be suitable in monitoring those uncertain residual effects outlined above.

**Table 9-2 – Potential Monitoring Measures**

| Potential Effects | Potential Indicators | Targets |
|---|---|---|
| **SEA1:** The potential for routes to be inaccessible to disabled users | Width of cycle ways<br>User statistics on routes | For all user groups to access proposed routes and to meet industry best practice standards |

| Potential Effects | Potential Indicators | Targets |
|---|---|---|
| **SEA5**: The potential loss and fragmentation of habitats, natural capital and ecosystem services | Biodiversity Net Gain from developments (measured using the Biodiversity Metric or Small Sites Metric for small development sites) | For all relevant developments to deliver a minimum of 20% Biodiversity Net Gain |
| **SEA5:** Potential negative effects from the loss of ancient woodland from proposed developments | Percentage loss of ancient woodland from all developments | No net loss in ancient woodland |
| **SEA7**: Potential negative effects from new developments on heritage assets | Increases in visitor numbers to heritage assets. | The number of heritage assets (statutory and non-statutory) benefiting from conservation and enhancement measures as a result of the ATS. |
| **SEA8**: The potential for increased flood risk along routes | Number of interventions supported by a flood risk assessment.<br>The number of schemes located within flood risk areas.<br>Number of interventions adopting climate change resilience and adaptation within designs. | The number of developments benefiting from flood protection. |

| Potential Effects | Potential Indicators | Targets |
|---|---|---|
| **SEA12**: The potential waste of materials and resources | The number of interventions which incorporate waste saving initiatives, such as re-using materials as part of the design. | All schemes to promote circular economy principles and utilise sustainable materials where possible. |

# 10 Recommendations

10.1.1 This section sets out the recommendations identified throughout the SEA assessment. These have been taken from the SEA Report and HRA. It should be noted that these are different from the mitigation measures outline in **Section 9**, as they focus on potential changes to the ATS, rather than measures identified in response significant effects.

10.1.2 These changes will be considered by Falkirk Council during the preparation of the preferred strategy for Regulation 19 consultation.

10.1.3 **Table 10-1** below outlines these recommendations.

**Table 10-1 – ATS Recommendations**

| Item | Recommendations | Source Document |
|---|---|---|
| Policies – Embracing Sustainability | Policy could also include measures of maintaining water quality and minimising flood risk. | SEA Report |
| Policies – Identifying Strategic Routes<br>Promoting Thriving High Streets | Policies could benefit from including direct consideration of the historic environment within Falkirk and improving accessibility to heritage assets through the ATS. Policies could also benefit from including the potential for enhancing the setting of heritage assets. | SEA Report |

| Item | Recommendations | Source Document |
|---|---|---|
| Policies - Identifying Strategic Routes<br>Promoting Thriving High Streets<br>Creating Liveable Neighbourhoods | Climate change has the potential to significantly impact the ATS through increases in flood risk, rainfall, and heatwave events. Given the location of Falkirk close to a coastal area, policies would benefit from including mention to climate resilience and minimising flood risk in particular. Policies should also consider climate change resilience and adaptation from early design. | SEA Report |
| Policies - Identifying Strategic Routes<br>Promoting Thriving High Streets<br>Creating Liveable Neighbourhoods | Policies should include reference to biodiversity net gain. | SEA Report |
| Policies – Embracing Sustainability | Policies could include reference to circular economy principles, the minimisation of waste, and the protection of greenfield and valuable agricultural land. | SEA Report |
| ATS Options | Routes should avoid land take from green belt land. | SEA Report |

| Item | Recommendations | Source Document |
|---|---|---|
| ATS Options | Routes should ensure that width requirements are met (2 metres wide in each direction, or 3 to 4m for bidirectional tracks) to allow access to all users in line with Transport Scotland Cycling by Design document [online] Available at: Cycle Infrastructure Design Local Transport Note. | SEA Report |
| ATS Options | It is recommended that individual scheme level HRA's should be undertaken when options are developed. | HRA Report |

# 11 Next Steps

11.1.1 Falkirk Council is seeking the views of statutory bodies on the findings of the SEA. Consultation at this stage continues to ensure that the SEA provides a robust assessment of the Active Travel Strategy.

11.1.2 This Environmental Report will be issued to consultees for a 12-week consultation period alongside the draft ATS.

11.1.3 An indicative timetable of the remaining stages of the SEA and ATS have been included in **Table 11-1** below.

**Table 11-1 – Indicative ATS and IIA Timetable**

| **SEA / ATS Stages** | **Timescales** |
|---|---|
| Consultation | TBC |
| Finalisation of ATS and Environmental Report | TBC |
| SEA Post Adoption Statement | TBC |

# Appendix A – ATS Policy Assessment

## Introduction

This Appendix sets out the findings of the ATS policy assessment, that were considered as part of the Strategic Environmental Assessment (SEA) . The assessment uses the key to effects set out in Table A.1 below.

**Table A.1 – Assessment of Significance**

| Effect Significance | Key |
|---|---|
| Potential for significant positive effects | ++ |
| Potential for minor positive effects | + |
| Potential for minor negative effects | - |
| Potential for significant negative effects | -- |
| Uncertain effects – Uncertain or insufficient information on which to determine the appraisal at this stage | ? |
| Potential for both positive and negative effects | +/- |
| Negligible / No effect | 0 |
| Nature of effect (direct / indirect). | D / I |
| Spatial Extent (local / regional / national) | L / R / N |
| Reversibility of effect (reversible / irreversible) | R / I |
| Permanence (Temporary or Permanent) | T / P |
| Duration (short / medium / long term). | ST / MT / LT |

## Legend

| Explanation of symbols / letters | Key |
|---|---|
| Significant positive effects | ++ |
| Minor positive effects | + |
| Minor negative effects | - |
| Significant negative effects | -- |
| Uncertain effects | ? |
| Mixed positive and negative effects | +/- |
| Negligible / No effect | 0 |
| Direct effect | D |
| Indirect effect | I |
| Local | L |
| Regional | R |
| National | N |
| Reversible | R |
| Irreversible | I |
| Temporary | T |
| Permanent | P |
| Short Term | ST |
| Medium Term | MT |

| Explanation of symbols / letters | Key |
|---|---|
| Long Term | LT |
| Not Applicable | N/A |

# Identifying Strategic Routes

## Policy Overview

This policy includes the following actions:

- We will invest in our strategic active travel network, with a goal of completing the primary network by 2038;
- We will develop and maintain an ambitious delivery plan for delivering the strategic active travel network;
- We will prioritise investment in street lighting, the footway network, and cycle routes to provide safe, sustainable travel options;
- We will work with the Council's Core Paths Plan to enhance the existing path network and develop multi-use paths that are easily accessible and well connected;
- We will improve the pedestrian and cycle environment in the busiest used areas to enhance safety for walking, wheeling and cycling; and
- We will continue listening carefully to communities through prioritising consultation and collaboration with community groups.

**Table A-1 - Assessment Overview – Identifying Strategic Routes**

| | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Significance | ++ | ++ | ++ | ++ | 0 | + | ? | ? | + | + | ? | ? | ? |
| Nature of Effect | D | I | D | D | N/A | I | N/A | N/A | I | I | N/A | N/A | N/A |
| Spatial Extent | L | L | L | L | N/A | L | N/A | N/A | L | L | N/A | N/A | N/A |
| Reversibility | I | I | I | R | N/A | I | N/A | N/A | R | R | N/A | N/A | N/A |
| Permanence | P | T | P | P | N/A | P | N/A | N/A | P | P | N/A | N/A | N/A |
| Duration | LT | LT | LT | LT | N/A | LT | N/A | N/A | MT | MT | N/A | N/A | N/A |

## Assessment Summary

Significant positive effects have been identified for SEA1 (population and equalities), SEA3 (transport and accessibility) and SEA4 (community safety). The development of Falkirk's strategic active travel network will contribute to improving connectivity across the council area, as well as encourage a modal shift away from private car use through the improvement of access to services across the council area. Additionally, these improvements enhance safety of active travel users, as well as improving lighting to increase the feeling of safety after dark. The improvement of both the strategic active travel network and the existing path network also contributes to improving the public realm. Improvements to the active travel network also provide opportunities for greater access to the countryside and green spaces within Falkirk. Minor positive effects have therefore been identified for SEA6 (landscape and townscape). Through sensitive design, there are also opportunities for positive placemaking as a result of developments that may come forward from this policy, positively effecting both SEA6 (landscape and townscape) and SEA7 (cultural heritage). However, insensitive design may result in negative effects on the setting of Falkirk's townscape and historic environment. These effects are likely to be determined by individual scheme design, resulting in uncertain effects for SEA7 (cultural heritage).

Significant positive effects have been identified for SEA2 (human health) as improving the active travel network is likely to indirectly improve health through the promotion of healthy lifestyles and improving physical activity rates amongst users of the network, including wheelchair users. Similarly, the modal shift towards active travel is also likely to indirectly improve air quality within the council area, through a reduction in transport related emissions. Minor positive effects have therefore been identified for SEA10 (air quality) and SEA9 (GHGs). However, developments that may come forward as a result of this policy may result in higher levels of embodied carbon due to construction. This is likely to be determined by individual schemes and developments.

Uncertain effects have been identified for SEA8 (climate resilience), SEA12 (efficient use of resources) and SEA13 (protection of land). Effects upon these SEA objectives are determined largely by individual schemes, rather than overarching policy, therefore effects cannot be determined at this stage. Uncertain effects have also been identified for SEA11 (water environment) as this will be determined by the location of schemes and their proximity to water bodies and the potential for a reduction in water quality.

## Promoting Thriving High Streets

### Policy Overview

This policy includes the following actions:

- We will trial pedestrian and cycling improvements and monitor the economic impacts on local businesses through business engagement;
- We will invest in secure cycle parking infrastructure at key destinations;
- All new flats will have dedicated secure cycling storage;
- We will invest in infrastructure and placemaking to make the walking, wheeling and cycling gateways to town centres welcoming and accessible;
- We will work collaboratively to increase the flexibility of land use, to encourage thriving high streets;
- We will remove time restrictions for cycle access on Falkirk town's high street to increase cycle access and facilitate greater use of cargo bike delivery models;
- We will explore opportunities for cargo bikes in the Grangemouth Investment Zone, and make arriving at this zone by foot, cycle or wheel a welcoming and accessible experience; and
- Ensure the Grangemouth Investment Zone is accessible via walking, wheeling and cycling.

**Table A-2 - Assessment Overview – Promoting Thriving High Streets**

| | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Significance | + | ++ | ++ | + | 0 | ++ | ? | ? | +/- | ++ | ? | ? | 0 |
| Nature of Effect | D | I | D | D | N/A | D | N/A | N/A | D | I | N/A | N/A | N/A |
| Spatial Extent | L | L | L | L | N/A | L | N/A | N/A | L | L | N/A | N/A | N/A |
| Reversibility | R | R | I | R | N/A | I | N/A | N/A | I | R | N/A | N/A | N/A |
| Permanence | P | P | P | P | N/A | P | N/A | N/A | P/T | P | N/A | N/A | N/A |
| Duration | LT | MT | LT | MT | N/A | LT | N/A | N/A | ST/LT | LT | N/A | N/A | N/A |

**Assessment Summary**

This policy improves the connectivity of infrastructure, improving access to Falkirk's high street and Grangemouth Investment Zone by active travel modes. This results in minor positive effects for SEA1 (population and equalities). The improvements to connectivity also promote healthier lifestyles, encouraging active travel usage due to increased access to the town centre. The proposed improvements to connectivity, and access to the town centres and employment in the Grangemouth Investment Zone also aid in encouraging a modal shift away from private car use. Significant positive effects have been identified for SEA3 (transport and accessibility) and SEA2 (human health).

Encouraging a modal shift away from private car use also contributes to improving air quality within the council area. Additionally, improving active travel connectivity with the Grangemouth Investment Area provides opportunities to reduce transport related emissions within the Grangemouth AQMA. The facilitation of greater cargo bike deliveries reduces reliance upon HGVs within Falkirk town's high street, therefore reducing emissions. This is particularly notable given the Falkirk Town Centre AQMA. Significant positive effects have therefore been identified for SEA10 (air quality).

The policy also includes improvements to cycle infrastructure and storage, improving safety. Additionally, the proposed infrastructure contributes to improving placemaking and making town centres welcoming. These improvements result in minor positive effects on both SEA4 (community safety) and contribute to significant positive effects upon SEA6 (landscape and townscape) through public realm improvements and improving both security and the feeling of safety. Through sensitive design, there are also opportunities for positive placemaking as a result of developments that may come forward from this policy, positively effecting both SEA6 (landscape and townscape) and SEA7 (cultural heritage). However, insensitive design may result in negative effects on the setting of Falkirk's townscape and historic environment. Uncertain effects have therefore been identified for SEA7 (cultural heritage), as whilst the policy improves connectivity and access to Falkirk's town centres, and therefore multiple heritage assets located in town centres, the connectivity with assets and enhancement of their settings through improvements is currently unknown and likely to be determined by scheme design.

Mixed positive and negative effects have been identified for SEA9 (GHGs) as the development of infrastructure is likely to reduce transport related emissions and GHGs within Falkirk through promoting active travel modes. However, there are likely to be construction related emissions associated with the development of additional infrastructure, resulting in potential negative effects.

Additional uncertain effects have also been identified for SEA8 (climate resilience), SEA12 (efficient use of resources) and SEA13 (protection of land). Effects upon these SEA objectives are determined largely by individual schemes; therefore, effects cannot be determined at this stage. Uncertain effects have also been identified for SEA11 (water environment) as this will be determined by the location of schemes and their proximity to water bodies and the potential for a reduction in water quality.

## Creating Liveable Neighbourhoods

### Policy Overview

This policy includes the following actions:

- We will review existing footway and path clutter and remove or relocate anything unnecessary which is a barrier to access for all people whether walking or wheeling;
- We will invest in new street infrastructure such as pedestrian crossings, wider footways, and protected vehicle-free spaces to improve the pedestrian experience;
- We will improve connectivity and integration between different modes of transport to ensure seamless mobility. This includes steps such as exploring integrated ticketing, walking, wheeling and cycling access to train station, and active travel integration with car club vehicles (e.g. cycle racks);
- In areas of high pedestrian demand we will ensure that the default position is pedestrian priority at signal-controlled junctions; and
- We will prioritise cycling movements over motor vehicles through greenlights, and investigate 'green wave' technology to help cyclists progress through a series of junctions more smoothly.

**Table A-3 - Assessment Overview – Creating Liveable Neighbourhoods**

| | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Significance | ++ | + | ++ | + | 0 | + | ? | ? | +/- | + | ? | ? | ? |
| Nature of Effect | D | I | D | D | N/A | I | N/A | N/A | D | I | N/A | N/A | N/A |
| Spatial Extent | L | L | L | L | N/A | L | N/A | N/A | L | L | N/A | N/A | N/A |
| Reversibility | I | R | I | I | N/A | I | N/A | N/A | I | R | N/A | N/A | N/A |
| Permanence | P | P | P | P | N/A | P | N/A | N/A | P/T | P | N/A | N/A | N/A |
| Duration | LT | LT | LT | LT | N/A | LT | N/A | N/A | ST/LT | MT | N/A | N/A | N/A |

## Assessment Summary

Significant positive effects have been identified for SEA1 (population and equalities) as this policy contributes towards reducing inequalities through removing pavement clutter as well as integrating transport modes and ticketing. Integrating transport modes also contributes to improving connectivity across both the council area, and wider region. Developing and integrating active travel modes also improves access to active travel modes and encourages healthy lifestyles. Minor positive effects have been attributed to SEA2 (human health).

The proposed improvements to connectivity, and integration with other transport modes also aid in encouraging a modal shift away from private car use as well as supporting seamless travel. Significant positive effects have been identified for SEA3 (transport and accessibility). Encouraging a modal shift away from private car use also contributes to improving air quality within the council area. Minor positive effects have therefore been identified for SEA10 (air quality).

This policy also includes developing new street infrastructure, as well as ensuring pedestrian priority at signal-controlled junctions. Improving pedestrian crossings and footways contributes to improving both pedestrian and cyclist safety, reducing accidents amongst these users. Minor positive effects have been identified for SEA4 (community safety) as a result. Minor positive effects have also been identified for SEA6 (landscape and townscape) due to the review off footway clutter. The removal of clutter is likely to contribute to improving the public realm. The development of additional active travel modes also contributes to promoting access to the wider Falkirk council area. However, there is potential that insensitive design of street infrastructure, and existing poorly designed infrastructure that is retained, may detract from the setting of the townscape. Poor design may also detract from the setting of the historic environment in the area. These effects are likely to be determined by individual scheme design, resulting in uncertain effects for SEA7 (cultural heritage).Mixed positive and negative effects have been identified for SEA9 (GHGs) as the development of infrastructure is likely to reduce transport related emissions and GHGs within Falkirk through promoting active travel modes. However, there are likely to be construction related emissions and embodied carbon associated with the development of additional infrastructure, resulting in potential negative effects. Uncertain effects have been identified for SEA8 (climate resilience), as resilience to climate change is likely to be determined by individual scheme design.

Uncertain effects have also been identified for SEA11 (water environment) as this will be determined by the location of schemes and their proximity to water bodies and the potential for a reduction in water quality. Additionally, uncertain effects have been identified for SEA12 (efficient use of resources) and SEA13 (protection of land) as it is unclear whether existing infrastructure may be reused within new infrastructure and any land take required for developments.

## Embracing Sustainability

### Policy Overview

This policy includes the following actions:

- We will continue promoting and increasing awareness of sustainable and active travel choices through the Take the Right Route campaign;
- Continue to work with the schools and other partners to educate children on the benefits of walking and cycling, to increase walking, wheeling and cycling to and from school; and
- We commit to ensuring more than 10% biodiversity et gain across out active travel programme to improve the habitats and environments within the Falkirk district.

**Table A-4 - Assessment Overview – Embracing Sustainability**

| | SEA1: Population and Equalities | SEA2: Human Health | SEA3: Transport and Accessibility | SEA4: Community Safety | SEA5: Biodiversity and Natural Capital | SEA6: Landscape and Townscape | SEA7: Cultural Heritage | SEA8: Climate Resilience | SEA9: Greenhouse Gases (GHGs) | SEA10: Air Quality | SEA11: Water Environment | SEA12: Efficient use of Resources | SEA13: Protection of Land |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Significance | + | + | + | + | ++ | 0 | 0 | 0 | + | + | 0 | 0 | 0 |
| Nature of Effect | D | D | I | I | D | N/A | N/A | N/A | I | I | N/A | N/A | N/A |
| Spatial Extent | L | L | L | L | L | N/A | N/A | N/A | L | L | N/A | N/A | N/A |
| Reversibility | R | R | I | R | I | N/A | N/A | N/A | I | R | N/A | N/A | N/A |
| Permanence | P | P | P | P | P | N/A | N/A | N/A | P | P | N/A | N/A | N/A |
| Duration | MT | MT | LT | LT | LT | N/A | N/A | N/A | LT | LT | N/A | N/A | N/A |

### Assessment Summary

This policy focuses on improving the knowledge and awareness of active travel choices. Improving awareness amongst partners, schools and the general population contributes to promoting healthy lifestyles and encouraging physical activity rates. Minor positive effects have therefore been identified for SEA1 (population and equalities) and SEA2 (human health). Improving awareness about active travel choices also contributes to reducing the demand for private car use and promotes a modal shift towards active, sustainable transport modes; also reducing transport emissions. This results in indirect minor positive effects on SEA3 (transport and accessibility), SEA9 (GHGs) and SEA10 (air quality). Minor positive effects have also been identified for SEA4 (community safety) as increasing the awareness of active travel options improves the safety of users on active travel networks.

Additionally, this policy commits to ensuring 10% biodiversity net gain across the active travel network. Ensuring the development of biodiversity net gain provides opportunities to enhance habitats and provide connectivity within habitats across the area. Improving habitats and the natural environment within the Falkirk council area also contributes to enhancing ecosystem services within the local area and provides habitats for species. Significant positive effects have therefore been identified for SEA5 (biodiversity and natural capital), with minor positive effects identified for SEA6 (landscape and townscape) due to indirect public realm and landscape improvements as a result of biodiversity net gain.

# Appendix B – Assessment of ATS Options – refer to separate document

This appendix is listed for information purposes only.

# Appendix C – Scoping Report Baseline

## Introduction

This appendix sets out the key baseline information for each of the SEA topics, as well as any future trends regardless of the implementation of the Strategy.

It also identifies key issues in relation to the Strategy and the implications for the drafting of the final Strategy. The information presented has been used to develop the SEA Objectives.

## Population and Equalities

As of 2020, Falkirk had a population of 160,560, which is a 0.2% decrease from 2019. (Falkirk Council Area Profile (2021) [online] Available at: Population Projections). The highest proportion of people in Falkirk are aged between 45-64 who make up 29.1% of the population, with the second highest proportion being those of working age at 25-44 representing 24.8%. The percentage of those aged 65 years and over (19.1%) is slightly lower than the Scottish national average of 19.3%.

Within Falkirk, approximately 49% of the population are male, and 51% female (Labour Market Profile Falkirk (2020) [online] Available at: Falkirk). This represents a similar higher male to female ratio as seen in the national average of 48.8% male and 51.2% female.

Disability in Falkirk reflects that of wider national averages, with both Falkirk and Scotland having 9.6% of the population report they are limited a lot by a by a long term health problem or disability. In Falkirk 10.4% report being limited a little, and c.80% not limited at all, this is highly similar to Scotland with 10.1% and 80.4% respectively (Scotland's Census – Falkirk 2011 Overview [online] Available at: Falkirk Census).

According to 2011 census data, 98.1% of Falkirk are white, 0.2% are mixed or multiple ethnic groups, with Asian or Asian Scottish representing 1.3%, African or African Scottish representing 0.1% and Caribbean or Caribbean Scottish representing 0.06%. (Census Data Topic Selection (2011) [online] Available at: Census Data).

Over a third of the population in Falkirk identify as Church of Scotland, 36.5%, whilst 39.9% have no religion (Census Data Topic Selection (2011) [online] Available at: Census Data). With regards to other religions, a lesser proportion of 12.3% identify as Roman Catholic,

4.1% as ‘Other Christian’, 0.1% as Buddhist, 0.1% as Hindu, 0.03% as Jewish, 0.9% as Muslim, 0.08% as Sikh and 0.2% as ‘Other Religion’.

The Scottish Indices of Multiple Deprivation (SIMD) 2019 is a relative measure of deprivation across 6,976 small areas (called data zones) in Scotland (Scottish Index of Multiple Deprivation 2020 Toolkit [online] Available at: Scottish IMD 2020). The SIMD looks at the extent to which an area is deprived across seven domains: income, employment, education, health, access to services, crime, and housing. The SIMD for Falkirk shows that the councils data zones (Scottish Index of Multiple Deprivation 2020 Toolkit [online] Available at: SIMD 2020 Toolkit) predominantly cover the lower range of ranking in the SIMD. Of the 214 data zones in Falkirk, 35 of them are within the 20% most deprived areas in Scotland, with 15% of Falkirk’s population living in these most deprived areas (SIMD 2020 [online] Available at: SIMD Census).

Nationally, this places Falkirk 13th out of Scotland’s 32 local authorities in terms of deprivation. It has a 2.5% share of all data zones located within the top 20% of most deprived nationally (Scottish Government, Scottish Index of Multiple Deprivation 2020 Local and National Share Calculator (2020) [online] Available at: SIMD Local And National Share Calculator).

The crime domain has the highest number of data zones amongst the top 20% of most deprived data zones nationally with 50, this is followed by education with 49, access with 39, employment with 35, income with 31 and health with 30 (Scottish Government, Scottish Index of Multiple Deprivation 2020 Local and National Share Calculator (2020) [online] Available at: SIMD Local And National Share Calculator).

The highest levels of deprivation in Falkirk (those within the worst 5%) are located within the centre and just North of the centre of the Falkirk Council area, namely Camelon East, Bainsford and Langlees, Dunipace and Bowhouse in Grangemouth (Scottish Index of Multiple Deprivation (2020) [online] Available at: SIMD 2020).

The south and east of the council area have generally lower rates of deprivation, namely Arnothill, Reddingmuirhead and Polmont, with parts of these places sitting within the least deprived 10%.

The rural population of Falkirk is an estimated 3,449 and has increased by 28.4% in the last 10 years. Here, 63.5% of people are working age, and 17.6% are 65 and over. The unemployment rate in rural Falkirk is nearly half that of Falkirk at 4% compared to 8.2%, yet 21.3% of the population are income deprived, and 17.5% are employment deprived. There is one data zone that falls within the most deprived SIMD (Falkirk Rural Settlement Profile (2020) [online] Available: Area Settlement Profile).

## Likely Evolution of the Baseline without the ATS

Despite a small decrease in population between 2019 and 2020, the population in this council area is expected to increase by 3.2% by 2028, a rate 1.4% greater than the national average[3].

The population is also set to become older (in line with the national average), with 20.2% of the population anticipated to be over 65 by 2028, a 1.1% increase from current levels (Falkirk Council Area Profile (2021) [online] Available at: Population Projections). This will likely place an increased demand on services like health and social care. Greater consideration will need to be taken regarding the accessibility needs of the elderly going forward.

The rural population has increased in Falkirk over the past ten years. This is likely to continue to increase with the convenience of remote working, which was highlighted during the COVID-19 pandemic. This may however, present some issues particularly for accessing services, facilities and employment.

The existing Falkirk Local Transport Strategy [online] available at: Local Transport Strategy does aim to increase rural connectivity, however, this isn't focussed on active travel. As active travel provides free and accessible modes of travel, without the development of the ATS there may be potential for some groups in the rural communities to be excluded.

## Key Risks and Opportunities for the ATS

**Table C-1** below sets out the key risk and opportunities for population and equalities with regards to the ATS.

**Table C-1 – Strategy Implications – Population and Equalities**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • The population of Falkirk is predicted to increase both in number and age profile. An expected increase in elderly residents will call for adequate support and greater access to services and facilities for the elderly population to be provisioned<br>• Changing behaviours such as remote working habits and long-term shielding by the elderly may increase social isolation and increase reliance on alternative social interaction.<br>• Rural communities are likely to increase, which could also increase levels of social isolation. | • The ATS will need to address any necessary active travel services and developments to ensure provisions to elderly and socially excluded population groups.<br>• The ATS will need to address increased instances of social isolation brought about my remote working as well as amongst elderly populations. This may involve introducing new alternative modes of social interaction for all groups through greater access to outdoor spaces and improved walking abilities.<br>• The ATS will need to ensure that schemes are inclusive to all groups e.g. suitable path widths for wheelchairs and hand cranked cycles, providing clear signage and legible design.<br>• The ATS will need to ensure access to active travel services for those in rural communities. |

## Human Health

The average life expectancy for males in Falkirk is similar to the Scottish average at 77.1 years as of 2017 (Falkirk Community Partnership, Joint Strategic Needs Assessment (2021) [online] Available at: JSNA). While females have an overall higher life expectancy of 80.3 years, this has lowered by 0.7 years over a five year period since 2013, indicating that female health is declining in Falkirk.

There are large life expectancy disparities within Falkirk, with the lowest male life expectancy at 68.3 years, located in Bainsford and Langlees, and the highest male life expectancy at 86.5 years, located in Lochgreen and Lionthorn, showing a 18.2 year disparity (Falkirk Community Partnership, Joint Strategic Needs Assessment (2021) [online] Available at: JSNA). Similarly, the lowest female life expectancy within Falkirk is 76.5 years, located in Camelon West, and the highest female life expectancy is 87.6 years, located in Lochgreen and Lionthorn, showing an 11.1 year disparity.

The leading cause of death among men in Falkirk in 2020 was ischaemic heart disease (attributing to 15.3% of all male deaths) and for women it was dementia and Alzheimer's disease (attributing to 14.2% of all female deaths), according to the Joint Strategic Needs Assessment (2021) [online] Available at: JSNA.

Although overall smoking within the adult population of Falkirk is less than the national average there are substantial differences between data zones demonstrating substantial health inequalities (Falkirk Community Partnership, Joint Strategic Needs Assessment (2021) [online] Available at: JSNA). Adult smoking prevalence is at 32% in Falkirk's most deprived SIMD, and only 9% in the least, with similar patterns for maternal smoking.

Globally, poor diet is a leading risk factor for ill health while obesity has been linked to a range of comorbidities including diabetes, cardiovascular disease (CVD), hypertension and certain cancers (Falkirk Community Partnership, Joint Strategic Needs Assessment (2021) [online] Available at: JSNA). In Scotland 28% of the population are classed as overweight, and 35% as obese, with the prevalence of this being higher among those aged 45-64 (Falkirk Community Partnership, Joint Strategic Needs Assessment (2021) [online] Available at: JSNA). Only 47% of this age group reported undertaking enough activity to meet MVPA guidelines, and this declined with age to 42% for 56-74's and 34% for 75+. In Falkirk, 20,000 people live with heart and circulatory disease, and 64% are classed as having obesity (British Heart Foundation – Falkirk (2022) [online] Available at: Falkirk BHF).

The presence of COVID-19 has had an impact on health in a range of ways. Pre-pandemic social isolation and loneliness were considered key priorities by the Scottish government, with 7% of adults reporting they had only one or no people to turn to for support in a crisis, and specifically 9% of men feeling this way (Scottish Health Survey (2020) [online] Available at: Scottish Health Survey).

Since the pandemic, 180,000 people in Scotland are considered the highest clinical risk from COVID-19, being advised to shield through the pandemic, increasing feelings of loneliness by 7% from those who are high risk to those who aren't. In Falkirk a higher proportion of people with long term health conditions of 59% (those who are more likely to be high risk) have reported increased feelings of anxiety compared to the overall adult population (54%) (Lifestyle of Scotland's People Since the Coronavirus Outbreak (2020) [online] Available at: Obesity Action Scotland).

Since the pandemic, Scottish residents believe their physical activity levels have worsened (41%) and their diet has worsened (35%) (Lifestyle of Scotland's People Since the Coronavirus Outbreak (2020) [online] Available at: Obesity Action Scotland). In 2020, 39% of adults reported increased weight since the start of the lockdown, and out of adults classed as high risk, only 48% were meeting physical activity guidelines (Falkirk Community Partnership, Joint Strategic Needs Assessment (2021) [online] Available at: JSNA).

While the pandemic has increased indoor activity levels by nearly a third, the introduction of more sedentary lifestyles as well as lockdown preventing outdoor activities, has created a prominent feeling among the population that the pandemic has had negative implications on the health of their lifestyle.

By the end of the week commencing the first of August 2022, 128,676 people in Falkirk had been given a first dose of the COVID-19 vaccination, 124,080 had been given a second, and 105,455 had received a booster dose (Covid-19 in the UK, Simple Summary for Falkirk [online] Available at: Summary for Falkirk).

## Likely Evolution of the Baseline without the ATS

Physical activity and diet are already public health priorities in Scotland, but with the effects of the pandemic these can be expected to worsen. Reduced access to exercise facilities and increasingly sedentary lifestyles may see the further deterioration of health, and potentially increased prevalence of associated comorbidities like cardiovascular disease and hypertension.

Social isolation and loneliness are likely to become more prevalent in Falkirk as people continue to work from home. Social isolation can lead to loneliness which has the potential to undermine wellbeing thereby impacting negatively on many people's quality of life, particularly older people.

Inequality is widening in Falkirk and has been further exacerbated by COVID-19. Some groups have been disproportionately infected with the virus and have experienced poorer health outcomes. Equally, some groups have experienced higher death rates. There are also visible inequalities being brought about by the pandemic regarding employment, as groups in deprived areas have been more severely impacted by unemployment and a loss of income as a result of COVID-19. Without adequate intervention, these issues may continue in the future.

Without the ATS current poor health outcomes as a result of COVID-19 are likely to continue, and without further intervention dimensions of health such as activity and social isolation may continue to deteriorate.

## Key Risks and Opportunities for the ATS

**Table C-2** below sets out the key risk and opportunities for human health with regards to the ATS.

**Table C-2 – Strategy Implications – Human Health**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • Increases in poor health related with diet and physical activity re likely to be seen as a result of sedentary lifestyles brought about by the pandemic.<br>• Increases in loneliness are likely to be seen as a result of social isolation and loneliness, brought about by the pandemic.<br>• COVID-19 has exacerbated inequalities within Falkirk | • The ATS should ensure plans contribute positively to the improvement of adult activity levels<br>• The ATS should ensure plans contribute positively to reductions in social isolation through increased provision of community walking schemes<br>• There is a need for the ATS to address issues with inequalities in Falkirk following the COVID-19 pandemic. |

# Economy and Employment

Falkirk's close proximity and connectivity to both Glasgow and Edinburgh, has resulted in Falkirk having a robust economy and strong location for residents who commute to Glasgow and Edinburgh for employment. An average of 12,500 more people commute out of Falkirk than commute in. The largest destinations of commuters are Stirling, Edinburgh, and Glasgow (Falkirk Council (2015) Falkirk Economic Strategy 2015-2025).

Falkirk benefits from international connectivity due to its close proximity Edinburgh Airport, which allows businesses and residents to benefit from opportunities provided by international trade, and investment in global markets.

Falkirk has a high level of productivity compared with other areas of Scotland (The Scottish Parliament (2018) A Guide to Goss Value Added (GVA) in Scotland. Available at: GVA in Scotland, with £22,208 GVA per head in 2017 (Office for National Statistics (2017) Regional gross value added (balanced) by local authority in the UK. Available at: Regional GVA by Local Authority), however this is lower than the regional average of £40,297 GVA per head.

Falkirk's GVA per head has increased by 22.2% since 2011 which is significantly higher than the regional average increase of 13.6% and Scotland average increase of 13.5%.

In 2021, the percentage of working age population (16-64) is 78.0% (Nomis (2020) Labour Market Profile – Falkirk. Available at: Labour Market Profile), which is higher than the Scotland average of 76.2%, but slightly lower than the Great Britain average of 78.4%. Like the national trend, the working age population has continued to decrease year on year since 2012. In Falkirk, 76.6% of the population are in employment which is higher than both the Scotland and Great Britain averages (73.1% and 74.8% respectively). The percentage of the population unemployed is slightly lower than both the Scotland (3.9%) and Great Britain averages (4.4%) at 3.5% (Nomis (2020) Labour Market Profile – Falkirk. Available at: Labour Market Profile).

**Table C-3** shows Falkirk's key economic sectors compared to Scottish and national averages. Falkirk has a significantly larger than average number of employees within the manufacturing industry (11.1%) when compared to both Scotland (7.2%) and Great Britain (7.9%). Similarly, Falkirk has a large proportion of people working in health and social care (22.2%) when compared to both Scotland (16.6%) and Great Britain (13.6%). Health and social work activities are also Falkirk's largest employment sector.

Falkirk's smallest employment sector is mining and quarrying (0.1%), which is lower than Scotland's average (1.2%), however it is in line with Great Britain. Falkirk also has a significantly lower proportion of employment in financial and insurance activities when compared to both Scotland and Great Britain.

**Table C-4 - Employment in key economic sectors (%) (Nomis (2020) Labour Market Profile – Falkirk. Available at: Labour Market Profile)**

| Industry | Falkirk % | Scotland % | Great Britain % |
|---|---|---|---|
| Mining and Quarrying | 0.1 | 1.2 | 0.2 |
| Manufacturing | 11.1 | 7.2 | 7.9 |
| Electricity, Gas, Steam and Air Conditioning Supply | 0.7 | 0.9 | 0.5 |
| Water Supply; Sewerage, Waste Management and Remediation Activities | 0.6 | 0.7 | 0.7 |
| Construction | 6.3 | 5.1 | 4.8 |
| Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles | 14.3 | 13.9 | 14.9 |
| Transportation and Storage | 7.1 | 4.5 | 5.1 |
| Accommodation and Food Service Activity | 4.8 | 7.2 | 7.2 |
| Information and Communication | 1.3 | 3.7 | 4.5 |
| Financial and Insurance Activities | 0.6 | 3.3 | 3.5 |
| Real Estate Activities | 1.0 | 1.5 | 1.8 |
| Professional, Scientific and Technical Activities | 4.0 | 7.1 | 8.7 |
| Administrative and Support Service Activities | 6.3 | 8.0 | 8.8 |

| Industry | Falkirk % | Scotland % | Great Britain % |
|---|---|---|---|
| Public Administration and Defence; Compulsory Social Security | 7.1 | 6.5 | 4.6 |
| Education | 7.1 | 8.4 | 9.0 |
| Human Health and Social Work Activities | 22.2 | 16.6 | 13.6 |
| Arts, Entertainment and Recreation | 2.0 | 2.3 | 2.2 |
| Other Service Activities | 1.3 | 1.7 | 1.9 |

The percentage of Falkirk's population with qualifications is generally slightly lower than the Scotland and national averages (Nomis (2020) Labour Market Profile – Falkirk. Available at: Labour Market Profile):

- NVQ4 and above is 44.2%, lower than the Scotland average of 50.1%, but higher than the national average of 43.5%;
- NVQ3 and above is 61.9%, lower than the Scotland average of 64.9%, but marginally higher than the national average of 61.5%;
- NVQ2 and above is 75.3%, lower than the Scotland average of 79.6% and lower than the national average of 78.2%;
- NVQ1 and above is 83.9%, lower than the Scotland average of 86.5% and the national average of 87.6%;
- Other qualifications is 6.0%, slightly higher than both the Scotland (5.8%) and national average (5.9%); and
- No qualifications is 10.0%, higher than both the Scotland (7.7%) and national average (6.6%).

The COVID-19 pandemic has had a serious impact on the economy and employment within Falkirk, with many experiencing job losses. However, unemployment rates across the UK (Statista (2022) Employment rate in the United Kingdom from May 1971 to May 2022. Available at: Statista) and Falkirk (Nomis (2020) Labour Market Profile – Falkirk. Available at: Labour Market Profile) are starting to increase again. The pandemic has also changed the way people are working with many employers now allowing employees to work from home, although following the removal of national restrictions in Scotland the number of people working from home has been declining. Despite this, approximately 30% of working adults reported working from home (Office for National Statistics (2021) Coronavirus (COVID-19) latest insights: Work. [online] Available at: Covid-19 insights). The number of adults both working from home and travelling to work is however increasing, suggesting employers are providing a hybrid approach to working.

The Falkirk Economic Strategy has identified a number of opportunities for attracting investment and jobs into Falkirk. Falkirk has strengths in the chemical sector, high value manufacturing and logistics. The strategy aims to focus on these strengths, increasing capacity and encouraging a young, skilled workforce in the area. Additional diversification of the economy, including increasing tourism, is also identified as an opportunity for improving Falkirk's economic growth.

Falkirk Council have also outlined improvements to the Falkirk Council Area's town centres (Falkirk Council, Town Centre Regeneration [online] Available at: Town Centre Regeneration). These redevelopments aim to combat high street decline and improve the useability and vitality of town centres, particularly following years of high street decline (Falkirk Council (2017) Technical Report 7: Town Centres and Retailing).

## Likely Evolution of the Baseline without the ATS

The rising population in the county is accelerating the need for the delivery of additional housing, services and infrastructure. Growth in jobs is also anticipated in order to close the gap between increases in population and the need for employment. There is a need for improving accessibility to these jobs and training opportunities, particularly given that levels of workers commuting out of Falkirk is significant.

Population is aging and the working age is declining. The decline in the percentage of the population that is of working age will exert pressure on the labour market and economic issues could occur in terms of reduced local economic activity levels and supply of labour.

During the COVID-19 pandemic, homeworking has been encouraged for those who are able, changing the way people work. This trend will likely continue as employers look to maintain flexible working conditions in future.

Maintaining the vitality and attractiveness of town centres and high streets will be an ongoing challenge as shopping patterns and service delivery models change, especially with the growth of online shopping.

Diversification of Falkirk's economy is likely to continue, with increasing focus placed on encouraging tourism to the area. Without the ATS, this growth is likely to be limited by Falkirk's current transportation network, with tourists relying on largely private car use. The ATS presents an opportunity for improving linkages within Falkirk and the wider area, and presents an additional transportation network for tourists, particularly those without accessibility to a car.

Without the implementation of the ATS, it is likely that increasing pressure will be placed on Falkirk's roads, with rising vehicle numbers likely. This is likely to increase journey time for commuters, particularly to places of employment, as well as limit economic growth within the tourism sector. The introduction of the ATS will provide the availability of alternative transport modes for commuters and tourists.

## Key Risks and Opportunities for the ATS

**Table C-4** below sets out the key risk and opportunities for economy and employment with regards to the ATS.

**Table C-4 – Strategy Implications – Economy and Employment**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • There will be a greater need for supporting infrastructure within Falkirk and connecting to the wider region, such as Glasgow, Edinburgh and Stirling.<br>• There are opportunities to improve access to facilities and services, as well as housing, for the elderly, young adults, and rural communities.<br>• The population of Falkirk is predicted to increase both in number and age profile, likely increasing the amount of private cars. The ATS presents an opportunity to reduce the number of private cars and improve connectivity for alternative modes.<br>• Changing work habits such as remote, internet-based jobs and working from home are likely to reduce current demands but may also increase social isolation and increase reliance on alternative social interaction. | • The ATS should aim to ensure improvements to the network within Falkirk, as well as providing links to the wider region, for example through strategic mobility hubs.<br>• The ATS should aim to include connectivity across Falkirk, including urban and rural areas.<br>• The ATS should be used to support growth in the tourism sector. |

## Transport

Falkirk is well positioned in terms of transport links. It has an extensive road network throughout, supported by motorways and trunk roads like the M80, M876, M9, and A9 which providing links to nearby big cites Glasgow and Edinburgh, as well as connections to the wider region.

Falkirk is 32 miles away from Glasgow Airport and only 19 miles from Edinburgh Airport, the biggest airport in Scotland providing both internal and external flights.

There are seven train stations within Falkirk. The two major stations are Falkirk High and Falkirk Grahamston (which is situated on the Glasgow to Edinburgh via Falkirk line), providing excellent connections to nearby both cities.

There are six different bus operators in Falkirk, each serving different areas, providing services to and from stations, and providing long distance services to Edinburgh and Glasgow (Falkirk Council [online] Available at: Roads Parking Transport). These services provide a Scotland-wide free bus travel for people aged 60 and over without any restrictions.

Falkirk Council is already invested in making positive contributions towards the enhancement of active travel. They introduced the Take the Right Route Better Points Challenge from May 2022 to December 2022, with the aim of helping the people of Falkirk engage in a more active and sustainable lifestyle by choosing to walk, run or cycle when travelling around the area (Falkirk Council [online] Available at: Roads Parking Transport). Participation was incentivised through rewards and prizes.

The Falkirk area has over 300 miles of paths and Public Rights of Way (PRoW) dedicated to walking and cycling (Falkirk Council [online] Available at: Core Paths Plan). The main path networks include:

- Airth path network
- Blackness and Bo'ness path network
- Bonnybridge path network
- Braes area path network
- Denny path network
- Discover the Antonine Wall

- Larbert and Stenhousemuir paths network
- Nature Trails in the Falkirk Area
- The Falkirk Wheel and South Falkirk

Falkirk Council has a network of Core Paths that has grown significantly since 2010, with over £6 million invested in the council's Core Paths (Falkirk Council [online] Available at: Core Paths Plan). Core Paths are the basic framework of key routes and can be Rights of Way, farm tracks, promoted paths or other routes. However, not all Core Paths are accessible. Falkirk Council has a Core Path plan (Falkirk Council [online] Available at: Core Paths Plan), which is currently undergoing revisions – this revision has identified 128 new potential Core Paths, and ten that are in need of realignment.

There are over 500km of shared paths in Falkirk council area dedicated to cycle lanes and routes, including mountain bike trails, parkland routes and canal paths (Falkirk Council [online] Available at: Core Paths Plan). Cycle Streets provides a map of available cycle routes for everyday use, and the Callendar Estate Activity Centre holds bespoke single track mountain bike trails for leisure purposes. These include:

- Canada Trail
- Craigieburn Trail
- Auchengen Trail
- Kilbean Trail

There are also two National Cycle Network routes in and around Falkirk (National Cycle Network [online] Available at: National Cycle Network Maps):

- 754 – Falkirk Wheel
- 76 – Round the Forth

Falkirk Council support a Cycle to Work schemes which has helped over 900 employees in Falkirk save up to 32% of the cosy of buying a bicycle since its launch ten years ago. The scheme operated as a salary sacrifice scheme allowing employees to lease a bike over a one year period, paying 12 equal payments to cover the annual cost.

## Likely Evolution of the Baseline without the ATS

During the COVID-19 pandemic home-working was encouraged for those who are able, leading to a short-term reduction in travel demand, and this trend will likely continue as employers look to maintain flexible working conditions. This shift has changed the way people implement active travel into their lives. With more people opting to work from home opportunities for active travel in the commuter journey to work have reduced, and so, physical activity must be sought after elsewhere to account for this.

As the population in Falkirk is ageing, there is likely to be additional strain on the council areas services and transport infrastructure, and the transport industry will need to adapt to meet the needs of this demographic change. Importantly, Infrastructure must evolve to preserve the independence of the elderly for as long as is possible, meaning increased public transport capacity and frequency, as well as more routes and connection opportunities.

Falkirk appears to have strong transport opportunities across multiple modes and destinations, as well as an initial intention to encourage active travel and travel to work through various schemes. There is an opportunity presented for the ATS to better integrate the available travel modes in order to encourage greater uptake of active travel.

## Key Risks and Opportunities for the ATS

**Table C-5** below sets out the key risk and opportunities for transport with regards to the ATS.

**Table C-5 – Strategy Implications – Transport**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • The COVID-19 pandemic has brought about the shift to home-working, reducing opportunities for active travel through commuting.<br>• Falkirk has a good existing active travel network, which could be further enhanced by the ATS.<br>• An ageing population in Falkirk will mean additional strain on transport infrastructure. | • There is a need for the ATS to address gaps in active travel opportunities and provide alternative solutions.<br>• Developments to infrastructure must work to preserve the independence of the elderly and provide increased capacity for their travel needs. |

## Community Safety

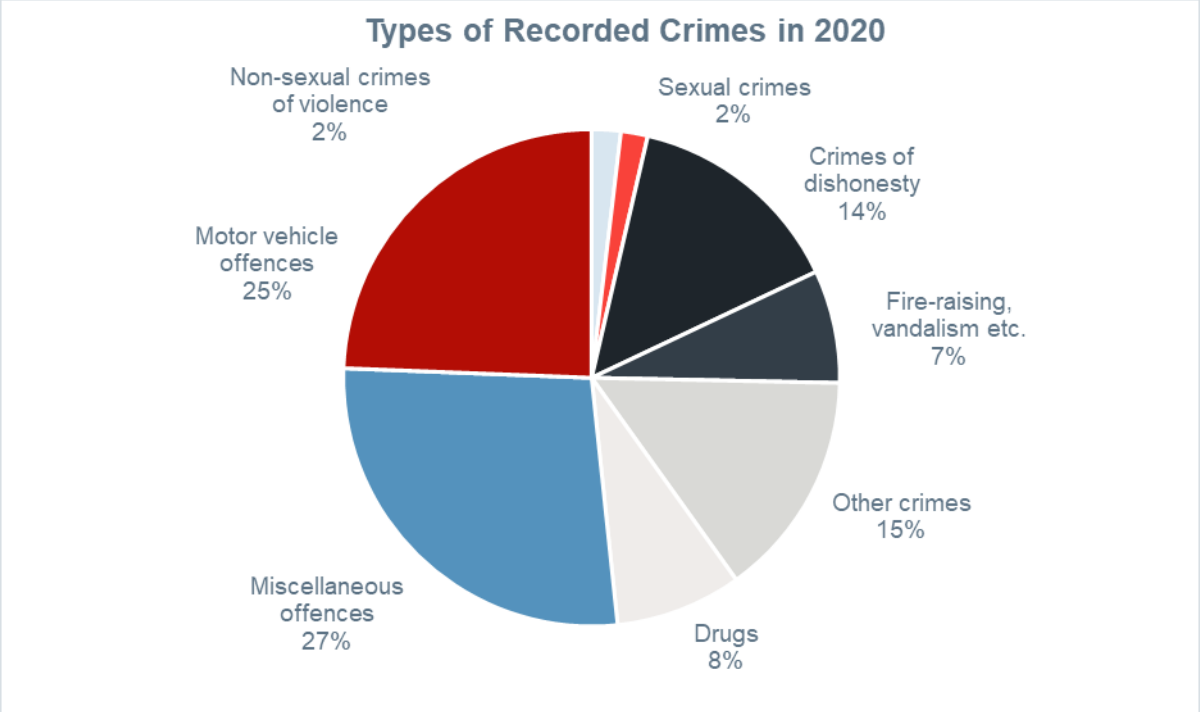
Ensuring community safety is key for achieving a positive state of wellbeing among people within social and physical environments. It is as much as about reducing and preventing crime as it is to build strong and vibrant communities. This means the perception of safety within Falkirk is as important as measuring crime rates.

The Scottish Household Survey 2019 established that 96% of residents thought Falkirk was a 'very good' or 'fairly good' place to live. This is slightly higher than the Scotland rate of 94% (Joint Strategic Needs Assessment (2021) [online] Available at: JSNA).

In 2020, crime rates in Falkirk fell by 10%. The largest reductions in crimes were seen in the number of housebreaking (reduced by 47%), drunk and disorderly (reduced by 50%), and sexual assault (reduced by 47%) Joint Strategic Needs Assessment (2021) [online] Available at: JSNA.

The overall proportion of crime rates in Falkirk in 2020 are detailed in **Figure C-1** below, with the majority of crimes being miscellaneous offences, and the smallest proportion sexual crimes:

**Figure C-1 - Crime breakdown for Falkirk in 2020**




## Types of Recorded Crimes in 2020

| | |
|---|---|
| Non-sexual crimes of violence | 2% |
| Sexual crimes | 2% |
| Crimes of dishonesty | 14% |
| Fire-raising, vandalism, etc | 7% |
| Other crimes | 15% |
| Drugs | 8% |
| Miscellaneous offences | 27% |
| Motor vehicle offences | 25% |

With regards to crime deprivation, according to the Scottish Index of Multiple Deprivation Falkirk has 15% of its residents living in the 20% most deprived areas in Scotland. Of the 214 datazones in Falkirk, 35 are in the worst 20% in Scotland, five are in the worst 5%, nine are in the worst 6-10%, and 11 are in the worst 16-20% (Scottish Index of Multiple Deprivation 2020 Toolkit [online] Available at: Scottish IMD 2020).

In Scotland there were 5,023 road casualties in 2021, 1,735 of which were killed or seriously injured (KSI) (Transport Scotland (2021) Key Reported Road Casualties Scotland 2021). The number of people KSI on Scotland's roads has remained in line with previous years – this is attributed to the COVID-19 restrictions in place, reducing the number of vehicles on roads. Within the Falkirk Council Area in 2021, a total of 43 people were KSI injured on roads (Scottish Government (2021) Road Casualties [online] Available at: Road Casualties).

The number of casualties on Scotland's roads were predominantly car users, followed by pedestrians and pedal cyclists. Pedestrian casualties have decreased by 7% between 2020 and 2021, with cyclist casualties decreasing 18%(Scottish Government (2021) Road Casualties [online] Available at: Road Casualties).

Scotland's 2021 Road Safety Framework (Transport Scotland, 2021. Scotland's Road Safety Framework to 2030) aims for a 50% reduction in people KSI on Scotland's roads by 2030, with a 60% reduction in the number of children aged <16 years KSI.

## Likely Evolution of the Baseline without the ATS

The UK as a whole has seen COVID-19 restrictions contribute to lowering crime rates (Office for National Statistics, 2021. Crime in England and Wales: Year ending September 2021). However, it is predicted that crime rates will likely increase post COVID-19 (Centre for Economic Performance, 2020. Covid-19 and changing crime trends in England and Wales), with increases in anti-social behaviour and violent crime rates, including sexual assault and domestic abuse, seeing the largest increases.

As the population of Falkirk increases, there are expected to be a greater number of vehicles on the Falkirk Council Area's roads, which may result in an increase in the number of accidents and those KSI on roads.

The ATS presents an opportunity to reduce the number of accidents on roads in Falkirk and reduce the number of people KSI, and aid in achieving Transport Scotland's goals for the reduction of KSI on roads.

The ATS also presents an opportunity for the improvement of routes for pedestrians and cyclists, reducing the number of accidents involving pedestrians and cyclists. Additionally, it is likely that improvements may contribute to reductions in anti-social behaviour through improving the public realm and lighting improvements.

## Key Risks and Opportunities for the ATS

**Table C-6** below sets out the key risk and opportunities for community safety with regards to the ATS.

**Table C-6 – Strategy Implications – Community Safety**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • Crime rates are on the rise nationally following the lifting of COVID-19 restrictions.<br>• There are opportunities to improve neighbourhoods and reduce the prevalence of antisocial behaviour.<br>• There are opportunities to increase the safety of active travel network.<br>• Vulnerable road users such as cyclists and pedestrians are more likely to be casualties. | • The ATS will need to ensure improvements to active travel routes to reduce the number of road accidents in Falkirk.<br>• The ATS will need to ensure improvements to active travel networks including improving lighting, to reduce opportunities for crime and well as reducing the fear of crime |

## Biodiversity and Natural Capital

There are multiple internationally and nationally designated sites within 10km of Falkirk, these are identified as follows:

- National Nature Reserves (NNR) – Blawhorn Moss (0.63km south);
- Ramsar Sites – Firth of Forth (located within Falkirk and surrounding area);
- Sites of Special Scientific Interest (SSSIs) – 42 sites within 10km of Falkirk;
- Special Areas of Conservation (SAC) – six sites within 10km of Falkirk; and

Special Protection Areas (SPA) – Firth of Forth (located within Falkirk and surrounding area) and Slamannan Plateau (located within Falkirk).Falkirk has an abundance of parks and open spaces which provide important habitat for wildlife, including those designated as Local Nature Reserves (LNR). These are namely Kinneil Local Nature Reserve, Bonnyfield Nature Reserve, Carron Glen Wildlife Reserve, Carron Dams, and Lionthorn Woods.

The habitat of Falkirk is predominantly urban development in the centre, with areas of woodland and grassland in the rural outskirts of the Falkirk Council Area in the south and west. To the east of the Falkirk Council Area is the River Forth and coastal area – this is predominantly mud substrate. The key habitat of coastal saltmarsh is located in this area of Falkirk. There are multiple areas of ancient woodland in Falkirk, such as Callendar Wood, Gateside Woodland and Lionthorn Woods.

There are eight Scottish Wildlife Trust sites located within 10km of Falkirk (Scottish Wildlife Trust, Falkirk [online] Available at: Falkirk). These are: Wallacebank Wood, located in the north west of the Council area, Jupiter Urban Wildlife Centre, located in the centre of the council area, Luggiebank Wood, located 5km south west of the council area, Cumbernauld Glen, located approximately 1.5km south west of the council area, Forest Wood, located approximately 2.5km south west of the council area, Carron Glen, located in the west of the council area, Carron Dam, located in the north of the council area, and Bo'mains Meadow, located in the east of the council area.

NatureScot is leading on the Scottish Government's Green Infrastructure Strategic Intervention (GISI) (Available at: Scottish Government's GISI). The GISI aims to create and improve Scotland's Green Infrastructure network through improving investment and developments of 'green' and 'blue' infrastructure. Green Infrastructure contributes towards dealing with the climate emergency, as well as providing ecosystem services and improving wellbeing. There is potential for the inclusion of Green Infrastructure developments within Falkirk, with Falkirk Council outlining potential areas for inclusion of Green Infrastructure in new developments (Falkirk Council (2021). Green Infrastructure and New Development. Available at: Green Infrastructure and New Development).

Scottish natural capital assets have been estimated to be worth £206 billion in 2018. However, this value has decreased by 4% from its 2017 value of £213 billion (Scottish Government (2022). Scottish natural Capital Accounts 2022), attributed to a fall in the asset value of fossil fuels. Of this valuation, 30% was accounted for by recreation assets.

Natural capital is a key theme in the UK Government's 25-year Environment Plan: A Green Future. The UK's natural capital accounts show that approximately 20-25 million tonnes of carbon have been sequestered by vegetation in the UK each year between 2007 and 2015, while around 1.5 million tonnes of air pollutants have been removed each year. This equates to a monetary value of approximately £1.5 billion for carbon sequestration and £1 billion for pollution removal in 2015. Natural capital therefore has a mitigating effect on the emissions of carbon and air pollutants associated with transport.

## Likely Evolution of the Baseline without the ATS

The 2019 State of Nature Report (RSPB. (2019). State of Nature Report. Available at: State of Nature Report) highlights the general decrease in biodiversity in the UK. Since 1970, species abundance has decreased by 13% and species distribution has decreased by 5%. Of the 8,431 species that have been assessed using the International Union for Conservation of Nature (IUCN) Regional Red List criteria, 15% are currently threatened with extinction from Great Britain and 2% are already extinct.

Rising population and urbanisation of natural areas can further exacerbate decreases in biodiversity.

Habitat fragmentation can lead to decreases in biodiversity. Species distribution may shrink in the area if developments separate the woodland habitat corridor and the natural areas along the river (such as Firth of Forth).

Climate change presents another threat to ecosystem services and biodiversity. Current IPCC (IPCC, 2022: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press.) predictions for temperature increases are expected to be 2°C by the middle of the 21st century. This increase in temperature is expected to lead to increases in flooding events and northward colonisation of species in the UK. Increased flooding will need to be mitigated. In order to preserve biodiversity and natural habitats, soft engineering and nature-based solutions will need to be used over traditional hard engineering. Northward migration of species is likely to lead to changes in local and regional ecology.

The Nature Conservation (Scotland) Act 2004 Scottish Parliament (2004) Nature Conservation Scotland) Act 2004) requires conservation of biodiversity. Therefore, biodiversity on development sites will need to be preserved, with additional mitigation put in to increase biodiversity. This increase in biodiversity may be provided on site, or through off-site compensation.

The push by NatureScot to improve Scotland's green infrastructure provision, alongside Falkirk's plans for implementation include incorporating green infrastructure developments into new developments. A large portion of this new development includes active travel developments.

Falkirk Council forms part of the Central Scotland Green Network (CSGN). This initiative was launched in 2009 and is one of the largest environmental projects in Europe. The network promotes natural initiatives to make central Scotland a more attractive place to live, work and visit. As part of this, the Council have committed to the CSGN's Local Authority Concordat, which recognises its commitment to helping deliver the CSGN vision. Falkirk Council has pledged to embed the CSGN in all relevant policies, strategies and plans and to ensure it is integrated, as appropriate, into its development plans, frameworks and design briefs.

Without the ATS, there is potential that Falkirk will not develop sufficient levels of green infrastructure. The ATS also is likely to contribute to improvements in biodiversity and natural capital through incorporations of natural corridors into development. Without the development of the ATS, it is likely that biodiversity will continue on its current trajectory of decreasing in scale through Falkirk.

## Key Risks and Opportunities for the ATS

**Table C-7** below sets out the key risk and opportunities for biodiversity and natural capital with regards to the ATS.

**Table C-7 – Strategy Implications – Biodiversity and Natural Capital**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • Light, air, and noise pollution from increasing urban development in may put strains on nearby protected areas;<br>• There are opportunities to improve green infrastructure provision within Falkirk as part of active travel developments;<br>• There are opportunities for the ATS to reduce noise disturbance on biodiversity from roads and additional developments;<br>• Increasing population and associated developments may lead to fragmentation and urbanisation of natural habitats; and<br>• Legislation regarding biodiversity conservation will require developments to implement demonstratable increases in biodiversity. | • Developments in close proximity to designated sites may need particular attention to potential environmental impacts.<br>• Development of interventions for the ATS should include stringent standards for the protection of biodiversity and natural capital and should ensure biodiversity net gain where possible.<br>• The ATS will need to address plans for flood mitigation. Creation and use of nature-based solutions and ecosystems services for flooding can be included.<br>• The ATS will need to align to the CSGN initiative. |

## Landscape and Townscape

Falkirk has an abundance of parks and open spaces covering over 24 square kilometres on 632 individual sites (Falkirk Council, Parks and outdoors [online] Available at: Parks and Outdoors).

There are 178 open spaces containing a play space across Falkirk, and the council aim to ensure that every household is within an 800m walk of an open space containing a play space and that, where appropriate, contain equipment to serve three different age groups: toddlers, juniors and teens (Falkirk Council, Parks and outdoors [online] Available at: Parks and Outdoors).

Although Falkirk does not contain any National Parks, its nearest is Loch Lomond and the Trossachs National Park, which is c.45 miles away.

Falkirk has a total area of greenspace of 6,463 ha, with 77.9% of this being publicly accessible (The Third State of Scotland's Greenspace Report (2018) online] Available at: The Third State of Scotland's Greenspace Report). This is a greater level of accessibility than urban Scotland as a whole, where 74.9% of greenspace is publicly accessible, as shown in **Table C-8** below.

**Table C-8 - Greenspace**

| Area | Total Area of Greenspace (ha) | Area of publicly Accessible Greenspace (ha) | Area of greenspace per 1000 people (ha) |
|---|---|---|---|
| Falkirk | 6,463 | 5,035 | 45 |
| Urban Scotland | 159,274 | 119,299 | 36 |

Falkirk Council signed up to the Central Scotland Green Network (CSGN), recognising its commitment to helping deliver the visions and achieve the aims of the network (Falkirk Greenspace [online] Available at: Falkirk Greenspace). Part of this has been the creation of the Falkirk Greenspace Initiative (FGI) which has successfully improved the landscape setting and usage of green belt and urban fringe. This initiative was developed in response to the need to transform the environment in the area in the interest of local quality and increased attractiveness of outside investment. It helps define a locally relevant and achievable set of objectives to maintain excellent greenspace creation and enhancement.

The FGI has contributed positively to the enhancement of landscape setting for flagship projects such as:

- The Falkirk Wheel;
- The Helix;
- Canal corridor and linkages;
- Callendar Estate Bespoke;
- Larbert Forth Valley Royal Hospital wider estate; and
- Numerous access, community woodland and community scale projects.

There are 77 vacant (49) and derelict (28) land sites in Falkirk (Falkirk Council, Falkirk Greenspace [online] Available at: Falkirk GSI). The FGI aims to manage these sites in order to benefit the local community and biodiversity. It plans to tackle this by assessing each site's ability to contribute socially, economically, and environmentally should it be rehabilitated, then identifying priority sites to remediate. By doing so this will work to enhance the overall green network of Falkirk.

Falkirk has 16 Local Landscape Character Areas (LLCAs) (Landscape Character Assessment and Landscape Designations (2021) [online] Available at: Landscape Character Areas), which fall within four different national Landscape Types. These have been defined in **Table C-9** below.

**Table C-9 - Landscape Types / Character (Landscape Character Types (2019) [online] Available at: Landscape Character Types)**

| Name | Description |
|---|---|
| Lowland Hills Fringes | Undulating, rolling topography rising to larger scale hill landforms. Diverse landcover of arable and open improved and unimproved pastureland, interlocks with woodland and forestry, with some estate landscapes with frequent beech hedgerows and shelterbelts. |
| Lowland Plateau | Undulating and rolling plateau landform, dissected by numerous streams and small river courses. Predominantly open moorland and semi-improved grassland landcover, including important designated areas of grassland and peatland. |
| Lowland River Valley | well-defined corridors with flat valley floors, enclosed by commanding hills. Relatively high proportion of tree cover, with roadside and hedgerow trees and seminatural woodland. |
| Urban/Village Limit | Urban areas are identified as settlements with a population approximately > 25,000. They are not classified as LCTs and do not have a description. |

**Table C-10 - Landscape Types / Character**

| Name | Description |
|---|---|
| Kilsyth/Denny Hills | Lowland Hills, large scale hill landform with vegetation and forestry cover. |
| Denny Hills Fringe | Lowland Hills Fringe, incised wooded valleys with watercourses on upper slopes. |
| Touch Hills Fringe | Lowland Hills Fringe, mixed and coniferous woodland, individual trees and tree groups, boundary hedgerows, stone walls, watercourses and fields. |
| Slamannan Plateau | Lowland Plateau, diverse land cover with rolling plateau landform. |
| Darnrig/Gardrum Plateau Moorland | Lowland Plateau, defining landscape elements such as woodland cover, shelterbelts, tree groups, hedgerows, and stone walls. |
| Castlecary/Shieldhill Plateau Farmland | Lowland Plateau, a section of the Antonine Wall World Heritage Site Buffer Zone is located within northern part of character area. |
| Avon Valley | Lowland River Valley, rural and intimate wooded valley character area with enclosure pattern. |
| Carron Glen | Lowland River Valley, rural and intimate wooded valley character area with enclosure pattern. |
| Bonny Water | Lowland River Valley, the Forth and Clyde Canal recreational route/path and the Antonine Wall World Heritage Site are present in this character area. |
| Lower Carron/Bonny Water | Lowland River Valley, this area includes a substantial proportion of greenbelt as well as a section of the Antonine Wall World Heritage Site and the Falkirk Wheel tourist attraction. |

| Name | Description |
|---|---|
| Falkirk - Grangemouth Urban Fringe | Lowland River Valley, this area is predominantly greenbelt and includes a section of the Antonine Wall. |
| Manuel Farmlands | Costal Farmlands, a section of the Union Canal passes through the area, along with the associated cycle path and tow path as well as a section of the Antonine Wall. |
| Bo'ness Coastal Hills | Coastal Farmlands, prominent ridge of high ground between Bo'ness and Linlithgow. Higher density of small buildings. |
| Grangemouth/Kinneil Flats | Coastal Farmlands, coastal native tree and shrub cover contribute to providing some structure and screening, contributing to the setting of Bo'ness. |
| Skinflats | Carselands, flat, low lying and open character with limited hedgerow cover. |
| Carse of Forth | Carselands, flat, low lying and open character with limited hedgerow cover. |

Falkirk Council are considering the future of the Town Centre, identifying an aspiration to undertake public realm improvements to the Lower Lintriggs and Newmarket Street area. The area will undergo improvements to its bus stops through the councils Transport Planning Unit (Falkirk Town Centre Regeneration [online] Available at: Falkirk Town Centre Regeneration). Works proposed will see the removal of one bus stop to improve pedestrian visibility at crossing points, and better access to kerb side for buses. The introduction of an additional bus stop on the southern side of the street will minimise queuing of buses. The project commenced work in January 2022. Town centre regeneration is also being done to Bo'ness, Grangemouth and Denny including retail regeneration and a heritage initiative.

Falkirk has a range of indoor and outdoor attractions including:

- The Helix;

- The Kelpies;
- The Falkirk Wheel;
- Antonine Wall;
- Blackness Castle;
- Bo'nes and Kinneil Railway;
- Callendar House & Park;
- Hippodrome Cinema; and
- John Muir Way.

## Likely Evolution of the Baseline without the ATS

Currently, due to changes in the policy context and national and local governance structures, a renewed strategic approach is being taken towards the preservation of the quality of the landscape and townscape. This will ensure a wider geographical focus, greater detail and clarity, and clearer local expressions of priorities. The Green Network Strategy will continue to improve the quality of place in Falkirk.

Without the ATS, LLCA'S can largely expect to see future changes like urban expansion for residential uses like housing developments, commercial uses like tourism, road improvements, energy and water treatment developments and telecommunications masts. These changes may bring about the loss of tree cover, including boundary trees and hedges, and subsequently the deterioration of the tranquillity and setting of place. The ATS presents an opportunity to support vitality and placemaking among Falkirk's townscapes through encouraging good design and incorporating of green infrastructure.

## Key Risks and Opportunities for the ATS

**Table C-11** below sets out the key risk and opportunities for Landscape and Townscape with regards to the ATS.

## Table C-11 – Strategy Implications – Landscape and Townscape

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • Development has the potential to cause direct and indirect impacts on designated landscapes and townscapes, particularly altering the character of the landscape and townscape;<br>• Population growth and additional developments could risk compromising landscape and townscape character and features. However, a landscape-led design with green infrastructure principles in place could play a key role in the enhancement of the natural environment, visual amenity and physical and mental health of its people;<br>• There is opportunity to enhance the landscape through the incorporation of a landscape-led approach to design, to ensure the best placement and integration of the proposed development into the existing landscape and contribute to positive placemaking;<br>• There is opportunity to increase countryside access and provide connectivity through urban built form to the countryside. It can also bring new audiences to tourist attractions and enable better appreciation of historic landscape assets through creating new views and vistas, providing information, and enhancing access; and<br>• The incorporation of landscape principles that are suitable for future challenges and landscape-led designs would help ensure infrastructure is designed for longevity in the 21st century, for both its people and its natural environment. | • The ATS should ensure plans contribute positively to a range of the Green Networks nine thematic priorities.<br>• The ATS should consider the landscape when designing interventions, to ensure positive implications on landscape character. |

## Cultural Heritage

Heritage assets make a significant contribution to the quality of life for those living, working or visiting Falkirk. The most significant of sites in Falkirk is the Antione Wall, which is a UNESCO World Heritage Site. Substantial lengths of the Antonine Wall can still be seen at various sites across the Falkirk, which includes Rough Castle, Polmont Wood, Kinneil Fortlet in Kinneil Estate, Callendar Park, Tamfourhill in Camelon and Seabegs Wood.

Falkirk Council is committed to the provision of a wide range of services related to the management of Antione Wall, which include planning, economic development, tourism, roads and education.

In addition, there are a number of other designated heritage sites in Falkirk, which are detailed below:

- 89 Scheduled Monuments – including ancillary parts of the Antonine Wall, the Union Canals and the Forth and Clyde;
- 352 Listed Buildings;
- Nine Conservation Areas;
- Three Historic Gardens and designated landscapes; and
- Two Battlefields – the Battle of Linlithgow Bridge and the 2nd Battle of Falkirk.

According to The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997, local authorities are obliged to designate conservation areas in their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. There are nine conservation areas within Falkirk (Falkirk Council, Conservation areas [online] Available at: Conservation Areas), all of which have accompanying Conservation Management Plans, these are:

- Airth;
- Allandale;
- Arnothill and Dollar Park;
- Bo'ness Town Centre;
- Dunmore;
- Falkirk Town Centre;

- Grange Terrace;
- Letham; and
- Muirhouses.

Historic Environment Scotland's Buildings at Risk Register programme helps to understand the overall state of Scotland's historic sites. It identifies those sites that are most at risk of being lost as a result of neglect, decay or inappropriate development. In Falkirk, there are 33 heritage assets on the Buildings at Risk register, out of the 2,226 assets on the register within Scotland as a whole (Historic Environment Scotland, 2021. Buildings at Risk Register [online] Available at: Buildings at Risk Register).

Falkirk possesses a great diversity of heritage assets that require conservation and enhancement. The council has a comprehensive strategy for regeneration and enhancement of these heritage assets in the Historic Environment Strategy (Falkirk Council, 2018. Historic Environment Strategy for Falkirk 2018).

## Likely Evolution of the Baseline without the ATS

Protection of the historic environment is firmly embedded in national and local policy, and this has been the case since 1990. This policy has developed independently of the European Union and is unlikely to change in the near future. However, whilst direct (physical) impacts on designated historical sites are strongly restricted, adverse effects on the setting of designated heritage assets do still occur, for example relating to visual intrusion, or aspects such as traffic, lighting and noise.

One trend over the last few years which may well continue, is the reduction in funding for Historic Environment Scotland and local authorities, with increased pressure on the case workload of Archaeological Officers, Conservation Officers and Historic Environment Scotland advisors. This can have an impact on the response times for the provision of planning advice.

The number of vehicles on the roads is likely to increase as Falkirk's population rises, increasing air pollution and road traffic. This has the potential to impact and degrade the settings of listed buildings, scheduled monuments and parks and gardens. Additionally, residential and road developments pose a risk to heritage assets through the potential for land take, causing harm to both the significance and setting of assets.

Development may place pressure on both known and unknown archaeological remains through excavation. It is a requirement that any archaeological remains discovered require preservation in situ, however development may risk damaging these assets.

Climate change poses a risk of harm to heritage assets, their characteristics, and settings, particularly through increased flooding, extreme heat events, and changes to energy requirements. World Heritage properties are particularly affected by the impacts of climate change (UNESCO World Heritage Convention, Climate Change and World Heritage [online] Available at: Climate Change and World Heritage), with increasing preservation required as climate change impacts become more prevalent within heritage assets.

Without the ATS, it is likely that development will continue to pose risks to the significance and setting of heritage assets. The development of the ATS provides opportunities to conserve and enhance heritage assets through a reduction in developmental pressures, and incorporation of developmental conservations to preserve assets at risk. Additionally, the ATS provides the opportunity to enhance the setting of assets through reductions in transport related disturbance by providing active travel modes; subsequently this increases accessibility towards heritage assets.

## Key Risks and Opportunities for the ATS

**Table C-12** below sets out the key risk and opportunities for cultural heritage with regards to the ATS.

**Table C-12 – Strategy Implications – Cultural Heritage**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • There are opportunities for enhancing the setting of heritage assets through the development of ATS schemes to reduce traffic noise and enhance accessibility through active modes and asset settings;<br>• There is potential for development to encroach on assets, particularly affecting the settings of assets through increased visual effects;<br>• Archaeological remains, whether designated or not, normally require preservation in situ. This clearly has implications and can represent a significant constraint to future scheme design, which should respect, retain and protect the remains (e.g. through avoidance and redesign); and<br>• The ATS presents opportunities to reduce vehicle damage and pollution. This can adversely affect both listed buildings and scheduled monuments, so reducing vehicle movements within historic urban areas is also an important opportunity to achieve. | • The ATS should preserve and enhance the current settings of above ground heritage assets; and<br>• Where possible, the ATS should seek to encourage awareness and education of Falkirk's heritage assets, through improving access to heritage assets. |

## Climatic Factors

Emissions of greenhouse gases (GHGs) are having a detrimental impact upon the global atmosphere, and it is widely acknowledged that GHGs are already contributing to changes in the global climate, with extreme weather conditions becoming increasingly common. Equally, even if GHG emissions were stopped today, climate impacts would still be experienced in the future owing to lags in the climate system.

According to UK Climate Projections 2018 (UKCP18) (Met Office, UKCP18 Science Overview Report, 2019 Update [online] Available at: UKCP18 Science Overview Report, 2019) over the past few decades there has been an increase in annual average rainfall over the UK, particularly over Scotland for which the most recent decade (2008–2017) has been on average 11% wetter than 1961–1990 and 4% wetter than 1981-2010.

The average temperature in Scotland in the last decade (2010-2019) was 0.69°C warmer than the 1961-1990 average, and the warmest year on record was 2014 (Climate trends and projections [online] Available at: Climate Trends and Projections). There has been an increase in rainfall over Scotland in the past few decades (with an increasing proportion of rainfall coming from heavy rainfall events). The annual average rainfall in the last decade (2010-2019) was 9% wetter than the 1961-1990 average, with winters 19% wetter (Climate trends and projections [online] Available at: Climate Trends and Projections).

In general, climate change is projected to lead to wetter winters and drier summers although natural variation, including extreme events such as storms and heat waves, will continue to punctuate these trends. By the 2080s, winter precipitation is expected to increase in Scotland by 1.4% to 41.4%, with a central estimate of 19.5%.

For summer projections, rainfall is projected to decrease by 39.3% to 1.2%, with a central estimate of a decrease in 20.2%. In Falkirk, winter precipitation is expected to increase by to 12-26% by 2080, and temperatures to rise by 2.4°C. For summer projections, rainfall is projected to decrease by 16-26% and temperatures to rise by 0.5°C (Climate trends and projections [online] Available at: Climate Trends and Projections). **Table C-13** below displays projected climate trends in Falkirk from 2020-2080.

**Table C-13 - Projected Climate trends in Falkirk (Climate trends and projections [online] Available at: Climate Trends and Projections)**

| Season | Summer Precipitation Change | Summer Precipitation Change | Winter Precipitation Change | Winter Precipitation Change | Summer Temperature Change | Summer Temperature Change | Winter Temperature Change | Winter Temperature Change |
|---|---|---|---|---|---|---|---|---|
| Average Change / Year | Mean (% change) | 1 day max (mm) | Mean (% change) | 1 day max (mm) | Mean (+°C change) | Max (+°C change) | Mean (+°C change) | Max (+°C change) |
| 2020's | 4% drier | 68 | 4% wetter | 42-43 | 1-1.1 | 1.6 | 0.8 | 0.6-0.7 |
| 2040's | 6-7% drier | 68-69 | 8-10% wetter | 43-44 | 1.5-1.6 | 1.9-2.3 | 1.1-1.5 | 0.9-1.2 |
| 2060's | 16-23% drier | 68-71 | 12-18% wetter | 43-47 | 1.4-2.6 | 1.6-3.2 | 1.1-1.2 | 1-2 |
| 2080's | 16-26% drier | 69-72 | 12-26% wetter | 43-50 | 1.6-4.2 | 2.1-4.8 | 1.2-3.2 | 1.2-2.7 |

As a result of global warming, sea levels are rising. UK sea level has risen by 16cm since the start of the 20th century. For Falkirk's shoreline on the Firth of Forth estuary, between 8cm in a low emission scenario and 90cm in a high emissions scenario sea level rise can be expected by the year 2100 compared to the 1981-2000 average (UKCP18- Headline Finding- Marines [online] available at: Headline Finding- Marines).

The Scottish Government is committed to a low carbon economy through reductions in carbon emissions and adaptation to climate change. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, [online] available at: Climate Change (Emissions Reduction Targets) (Scotland) Act 2019) sets targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030 and 90% by 2040.

This net-zero target is five years ahead of the rest of the UK. Falkirk Council declared a climate emergency in August 2019 and is committed to achieving net zero by 2030, in relation to scope 1 and 2 emissions. Scope 1 emissions are direct emissions that an organisation is responsible for and include on-site fuel use e.g. natural gas and fuel use in company owned vehicles. Scope 2 emissions are indirect emissions - those caused by the generation of grid electricity. The Council is currently working on setting a carbon budget for each of the service areas (Sustainable Scotland Network - Falkirk (2020-21) [online] available at: Sustainable Scotland Falkirk). Since 2020, Falkirk has made total estimated emissions savings of 3913 tCO2e.

## Likely Evolution of the Baseline without the ATS

The UKCP18 headline findings project hotter drier summers, warmer wetter winters, increases in the frequency and intensity of extreme events, and an increase in sea level rise by the end of the 21st century across all areas the UK (Met Office, UKCP18 Science Overview Report, 2019 Update [online] Available at: UKCP18 Science Overview Report, 2019).

Precipitation is of particular concern for Scotland, and although rainfall patterns across the UK will continue to vary on seasonal and regional scales, significant increases in hourly precipitation extremes are expected. This will result in an increase in risk to the built environment, infrastructure assets and systems, and services in the region, which could cause financial, legal and reputational impacts, amongst others. The scale of this increase in risk will be dependent on the level of adaptation actions included in the scheme, and the extent to which they lead to an overall increase in resilience.

As Falkirk is traversed by nationally significant roads and railways and contains several busy locations, the area is vulnerable to 'spill-over' of transport disruption from surrounding areas. Travel disruption was the most widely reported weather impact by Falkirk council officers, affecting work, services, delivery, and other aspects of life. This disruption can only be expected to rise as climate change brings more severe and frequent extreme weather events (Local Climate Impact Profile for Falkirk (2020) [online] Available at: Local Climate Impact Profile Falkirk). Although the demand for travel has subsided since the pandemic, there is still a need for the Falkirk area to build up climate resilience in order to better prepare for, respond and recover from communal challenges brought by climate change.

The scale of these future impacts will depend on the future global emissions pathways and the extent to which the low-carbon transition is successful, failing to consider climate risks to the low carbon transition, presents the potential for it to become more risky and costly. Without the ATS there may be a continued reliance upon motorised vehicles, which could exacerbate existing issues relating to GHG emissions and reduce the likelihood of achieving Net Zero targets.

## Key Risks and Opportunities for the ATS

**Table C-14** below sets out the key risk and opportunities for climatic factors with regards to the ATS.

**Table C-14 – Strategy Implications – Climatic Factors**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • Significant increases in hourly precipitation extremes in Scotland will result in an increase in risk to the built environment, infrastructure assets and systems, and services in the region.<br>• The scale of this increase in risk will be dependent on the level of adaptation actions included in the scheme, and the extent to which they lead to an overall increase in resilience, meaning there is an opportunity to reduce the scale of risk through measures implemented by the scheme.<br>• Increased frequency and severity of extreme weather events have the potential to bring greater disruption to travel in Falkirk. | • The ATS will need to plan for and implement/facilitate climate change adaptation, in respect of rising temperatures and extreme weather events, particularly heavy rainfall/flooding and heat to maximise resilience.<br>• The ATS must address climate risks with the full potential they hold in order to implement reduction measures successfully.<br>• The ATS must ensure schemes positively contribute to building climate resilience in Falkirk in order to enable preparedness and recovery capabilities.<br>• The ATS should incorporate net zero design principles where possible and reduce levels of embodied carbon in any developments to contribute to achieving its net zero targets. |

# Air Quality

Air quality plays an important role in human health. Poor air quality can have large impacts on health through short term exposure, but particularly through long term exposure. According to the World Health Organization (WHO) (WHO. (2021). *Ambient (outdoor) air pollution*. Available at: *Ambient (outdoor) air pollution*), air quality is one of the greatest environmental risks to human health. Reducing air pollution can result in reductions in stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma. WHO estimates that ambient air pollution caused 4.2 million premature deaths worldwide in 2016. Major pollutants include NOx, $NO_2$, and particulate matter.

Particulate matter (PM) is a particularly harmful pollutant that the UK has made efforts to reduce (Defra. (2022). *Emissions of air pollutants in the UK – Particulate matter (PM10 and PM2.5).* Available at: *Emissions of air pollutants in the UK)* . PM is measured in micrometres as $PM_{10}$ and $PM_{2.5}$. Current $PM_{10}$ emissions come predominantly from industrial processes and solvent use, followed by manufacturing and construction, domestic combustion and road transport[18]. Emissions of PM10 have been reduced by 80% since 1970 and it is likely that this will continue based on this trend[18]. Air quality standards in the UK follow EU guidance and were written into law through the Air Quality Standards Regulations (*The Air Quality Standards Regulations*. (2010). Available at: *The Air Quality Standards Regulations)*.

Falkirk has slightly lower levels of air pollution compared to the UK overall, however its levels are in line with Scottish levels (the annual mean for $NO_2$ is <10 µg m-3 (micrograms per meter cubed), <13 µg m-3 for $PM_{10}$ and <0.5 days of ozone greater than 120 µg m-3). Areas of Scotland such as Glasgow, Aberdeen, Dundee and Edinburgh all have higher levels of $NO_2$ emissions. In Falkirk, the annual mean for $NO_2$ is <10 µg m-3, <13 µg m-3 for $PM_{10}$ and <0.5 days of ozone greater than 120 µg m-3 (Defra. (2022). UK Air Information Resource. Available at: UK Air Information Resource). The highest levels of air pollution in Falkirk are located around the M9 Junction 6 and the area of Grangemouth, where the annual mean for $NO_2$ is 10-20 µg m-3. The area of Grangemouth is home to Scotland's only crude oil refinery, as well as petrochemical plants which accounts for the increased $NO_2$ emissions.

Scotland as a whole has seen a reduction in $CO_2$ emissions in recent years, with $CO_2$ emissions of 40 million tonnes in 2020 (Scottish Government (2020) Scottish Greenhouse Gas Statistics 2020. Available at: Scottish Greenhouse Gas Statistics 2020). This is a reduction of 51% compared to 1990 levels, and a reduction of 12% compared to 2019. The reductions of emissions in 2020 can be attributed to the impact of COVID-19 restrictions in place during this year, so it is expected that levels will increase on this level in current and future years.

Local authorities must declare areas that are not likely to achieve national air quality objectives as Air Quality Management Areas (AQMAs). Falkirk currently has two AQMAs (Falkirk Council, 2022, Air Quality. [online] Available at: Air Quality) Falkirk Town Centre AQMA and Grangemouth AQMA. The Falkirk Town Centre AQMA has been declared for both $PM_{10}$ and $NO_2$ emissions, whereas the Grangemouth AQMA has been declared for sulphur dioxide ($SO_2$). The Falkirk Town Centre AQMA can be largely attributed to vehicle emissions, however the Grangemouth AQMA is attributed to industrial activity.

According to the Falkirk Council 2021 Air Quality Annual Progress Report (Falkirk Council (2021) 2021 Air Quality Annual Progress Report), Falkirk Council have taken significant steps towards improving air quality in the Falkirk Council Area, particularly through the encouragement of sustainable modes (such as electric vehicles) and alternative active travel options.

Falkirk Stadium Vehicle Charging Hub provides 30% more electric vehicle charging spaces than Scotland's second largest charging hub. Falkirk now has a total of 39 electric vehicle charging bays and plans to install 63 more. The installation of electric vehicle points encourages more sustainable transport modes, contributing to reductions in vehicle emissions in Falkirk.

## Likely Evolution of the Baseline without the ATS

The UK Clean Air Strategy outlines plans to reduce emission of pollutants and improve air quality by the year 2030 (Defra. (2019). *Clean Air Strategy*. Available at: Clean Air Strategy). This will include reductions in public exposure to particulate matter, ammonia, nitrogen oxides, sulphur dioxide, and non-methane volatile organic compounds. However, the 29% increase in road traffic from 1990 and 2018 and 6% increase in GHG emissions from 1990 to 2017 is likely to continue.

In line with UK and Scottish trends, increased urbanisation and population growth are likely to see increases in the number of private cars on Falkirk's roads. This is therefore likely to contribute to worsening air quality across the area, particularly in heavily congested areas and areas of existing poor air quality such as the M9 Junction 6 area.

More severe and frequent heat episodes (associated with the changing climate) can also worsen air quality and therefore asthma, respiratory diseases, and allergic reactions, without further intervention.

A ban on new petrol and diesel vehicle sales in the UK by 2030 is expected to further reduce NOx and CO2 emissions. This will improve air quality, particularly across urban areas, and further the improvements to emissions reductions. Electric and hybrid vehicles are expected to become dominant (with the ban on hybrid vehicle sales in the UK by 2035).

The UK wide ban on the new petrol and diesel vehicle sales by 2030 is expected to lead to a reduction in emissions from vehicles (HM Government (2020). Available at: Government News). This will improve air quality in urban areas, which will have a positive impact on health problems associated with air pollution. Because the Falkirk Town Centre AQMA is associated with vehicle emissions, the transition to electric vehicles has the potential to bring air pollution to acceptable levels in this AQMA, as well as reduce the possibility of new AQMAs being instituted. Similarly, new regulatory frameworks for industrial emissions in the UK are likely to reduce the levels of industrial pollutants emitted and may therefore improve the Grangemouth AQMA.

Overall, increases in population and urbanisation have the possibility to degrade air quality, while higher standards for air pollutants and vehicle emissions have the potential to improve air quality. These opposing trends may balance each other out in future.

The ATS presents significant opportunities to reduce air pollution, particularly through providing alternative transport modes within congested areas. This is likely to aid in encouraging a modal shift away from private car use, which supports Government initiatives to reduce vehicle emissions. Without the ATS, it is unlikely that this shift away from private vehicles, and therefore emissions reductions, would be attainable.

## Key Risks and Opportunities for the ATS

**11.1.4** **Table C-15** below sets out the key risk and opportunities for air quality with regards to the ATS.

**Table C-15 – Strategy Implications – Air Quality**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • The ATS supports Government plans of reducing vehicle emissions and has the opportunity to encourage a modal shift away from private car use.<br>• More severe and frequent heat episodes as a result of climate change can contribute to the worsening of air quality.<br>• Air quality issues across Falkirk can be addressed via a modal shift towards less polluting methods of transport (low carbon transport initiatives) and inclusive of active transport (e.g. cycling, walking etc.) thereby leading to a higher standard of air quality. | • The ATS should aim to improve congested areas of Falkirk through available and practical active travel options, minimising excess emissions where possible and aiding in improving air quality. |

## Water Environment

Falkirk sits within the main catchment area of the Forth Estuary. The main waterbodies in Falkirk include:

- The River Avon;
- Union Canal;
- River Carron;
- Bonny Water; and
- Westquarter Burn.

SEPA produce annual Water Framework Directive classifications for all the water bodies in Scotland. Surface water bodies are classified using a system of five quality classes; bad; poor; moderate; good and high, whilst groundwater is either graded as 'poor' or 'good'.

**Table C-16** below shows the classification of water quality of both groundwater and surface water bodies within Falkirk. Just under half (40%) of Falkirk's surface water bodies are classed as 'good', with only 32% being classed as 'high', and 28% as moderate. None of the surface water bodies in Falkirk are classed as 'poor.' Over half of the council areas groundwater bodies are classed as 'poor.'

**Table C-16 - Groundwater and Surface Water Quality in Falkirk (2018) (SEPA, Aquatic Classification, Water Classification Hub [online] available at: Water Classification Hub)**

| Water Body | High | Good | Moderate | Poor |
|---|---|---|---|---|
| Surface Water | 8 | 10 | 7 | N/A |
| Ground Water | N/A | 9 | N/A | 10 |

A review of the SEPA Flood Map (SEPA Flood Map [online] Available at: SEPA Flood Map) identifies areas of Falkirk and its coastline are at high risk (10% chance) of river and coastal flooding. Most notably, river flooding from the River Carron impacts the surrounding area of Carron, and coastal flooding of the Forth estuary impacts Grangemouth and Bo'ness.

Potentially Vulnerable Areas (PVAs) are described as areas where significant flood risk exists now or is likely to occur in the future. SEPA have identified 235 PVAs nationwide, based on receptors such as people, economic activity, transport, and protected areas (Impact of flooding (flood risk maps) summary: Methodology and mapping [online] Available at: Impacts of Flooding). The identification of PVAs is vital for the protection of people, properties, businesses, infrastructure and the environment from flooding. Falkirk (town), Grangemouth, Carron, Carronshore, Bo'ness and Airth are all identified as PVAs.

**Table C-17** below shows the number of residential properties at risk of flooding from each source, and the average annual damages incurred (Potentially Vulnerable Areas [online] Available at: PVAs). The total number of residential properties damaged by flooding across the PVAs is 2,310, and the total number of non-residential properties is ≤410. These damaged have incurred an annual total cost of £5.1m. In all PVAs, the biggest source of flooding is river flooding.

**Table C-17 - PVAs**

| PVA(s) | Source of Flooding | Number of Residential Properties | Number of Non-Residential Properties | Average Annual Damages |
|---|---|---|---|---|
| Falkirk Grangemouth, Carron, Carronsore | 51% river<br>28% coastal | 2,000 | 330 | £3.8m |
| Bo'ness | 83% river<br>17% coastal | 200 | 70 | £620,000 |
| Airth | 10% coastal | 110 | <10 | £720,000 |

## Likely Evolution of the Baseline without the ATS

The main pressures currently affecting the condition of rivers in Scotland are discharge from industry, agricultural irrigation, rural diffuse pollution, physical changes to the beds and banks, and man-made barriers to fish migration. Further development in response to population growth could add to these existing pressures by having an adverse effect on land use leading to a reduction in land available for natural flood management, and the introduction of more permeable surfaces which could exacerbate the frequency of flood events.

The main pressures currently affecting Falkirk's water environment are pollution and flooding (Falkirk Local Development Plan 2 Environmental Report (2017) [online] Available at: Falkirk Local Development Plan 2). The Bonny Water is susceptible to pollution from urban runoff, and the River Carron, River Avon, Forth Estuary and the Union Canal face pollution from sewage disposal, refuse disposal, chemical production, food production, and other manufacturing processes. Widespread fluvial and pluvial flooding risk is in place across the council area, especially within Grangemouth, Bonnybridge, Carron and Dunipace.

Falkirk Council is leading the development of Scotland's largest flood protection scheme, backed by the Scottish Government and SEPA (Falkirk Council Grangemouth Flood Defence Scheme [online] Available at: Falkirk Council Grangemouth Flood Defence Scheme). The Grangemouth Flood Protection Scheme is the largest flood defence project in Scotland and one of the biggest in the United Kingdom, protecting communities in Grangemouth, Wholeflats, Glensburgh, Langlees, Carron, Carronshore and Stirling Road, Camelon (Grangemouth Flood Protection Scheme [online] Available at: Grangemouth Flood Protection Scheme). The Grangemouth FPS will protect 5,800 people, 2,650 homes, 330 businesses and the community's road and rail infrastructure by providing 27km of flood defence walls, embankments and installing flood gates, flow regulation measures and drainage works. The scheme is expected to cost around £220m with an estimated completion date of 2035.

Climate change is likely to further exacerbate this issue of weather induced flood events. Warmer air and sea temperatures as well as extreme weather associated with climate change may increase the intensity and severity of storms, which can lead to increased flooding and erosion, and can adversely affect transport infrastructure, people, property and access to greenspaces.

The water cycle is likely to be altered by climate change, which may increasingly affect demands on water resources and could increase the risk of water scarcity. Maintaining water supplies may pose a significant challenge across the council area, which may be exacerbated by population growth. Under current population and water supply projections Scotland maintains a surplus supply-demand balance until the end of the century. However, without additional demand-side adaptation action there may be potential for deficits in supply (HR Wallingford, Updated projections of future water availability for the third UK Climate Change Risk Assessment, Technical Report, [online] available at: Updated projections of future water availability for the third UK Climate Change Risk Assessment ).

Objectives have been set by SEPA and agreed with flood risk management authorities, as well as each of the 32 individual local authorities in Scotland. These are the aims for managing local flood risk. The objectives have been grouped in three main ways: by reducing risk, avoiding increasing risk or accepting risk by maintaining current levels of management.

As the water cycle will continue to be influence by climate change and the fluctuating precipitation events it will bring, the likelihood of flood events will increase without intervention. The ATS presents an opportunity to integrate climate resilience into Falkirk's infrastructure to lessen the likelihood of climate induced flooding in the future.

The Scotland River Basin Management Plan and Forth Area River Basin Management Plans are likely to result in improvements to Falkirk's water quality. As part of the CSGN and River Basin Management Plan objectives, the Forth Multiple Benefits Project is being delivered (Falkirk Council. Falkirk Greenspace: A Strategy for our Green Network). This aims to improve the ecological status of the water environment in Falkirk, identifying sites where restoration would improve woodland, wetland and grassland networks. A number of sites in the Falkirk Council area have been identified for this scheme and will therefore see improvements in the ecological status of water.

## Key Risks and Opportunities for the ATS

**Table C-18** below sets out the key risk and opportunities for water environment with regards to the ATS.

**Table C-18 – Strategy Implications – Water Environment**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • A growing population will also put strain on existing pressures on Falkirk's water bodies from industry and pollution; and<br>• Climate change is likely to increase the occurrence of flooding from all sources and hence raise the flood risk. There is a need to plan for and implement/facilitate climate change adaptation in response to this, to avoid adverse effects on the water quality, but also local receptors like people and transport. | • The ATS should integrate climate resilience measures regarding climate induced increases in flooding such as more frequent precipitation events.<br>• The Strategy could incorporate nature friendly Sustainable Drainage Systems (SuDs) and Green Infrastructure (GI) to reduce levels of surface run off and subsequent flood risk. |

# Material Assets

## Soils

The Scottish Planning Policy (SPP) (Scottish Government (2020) Scottish Planning Policy) promotes development on previously developed land, rather than on greenfield land, to make the most efficient use of a finite resource.

There is a mix of land grades within the Falkirk Council area. Land in the town of Falkirk is considered Urban under Scotland's Soils Land Capability for Agriculture. The areas of rural land in Falkirk, such as Callendar Wood, is Grade 3.1 or Grade 3.2 (Scotland's Environment, 2017. National scale land capability for agriculture. [online] Available at: National scale land capability for agriculture). The capability of Grade 3.1 land is '*land capable of producing consistently high yields of a narrow range of crops and/or moderate yields of a wider range. Short grass leys are common',* while Grade 3.2 land is *'land capable of average production through yields of barley, oats and grass can be obtained. Grass leys are common'.*

The predominant soil type in Falkirk is mineral gleys, with some areas of brown soils in the east, and small pockets of mineral podzols and alluvial soils (Scotland's Environment, 2017. National soil map of Scotland. [online] Available at: National soil map of Scotland).

Peatland resource is vital to combatting the effects of climate change, acting as a carbon store and also aiding in maintaining water quality and biodiversity and reducing flood risk. Scotland's peatland resource covers more than 20% of its land area (NatureScot (2015) Scotland's National Peatland Plan: Working For Our Future [online] Available at: Scotland's National Peatland Plan: Working For Our Future) contributing to these benefits, as well as attracting tourism. However, it is estimated that approximately 80% of Scotland's peat resource is degraded (Scotland's Soils, Peatland Restoration [online] Available at: Peatland Restoration) and therefore not providing these full benefits. Falkirk Council Area has areas of peatland within its southern area and extending further south of the council area. There is also a small area of peatland located to the north of Falkirk.

## Geology

Falkirk is underlain by a secondary aquifer, classified as Class 2B (Scottish Government, Scotland's Environment Map. [online] Available at: Scotland's Environment Map) and moderately productive. Secondary aquifers are mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like fissures and openings or eroded layers (Environment Agency, Protect groundwater and prevent groundwater pollution. [online] Available at: Protect groundwater and prevent groundwater pollution). A site of geodiversity is a site identified and demonstrated to be of local geological or geomorphological importance. Geodiversity site designations aim to protect these sites and provide opportunities for people to enjoy, highlight the value of sites and encourage management, and focus opportunities for management and enhancement towards these sites. There are three sites of Geodiversity within Falkirk (Falkirk Council, 2020. Local Nature Conservation and Geodiversity Sites – Supplementary Guidance SG08):

- Bantaskine Quarry, designated for several disused sandstone quarries exhibiting visible strata, over 10 different species of bivalves collected from the rock, their presence identifying the old workings of the upper Drumgray Coal seam;
- Birkhill Clay Mine, designated for a disused fireclay mine, examples of 'stoop & room' excavation method, and fossilised tree trunks and stumps visible in mine roof; and
- Union Canal Tunnel, designated for Flowstone curtains (calcified forms and stalactites on the tunnel roof and sides).

Coal was the main mineral worked within Falkirk, with the area having a long history of extraction. Due to the history of coal extraction in the area, consultation on planning applications for certain types of developments should be sought with the Coal Authority. The Coal Authority map areas of high and low risk in their Coal Mining Risk Assessment. According to this assessment, Falkirk is predominantly high risk, particularly in its northern, southern and central areas. In the west and east of the Falkirk Council Area the land is of low risk.

## Waste

In 2020, Falkirk generated 77,069 tonnes of household waste (Scottish Environment Protection Agency (SEPA), 2020. Waste Data). Of this, 39,48 tonnes were recycled (51.2%), meaning 33,853 tonnes (43.9%) went to landfill. This is slightly lower than the recycling rate in 2019 of 53.0%. This is also higher than the overall recycling rate for Scotland in 2020 (42%) (Scottish Environment Protection Agency (SEPA), 2020. Official Statistics Publication for Scotland – Household waste summary (Jan-Dec 2020), waste landfilled in Scotland – 2020, and waste incinerated in Scotland – 2020 statistics. Available at: Waste Statistics)

As of 2020, there are 11 landfill sites within Falkirk. Between these sites, there is a remaining capacity of 1,711,996 tonnes. There is also one incineration facility within Falkirk, with an annual capacity of 236,500 tonnes (Scottish Environment Protection Agency (SEPA), 2020. Waste Site Information [online] Available at: Waste Site Information).

In line with The Waste (Scotland) regulations 2012, Falkirk Council will be implementing a ban on sending biodegradable waste to landfill sites (Falkirk Council, 2022. Residual Waste Contract Strategy [online] Available at: Residual Waste Contract Strategy ). This will come into effect in January 2026, with the aim of reducing landfill rates and improving non-landfill solutions. This is likely to significantly reduce the quantity of waste from Falkirk that goes to landfill.

## Energy

Scotland's renewable energy capacity has been growing since 2009, with an increase of 700MW since 2009. In 2020, 438MW of renewable electricity capacity was installed, a slight decline on previous years installations (Scottish Renewables, Statistics. [online] Available at: Statistics).

In 2021, Scotland's total renewable energy output reached 27,234GWh, with the majority of this output being from onshore wind sites (Scottish Renewables, Statistics. [online] Available at: Statistics). Scotland's renewable energy is provided by a range of technologies: onshore wind, offshore wind, hydroelectricity, solar PV, wave and tidal, and biomass and waste.

As a whole, Scotland's energy consumption has decreased in 2020 to 155,000GWh from its 2010 value of 170,000GWh (Scottish Renewables, Statistics. [online] Available at: Statistics).

The Scottish Energy Strategy (Scottish Government, 2017. Scottish Energy Strategy) sets a target for 50% of Scotland's energy for heat, transport and electricity to be supplied by renewable sources by 2030. By 2050, the Scottish Government aims to have decarbonised their energy system almost completely, gaining energy from renewable sources.

## Likely Evolution of the Baseline without the ATS

The rising costs of living, is likely to encourage a modal shift to more sustainable and cheaper transport modes. It will therefore be necessary to ensure a suitable provision of alternative transport modes such as active travel modes.

Due to projected population trends, there will be a need for development to support this growth. This development is likely to increase pressure upon agricultural land, which could potentially result in the loss of some of Falkirk's higher grade land capable of agriculture.

Agricultural areas are also at risk from climate change. Projections of increased flooding and drought may lead to the loss of important agricultural areas, through compaction, waterlogging and erosion of soil.

The growing population and associated need for development are also likely to increase use of mineral resources and waste generation. As such, it will be necessary to apply resource efficiency and waste management measures, including the re-use and recycling of materials. This is supported by the development required for the ATS, as implementation requires less infrastructure than road schemes and is therefore likely to produce less waste and utilise less materials.

Without the ATS it is likely that increasing development and a growing population will put pressure on land use resources. The ATS provides opportunities for developments to incorporate active travel routes, that require less land take than traditional road networks. This may protect some of Falkirk's high value land capable of agriculture. Additionally, the implementation of the ATS provides opportunity to assist in decarbonising Falkirk and contribute towards reduced energy needs. Without the ATS, it may become harder to achieve ambitious decarbonisation targets.

## Key Risks and Opportunities for the ATS

**Table C-19** below sets out the key risk and opportunities for material assets with regards to the ATS.

**Table C-19 – Strategy Implications – Material Assets**

| Key Risks / Opportunities | Implications for the Strategy |
|---|---|
| • The growing population and associated need for development and infrastructure is likely to increase the use of mineral resources and waste generation;<br>• Falkirk's soil resources are likely to be negatively impacted by climate change, which could lead to reduced levels of productivity; and<br>• There's a continued increase in renewable energy supplies across Falkirk. | • The ATS should promote actions to protect natural resources and infrastructure from the impacts of climate change.<br>• The ATS should protect the Falkirk's high value land capable of agriculture from development where possible.<br>• The ATS should encourage the use of sustainable resources and support a circular economy. |

# Appendix D – Review of  Plans, Policies and Programmes

This appendix presents the findings of the review of legislation, policies and plans including relevant international, national and regional documents undertaken as a part of the evidence gathering exercise for the SEA Scoping Report.

It should be noted that the scoping task of identifying related legislation, policies and plans cannot yield an exhaustive or definitive list, therefore, the review has been focussed to ensure that only policies that are current and of direct relevance to the Strategy and sustainability are included.

**Table D-1 - Relevant Plans, Programmes and strategies – Population and Equalities - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Equality Act, 2010 | The Equality Act 2010 legally protects people from discrimination in the workplace and in wider society. It is against the law to discriminate against anyone because of:<br>• age;<br>• being or becoming a transsexual person;<br>• being married or in a civil partnership;<br>• being pregnant or having a child;<br>• disability;<br>• race including colour, nationality, ethnic or national origin;<br>• religion, belief or lack of religion/belief;<br>• sex; and<br>• sexual orientation. | The Strategy will need to ensure consideration of all protected groups. | Yes ✓ | Yes ✓ | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Equality and Human Rights Commission, 2007 | The Equality and Human Rights Commission is Great Britain's national equality body, charged with safeguarding and enforcing the laws that protect people's rights to fairness, dignity and respect. The commission can provide information to influence decisions made over policy nationally. Under their 2019-2022 Strategic Plan, the EHRC set three goals:<br>• To ensure that people's life chances aren't held back by barriers in their way.<br>• To make sure we have strong foundations on which to build a more equal and<br>• rights-respecting society.<br>• To protect the rights of people in the most vulnerable situations. | The Strategy should align itself with the vision of the Equality and Human Rights Commission. | Yes ✓ | Yes ✓ | No | No |
| Community Empowerment (Scotland) Act, 2015 | The Community Empowerment (Scotland) Act 2015 helps to empower community bodies through the ownership or control of land and buildings, and by strengthening their voices in decisions about public services. | The Strategy should help to promote community empowerment. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |
| Inclusion by design Equality, diversity and the built environment (2008) | The built environment can contribute to a more equal, inclusive and cohesive society if the places where we live, the facilities we use and our neighbourhoods and meeting places are designed to be accessible and inclusive. | The ATS should ensure new developments as part of the built environment are positively contributing to the creation of a more inclusive and cohesive society | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |

**Table D-2 - Relevant Plans, Programmes, and strategies – Human Health – National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| A More Active Scotland: Scotland's Physical Activity Delivery Plan, 2018 | The strategy includes six key outcomes:<br>• Encourage and enable the inactive to be more active;<br>• Encourage and enable the active to stay active through life;<br>• Develop physical confidence and competence from the earliest age;<br>• Improve active infrastructure;<br>• Support wellbeing and resilience in communities through physical activity and sport; and<br>• Improve opportunities to participate, progress and achieve in sport. | The Strategy should look at ways of improving community facilities like greenspaces, footpaths and cycleways in order to help promote active lifestyles. | Yes ✓ | Yes ✓ | No | Yes ✓ |
| Good Places, Better Health, 2008 | Good Places, Better Health supports five National Outcomes:<br>• Our children have the best start in life and are ready to succeed;<br>• We live longer, healthier lives;<br>• We have tackled the significant inequalities in Scottish society;<br>• We live in well-designed, sustainable places where we are able to access the amenities and services we need; and<br>• We value and enjoy our built and natural environment and protect and enhance it for future generations. | The Strategy should consider the design of space and place, and its role in contributing to health outcomes across all age groups and into the future. | Yes ✓ | Yes ✓ | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Active Travel Framework, Transport for Scotland, 2020 | The Active Travel Framework brings together the key policy approaches to improving the uptake of walking and cycling in Scotland for travel. Central to the framework is the ambition that by 2030, Scotland's communities are shaped around people and place, enabling walking and cycling to be the most popular mode of travel for short, everyday journeys. | The Strategy should contribute positively to the 2030 ambition set out in the Active Travel Framework | Yes ✓ | Yes ✓ | No | Yes ✓ |
| A Connected Scotland, a strategy for tackling social isolation and loneliness, 2018 | The Scottish Government's first national strategy to tackle social isolation and loneliness and build stronger social connections. The vision for the strategy is a Scotland where individuals and communities are more connected, and everyone has the opportunity to develop meaningful relationships regardless of age, stage, circumstances or identity. Primary outcomes include:<br>• Healthy and active individuals;<br>• inclusive and empowering communities;<br>• fulfilment and protection of human rights and<br>• ability to realise full potential. | The Strategy should work to aid Connected Scotland in tackling social isolation through means of active travel. | Yes ✓ | Yes ✓ | No | Yes ✓ |
| A healthier future: Scotland's diet and healthy weight delivery plan, 2018 | The plan has a vision for a Scotland where everyone eats well and has a healthy weight, including the ambition to halve child obesity in Scotland by 2030, and the aim to significantly reduce health inequalities. | The Strategy should align its vision with that of the diet and healthy weight delivery plan including long term goals. | Yes ✓ | Yes ✓ | No | Yes ✓ |

**Table D-3 - Relevant Plans, Programmes, and strategies – Human Health – Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Falkirk Health and Social Care Partnership Strategic Plan, 2019 - 2022 | The Plan will set out how we the council aim to deliver the national outcomes for health and wellbeing, and achieve the core aims of integration to:<br>• improve the quality and consistency of services for patients, carers, service users and their families<br>• provide seamless, integrated, quality health and social care services that care for people in their homes, or a homely setting, where it is safe to do so<br>• ensure resources are used effectively and efficiently to deliver services that meet the needs of the increasing number of people with long term conditions and often complex needs, many of whom are older. | The Strategy should focus on the health and social care of the elderly population with long term needs and/or complex conditions. | Yes ✓ | Yes ✓ | No | No |
| Inspiring Active Lives, A Culture and Sport Strategy for Falkirk 2014-2024 | Four themes make up the strategic framework for the delivery of this plan:<br>• Participation: Consulting, Programming, Delivering, Increasing<br>• Motivation: Engaging, Targeting, Promoting, Inspiring<br>• Venues: Multipurpose, Home/Workplace, Accessibility, Outdoor<br>• Partnership: Supporting, Collaborating, Resource Sharing, Coordinating | When considering the implementation of active travel, the Strategy should consider these four themes. | Yes ✓ | Yes ✓ | No | Yes ✓ |

**Table D-4 - Relevant Plans, Programmes and strategies – Economy and Employment - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Economic regulation policy, 2022 | This policy was developed to maintain a focus on providing a stable, predictable, and transparent regulatory framework which facilitates efficient investment. This is based on 6 key principles:<br>• Accountability;<br>• focus;<br>• predictability;<br>• coherence;<br>• adaptability and efficiency. | The Strategy should draw on these 6 principles to be able to boost inward investment. | Yes ✓ | No | Yes ✓ | No |
| Scotland's National Strategy for Economic Transformation, 2022 | The vision of this strategy is to create a wellbeing economy: a society that is thriving across economic, social and environmental dimensions, and that delivers prosperity for all Scotland's people and places. Aiming to achieve this while respecting environmental limits, embodied by our climate and nature targets.<br>There are 5 policy programmes of action:<br>• establish Scotland as a world-class entrepreneurial nation<br>• strengthen Scotland's position in new markets and industries<br>• make Scotland's businesses, industries, regions, communities and public services more productive and innovative<br>• ensure that people have the skills they need at every stage of life to have rewarding careers and meet the demands of an ever-changing society<br>• reorient our economy towards wellbeing and fair work | The Strategy should consider national aims to encourage an economy of wellbeing, as well as one that respects environmental limits when planning new developments. | Yes ✓ | Yes ✓ | Yes ✓ | No |

**Table D-5 - Relevant Plans, Programmes and strategies – Economy and Employment - Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| An Economic Strategy for Falkirk 2015-25 | This strategy assesses Falkirk's economic progress, identifies challenges and opportunities, and aims to take account of a changing landscape, recent<br>developments within Falkirk and in the<br>wider global economy. The purpose of this Strategy is to:<br>▪ Plan for sustainable economic growth<br>▪ Identify how to maximise Falkirk's economic potential<br>▪ Leverage the area's comparative advantage in particular industries and sectors<br>▪ Identify new sectors and opportunities for growth<br>▪ Promote innovation and the application of new technologies<br>▪ Highlight the area's potential and means to attract investment<br>▪ Stimulate further development in the skills and experience of Falkirk's people to enhance our ready, highly skilled workforce.<br>▪ Help create opportunities for all<br>Identify our priorities for action | The Strategy aim to progress the economic status of Falkirk, focusing on sustainable economic growth and maximising potential. | Yes ✓ | No | Yes ✓ | No |

**Table D-6 - Relevant Plans, Programmes and strategies – Transport - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| National Transport Strategy, 2020 | The overall aim of the strategy – "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"<br>The Strategy has four key areas:<br>■ Reduce inequalities;<br>■ Take climate action;<br>■ Help deliver inclusive economic growth; and<br>■ Improve health and wellbeing. | The Strategy should aim to protect the transport network and associated infrastructure from climate change | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |
| Strategic Transport Projects Review 2, 2022 | Sets out the Scottish Government's transport investment priorities over the period to 2042. The STPR2 identifies those recommendations that most effectively contribute towards the Government's Purpose of increasing sustainable economic growth. STPR2 outlines the investment and recommendations required to deliver the National Transport Strategy priorities. The outcomes of STPR2 will:<br>■ Make Scotland more accessible for residents, visitors and businesses;<br>■ Create better connectivity with sustainable, smart and cleaner transport options; and<br>■ Highlight the vital contribution that transport investment can play in enabling and sustaining Scotland's economic growth. | The Strategy should support the development of infrastructure in the STPR2 and align with the strategic outcomes. | Yes ✓ | Yes ✓ | No | Yes ✓ |
| Active Travel Framework (2020) | The Active Travel Framework brings together the key policy approaches to improving the uptake of walking and cycling in Scotland for travel. This will involve high quality active travel infrastructure that is available and safe for all. | The ATS should contribute positively to the high quality of active travel infrastructure to improve accessibility to all | Yes ✓ | Yes ✓ | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Scottish Government's long term vision for Active Travel in Scotland (2030) | Focussing on areas such as infrastructure, transport integration, cultural and behaviour change, community ownership and planning, the Scottish Government's long term vision for active travel in Scotland to 2030 aims to encourage more people to walk and cycle for everyday shorter journeys. | The ATS should work to make walking and cycling more popular options for shorter everyday journeys among the community of Falkirk | Yes ✓ | Yes ✓ | No | Yes ✓ |
| Better planning, better transport, better places (2019) | This document provides critical practical steps to be taken by developers and local councils towards overcoming the barriers to a more sustainable transport system such as a lack of vision by local authorities, insufficient collaboration between delivering bodies and limited practical examples demonstrating the delivery of sustainable transport outcomes. It focuses on creating a clearer vision, better planning and delivery of the options. | The ATS should take into consideration the important role planning takes in delivering successful sustainable transport outcomes. | Yes ✓ | Yes ✓ | No | Yes ✓ |
| Designing for Walking (2015) | Well-designed facilities that follow desire lines, are clutter-free, and are legible to all users will assist in enabling walking journeys and improve the experience of those already walking. | The ATS should consider the importance of design in making active travel a more attractive option | Yes ✓ | Yes ✓ | No | Yes ✓ |
| Planning for Walking (2015) | Walking as a mode of transport has declined due to rising car ownership, yet the benefits of walking are many, including health, economic and environmental. These guidelines are designed to address the limited amount of guidance available to professionals about planning for walking to increase its uptake. | The ATS could promote the benefits of walking in order to increase its uptake. | Yes ✓ | Yes ✓ | No | Yes ✓ |
| Planning for Cycling (2015) | Cycling is one of the most sustainable forms of transport, and increasing its use has great potential to benefit population health and the environment. Planning for cycling is discussed in these guidelines in regard to highways, public spaces and other rights-of-way that need to be organised accordingly to release this potential. | The ATS should plan in a way to maximise benefits brought about by active travel . | Yes ✓ | Yes ✓ | No | Yes ✓ |

**Table D-7 – Relevant Plans, Programmes and strategies – Transport – Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Falkirk Local Transport Strategy, 2014 | The LTS sets out how the transport vision for the Falkirk Council area will be achieved, with increasing demand for high quality travel options in mind, it focuses on meeting this demand in a sustainable way, in order to minimise the negative impacts that travel can generate. This document sets out the policies that will help combat the effects of traffic growth whilst promoting sustainable active travel choices. | The Strategy should focus on meeting increasing demand for transport in a sustainable way. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |
| The Falkirk Council Core Paths Plan, 2010 | The Core Paths Plan identifies a network of paths that gives people reasonable (non-motorised) access throughout the Falkirk Council area. The plan maps Core Paths in our area and reviews this in consultation with local communities, land managers and path users. There is also opportunity through the Core Paths Plan to identify funding for the network. | The Strategy should aim to incorporate Core Paths and provide linkages where possible. | Yes ✓ | Yes ✓ | No | Yes ✓ |

**Table D-8 - Relevant Plans, Programmes and strategies – Community Safety - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Scotland's Road Safety Framework to 2030 | The five objectives of the framework are:<br>• Safe road use;<br>• Safe vehicles;<br>• Safe speeds;<br>• Safe roads and roadsides; and<br>• Post crash response.<br>The framework sets out targets for the reduction in accidents and injuries (including deaths) on Scotland's roads, including actions and key performance indicators to be used in order to reach these targets. | The Strategy should aim to improve safety on Falkirk's roads and other transport networks, aiming to reduce the number of accidents on the network. | Yes ✓ | Yes ✓ | No | Yes ✓ |

**Table D-9 - Relevant Plans, Programmes and strategies – Community Safety - Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Falkirk Council, Road Asset Management Plan 2017-2027 | The plan sets out the council's plans for the maintenance of road assets in the council area. This includes the improvement of roads, footpaths, lighting, structures and traffic management. | The Strategy should consider the improvements and management systems outlined within the plan when developing safety improvements. | Yes ✓ | Yes ✓ | No | Yes ✓ |
| Police Scotland, Local Police Plan 2017-2020 | The plan sets out the policing priorities for Falkirk and how these priorities are to be addressed. The aim of this plan is:<br>• To prevent crime and disorder and break the offending cycle;<br>• Minimising the impact of identified threats, risks and harm;<br>• Reducing vulnerability by protecting and supporting the most vulnerable and disadvantaged; and<br>• Ensuring an excellent policing service. | The plan should consider measures to reduce crime occurrences within developments. | Yes ✓ | Yes ✓ | No | No |

**Table D-10 - Relevant Plans, Programmes and strategies - Biodiversity and Natural Capital - International**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) | The convention has three main aims which are stated in Article 1:<br>• to conserve wild flora and fauna and their natural habitats;<br>• to promote cooperation between states; and<br>• to give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species. | The Strategy should promote and protect the region's biodiversity and help build resilience to climate change. | No | No | No | Yes ✓ |
| Conservation of Natural Habitats and Wild Fauna & Flora (the 'Habitats Directive') (1992) | The identification of a European network of Sites of Community Importance (SCIs) to be designated as Special Areas of Conservation (SACs). A SEA would need to report on any potential effects on SACs and all development plans should aim to avoid adverse effects on them. | The Strategy should promote and protect the region's designated sites and help build resilience to climate change. | No | No | No | Yes ✓ |
| EU (2011) EU Biodiversity Strategy to 2020 – towards implementation | Aimed at halting the loss of biodiversity and ecosystem services in the EU by 2020, the strategy provides a framework for action over the next decade and covers the following key areas:<br>Conserving and restoring nature;<br>• Maintaining and enhancing ecosystems and their services;<br>• Ensuring the sustainability of agriculture, forestry and fisheries;<br>• Combating invasive alien species; and<br>Addressing the global biodiversity crisis. | The Strategy should promote and protect the region's biodiversity and help build resilience to climate change. | No | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| EU (2013) 7th Environment Action Programme (EAP) to 2020 | The 7th EAP guided EU environmental policy up to 2020 and set ambitions for 2050. The Programme set the following as a priority objective: “to protect, conserve and enhance the Union’s natural capital.”<br>The 7th EAP reflects the EU’s commitment to the preservation of biodiversity and the ecosystem services it provides for both its intrinsic value and its contribution to economic well-being.<br>The Programme highlights that integrating the value of ecosystem services into accounting and reporting across the Union and its member states by 2020 will result in the better management of natural capital. | The Strategy should promote and protect the region’s biodiversity and help build resilience to climate change. | No | No | No | Yes ✓ |

**Table D-11 - Relevant Plans, Programmes and strategies - Biodiversity and Natural Capital - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) |
|---|---|---|---|---|---|---|
| The UK 25 Year Environment Plan, 2018 | The 25 Year Environment Plan outlines the Government's ambition to leave our environment in a better state than we found it. The Plan includes ten key targets of which two focus on biodiversity.<br>Thriving plants and wildlife:<br>• Restoring 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition, securing their wildlife value for the long term;<br>• Creating or restoring 500,000 hectares of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits;<br>• Taking action to recover threatened, iconic or economically important species of animals, plants and fungi and where possible to prevent human-induced extinction or loss of known threatened species in England and the Overseas Territories; and<br>• Increasing woodland in England in line with our aspiration of 12% cover by 2060: this would involve planting 180,000 hectares by end of 2042.<br>Enhancing biosecurity:<br>Managing and reducing the impact of existing plant and animal diseases; lowering the risk of new ones and tackling invasive non-native species; | The Strategy should restore, protect and improve the natural environment and biodiversity. | No | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives) |
|---|---|---|---|---|---|---|
| The Nature Conservation (Scotland) Act 2004 | The Act sets out a series of measures, designed to conserve biodiversity and to protect and enhance the biological and geological natural heritage of Scotland.<br>The Act places a general duty on all public bodies to further the conservation of biodiversity. | The Strategy should promote and protect the region's biodiversity and help build resilience to climate change | No | No | No | Yes ✓ |
| 2020 Challenges for Scotland's Biodiversity | Scotland's 2020 Challenge aims to:<br>• protect and restore biodiversity on land and in our seas, and to support healthier ecosystems;<br>• connect people with the natural world, for their health and wellbeing and to involve them more in decisions about their environment; and<br>maximise the benefits for Scotland of a diverse natural environment and the services it provides, contributing to sustainable economic growth. | The Strategy should align with the 2020 Challenge aims and protect the region's biodiversity. | No | No | No | Yes ✓ |
| Scottish biodiversity strategy post-2020: statement of intent | Sets the direction for a new biodiversity strategy which will respond to the increased urgency for action to tackle the twin challenges of biodiversity loss and climate change. Including renewed and improved commitment to extend the area protected for nature in Scotland to at least 30% of land area by 2030. | The Strategy must align with the most recent biodiversity intentions | No | No | No | Yes ✓ |
| Scottish Land Use Strategy 2021-2026 | The strategy covers the next five years and aims to provide a more holistic understanding of our land, the demands we place upon it and the benefits we get from our land. | The Strategy must understand land use, the demands and benefits. | No | No | No | Yes ✓ |

**Table D-12 - Relevant Plans, Programmes and strategies – Landscape and Townscape - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Creating Places: A policy statement on architecture and place for Scotland (2013) | This policy statement sets out the Scottish Government's position on architecture and place. The relationship between place and policy is highlighted, and how the decision making process plays a key role in delivering value in design. The policy states that the six qualities of a successful place are<br>• Distinctive,<br>• safe and pleasant;<br>• easy to move around;<br>• welcoming;<br>• adaptable and<br>• resource efficient. | The ATS should deliver value in design by making sure policy incorporates a range of these qualities of a successful place. | No | No | No | Yes ✓ |
| Central Scotland Green Network Delivery Plan 2020-2030 | The Delivery Plan outlines various green objectives under four workstreams, natural climate solutions, placemaking, health and wellbeing, and green recovery. | The Strategy must contribute positively to these objectives. | No | No | No | Yes ✓ |

**Table D-13 - Relevant Plans, Programmes and strategies – Landscape and Townscape - Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Falkirk Greenspace: A Strategy for our Green Network | The green network provides good quality spaces that enhance biodiversity and recreational opportunities, as well as improve the economic potential of the area by encouraging investment and making it a more attractive place to live and work. In particular, the Green Network will provide:<br>• A framework for landscape and regeneration place-making initiatives.<br>• Urban open spaces including parks, play spaces, sports areas, green corridors, and natural and semi-natural open spaces for community, educational and visitor use.<br>• An important opportunity for facilitating climate change adaptation through sustainable flood management and woodland planting, and by enabling species migration.<br>• Spaces for recreation and active travel through creating safer, more pleasant walking and cycling routes.<br>• Habitat and biodiversity value by providing and enhancing areas where flora and fauna can thrive.<br>• Sustainable water and soil management and help reduce air and water pollution. | The Strategy should work to enhance Falkirk's green spaces, improving the quality of place and encouraging inward investment. | Yes ✓ | No | No | Yes ✓ |

**Table D-14 - Relevant Plans, Programmes and strategies – Cultural Heritage – International**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| UNESCO, The World Heritage Convention, 1972 | This convention sets out a framework for the identification and designation of cultural or natural heritage sites of 'outstanding universal value' as World Heritage Sites. | The Strategy should observe World Heritage Sites present in Falkirk and support their conservation. | No | No | No | Yes ✓ |
| The Valetta Convention, 1992 | This convention outlines protection measures for archaeological heritage assets, including the development and maintenance of an inventory of sites. The aim of this convention is to protect sites for future study, outlines the requirements to report 'chance finds', as well as controlling excavations.<br>The input of expert archaeologists into the making of planning policies and decisions is also required under this convention. | The Strategy should work to protect archaeological heritage sites.<br>Where archaeological heritage sites are present, expert archaeologists should be consulted prior to anu developments. | No | No | No | Yes ✓ |
| Convention for the Protection of the Architectural Heritage of Europe, Granada (1985) | The main purpose of the Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It affirms the needs for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. | The Strategy should aim to conserve and enhance heritage sites. | No | No | No | Yes ✓ |

**Table D-15 - Relevant Plans, Programmes and strategies – Cultural Heritage – National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Historic Environment Policy for Scotland 2019 | Sets out the six policies which define how the historic environment should be managed:<br>• HEP 1 – decisions should be informed by understanding of cultural significance;<br>• HEP 2 – decisions should ensure understanding, enjoyment and benefits are secured for present and future generations;<br>• HEP 3 – plans and allocation of resources should protect and promote the historic environment and minimise detrimental effects, as well as demonstrating alternatives and mitigation;<br>• HEP 4 – changes to assets and their context should protect the historic environment and identify opportunities for enhancement. Where there are detrimental impacts, these should be minimised, alternatives explored and mitigations put in place;<br>• HEP 5 – decisions should contribute to the sustainable development of communities and places; and<br>• HEP 6 – decisions should be informed by an inclusive understanding of potential consequences for people and communities. Decisions should be collaborative, open, transparent and easy to understand. | The Strategy should promote and manage the adaptation and maintenance of its heritage assets and landscapes in a sustainable way, without loss of character. | No | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Our Place in Time: The Historic Environment Strategy for Scotland 2014 | Sets out a vision to that Scotland's environment is understood and valued, cared for and protected. The key outcome is to ensure that the cultural, social, environmental and economic value of Scotland's historic environment continues to make a strong contribution to the wellbeing of the nation and its people. | The Strategy should promote and manage the adaptation and maintenance of its heritage assets and landscapes in a sustainable way, without loss of character. | No | No | No | Yes ✓ |
| Planning (Listed buildings and Conservation Areas) Act 1990 | This is an Act relating to special controls in respect of listed buildings and areas of special architectural or historic interest | The Strategy should promote and manage the adaptation and maintenance of its heritage assets and landscapes in a sustainable way, without loss of character. | No | No | No | Yes ✓ |
| Ancient Monuments and Archaeological Areas Act 1979 | This Act ensures the provision of investigation, preservation and recording of archaeological or historical matters of interest. | The Strategy should ensure that any archaeological sites are preserved, and prevent loss of artifacts. | No | No | No | Yes ✓ |
| Creating Places: A policy statement on architecture and place for Scotland (2013) | This policy statement sets out the Scottish Government's position on architecture and place. Th relationship between place and policy is highlighted, and how the decision making process plays a key role in delivering value in design. The policy states that the six qualities of a successful place are<br>• Distinctive,<br>• safe and pleasant;<br>• easy to move around;<br>• welcoming;<br>• adaptable and<br>• resource efficient. | The ATS should deliver value in design by making sure policy incorporates a range of these qualities of a successful place. | No | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Historic Environment Scotland Act 2014 | This sets out the functions for Historic Environment Scotland in investigating, caring for and promoting Scotland's historic environment. | The Strategy should promote and manage the adaptation and maintenance of its heritage assets and landscapes in a sustainable way, without loss of character. | No | No | No | Yes ✓ |

**Table D-16 - Relevant Plans, Programmes and strategies – Cultural Heritage – Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Heritage Delivery Plan for the Falkirk Area, 2018-2023 | The plan has four guiding principles:<br>▪ To develop the wellbeing of the community<br>▪ To raise the outward profile of the Falkirk area through the richness of its heritage, encouraging visitors to the area and aiding the area's economy<br>▪ To encourage people to see local heritage in a larger framework<br>▪ To ensure that our aspirations, plans and delivery models are resilient, adaptable and sustainable | The Strategy should conserve Falkirk's heritage sites so they are able to continue attracting visitors to the area, aiding the local economy. | Yes ✓ | No | No | Yes ✓ |

**Table D-17 - Relevant Plans, Programmes and strategies – Climatic Factors - International**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| EU Adaptation Strategy, 2021 | ▪ Promoting action by member states and supporting adaptation in cities;<br>▪ Promoting adaptation in vulnerable sectors and ensuring Europe's infrastructure is more resilient; and<br>▪ Better informed decision making by addressing gaps in knowledge about adaptation. | The Strategy will identify goals, objectives and action areas for the city to adapt to climate change. | Yes ✓ | Yes ✓ | No | Yes ✓ |
| The Paris Agreement, 2015 | Aims to limit the global warming change to well below 2°C above pre-industrial levels. However, countries aim to limit the increase to 1.5°C to reduce the impacts of global warming. The EU has committed to a binding target of a reduction of at least 40% in greenhouse gas emissions by 2030 compared to 1990. | Whilst the Strategy should have cognisance of the Paris Agreement the Strategy should align with the more ambitious targets which are set in legislation through the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 | Yes ✓ | No | No | Yes ✓ |
| 2030 Climate Framework | The framework sets three key targets for the year 2030:<br>▪ At least 40% cuts in greenhouse gas emissions (from 1990 levels);<br>▪ At least 27% share for renewable energy; and<br>▪ At least 27% improvement in energy efficiency | The Strategy will need to align with 2030 targets | Yes ✓ | No | No | Yes ✓ |

**Table D-18 - Relevant Plans, Programmes and strategies – Climatic Factors - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 | The act has set targets for the reduction of greenhouse gases emissions and works to make provision about advice, plans and reports in relation to those targets, with the objective of Scotland contributing appropriately to the world's efforts to deliver on the Paris Agreement. This includes greenhouse gas emissions reduction targets of 56% by 2020, 75% by 2030, 90% by 2040, and a 100% reduction target for 2045. | Developments implemented by the Strategy must be in line with the net zero target set. | Yes ✓ | No | No | Yes ✓ |
| The Scottish Energy Strategy, 2017 | The Scottish Energy Strategy sets out a clear vision for the development of energy systems across Scotland that will create economic opportunities whilst supporting work to achieve Scotland's long-term climate change targets. | The Strategy should align with the Strategy targets. | Yes ✓ | No | Yes ✓ | Yes ✓ |
| UK Clean Growth Strategy, 2017 | ■ Key polices of the strategy include:<br>■ Develop world leading Green Finance capabilities;<br>■ Develop a package of measures to support businesses to improve their energy productivity, by at least 20 per cent by 2030;<br>■ Establish an Industrial Energy Efficiency scheme;<br>■ Demonstrate international leadership in carbon capture usage and storage;<br>■ Publish joint industrial decarbonisation and energy efficiency action plans; | | Yes ✓ | No | Yes ✓ | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| | ▪ Phase out the installation of high carbon forms of fossil fuel heating in new and existing businesses;<br>▪ Support recycling of heat;<br>▪ Upgrade all fuel poor homes to be upgraded to Energy Performance Certificate (EPC) Band C by 2030;<br>▪ Develop a long term trajectory to improve the energy performance standards of privately rented homes;<br>▪ Build and extend heat networks across the country;<br>▪ Invest in low carbon heating by reforming the Renewable Heat Incentive;<br>▪ Develop one of the best electric vehicle charging networks in the world;<br>▪ design a new system of future agricultural support to focus on delivering better environmental outcomes;<br>▪ zero avoidable waste by 2050; and<br>▪ Support peatland through a £10 million capital grant scheme for peat restoration. | | | | | |

**Table D-19 - Relevant Plans, Programmes and strategies – Climatic Factors - Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Falkirk Council Carbon Management Plan 2015/16 to 2020/21 | This Carbon Management Plan outlines how Falkirk Council may manage its carbon emissions for the period 2015-2021. It studies patterns to date and outlines options for the future, exploring<br>the risks and benefits. It finds three scenarios for the council to choose:<br>▪ Continued growth in consumption;<br>▪ stabilisation or<br>▪ gradual decrease.<br>It recommends that carbon and its associated costs should be built int decision making, and that any additions to council assets should be countered by disinvestment elsewhere.<br>Although this plan is now outdated, it is still the most relevant. | The ATS should follow a carbon stabilisation / decrease plan through its developments. | No | No | No | No |

**Table D-20 - Relevant Plans, Programmes and strategies – Air Quality – International**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Ambient Air Quality Directive | The Ambient Air Quality Directive provides the current framework for the control of ambient concentrations of air pollution in the EU. The control of emissions from mobile sources, improving fuel quality and promoting and integrating environmental protection requirements into the transport and energy sector are part of these aims. | The Strategy should recognise the impact of climate change on air quality and support the delivery of air quality management measures. | Yes ✓ | No | No | Yes ✓ |

**Table D-21 - Relevant Plans, Programmes and strategies – Air Quality – National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Clean Air Strategy, 2019 | This Strategy sets out the comprehensive action that is required from across all parts of government and society to meet these goals. These will support the creation of Clean Air Zones to lower emissions from all sources of air pollution, backed up with clear enforcement mechanisms. | The Strategy should support the creation of clean air zones to lower emissions and improve air quality. | Yes ✓ | No | No | Yes ✓ |
| The Air Quality Standards Regulations 2010 | The objective of these regulations is to improve air quality by reducing the impact of air pollution on human health and ecosystems. By setting air quality standards for key pollutants and obliging member states to provide air quality plans demonstrating how air quality standards will be achieved and maintained when compliance is breached, legislation on ambient air quality has contributed to the improvement of air quality throughput the European Union. | The Strategy must observe air quality standards and state air quality plans to reduce the impact of poor air quality on human health and ecosystems. | Yes ✓ | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Air Quality (Scotland) Amendment Regulations 2016 | The air quality objectives set out in the Air Quality (Scotland) Regulations 2000, the Air Quality (Scotland) Amendment Regulations 2002 and the Air Quality (Scotland) Amendment Regulations 2016 provide the statutory basis for local air quality management areas. | The Strategy should observe local air quality management areas and contribute positively to their improvement. | No | No | No | No |
| Cleaner Air for Scotland 2 (CAFS2) strategy, 2021 | This strategy setts out the Scottish Government's air quality policy framework for the next five years and a series of actions to deliver further air quality improvements based on 10 themes:<br>■ Health<br>■ Integrated Policy<br>■ Placemaking<br>■ Data<br>■ Pubic engagement and behaviour change<br>■ Industrial emissions regulation<br>■ Tackling non-transport emission sources<br>■ Transport<br>■ Governance, accountability and delivery<br>■ Future progress | | Yes ✓ | No | No | Yes ✓ |

**Table D-22 - Relevant Plans, Programmes and strategies – Air Quality – Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Falkirk Council Air Quality Management Action Plan, 2015 | This plan focuses only on the Falkirk town centre and Haggs AQMA's and identifies 20 actions to reduce pollutant levels of both $NO_2$ and $PM_{10}$ within Falkirk. Some of these include:<br>▪ reducing emissions from individual vehicles;<br>▪ reducing demand for travel and promoting alternative modes and<br>▪ educate and inform the public regarding air quality. | The Strategy should work to reduce individual vehicle use by promoting active travel in order to cut emissions and improve air quality. | No | No | No | No |

**Table D-23 - Relevant Plans, Programmes and strategies – Water Environment - International**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy ("The Water Framework Directive") | The main aims of the Water Framework Directive (WFD) are to:<br>▪ prevent deterioration and enhance status of aquatic ecosystems, including groundwater<br>▪ promote sustainable water use<br>▪ reduce pollution<br>▪ contribute to the mitigation of floods and droughts<br>The WFD requires the creation of River Basin Management Plans (RBMPs).<br>Statutory objectives are set for Scottish waters through River Basin Management Planning. These objectives are based on ecological assessments and economic judgments. The plans cover all types of water body, e.g. rivers, lochs, lakes, estuaries, coastal waters and groundwater. | The Strategy should support improved resilience to climate change and flood risk management and the integration of river basin management planning to protect and improve the status of water bodies across the City Region. | No | No | No | Yes ✓ |
| Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks | Requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. | The Strategy should promote sustainable flood risk management and align with key actions to protect humans and assets. | No | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration | This Directive establishes a regime which sets groundwater quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater. The directive establishes quality criteria that takes account local characteristics and allows for further improvements to be made based on monitoring data and new scientific knowledge. | The Strategy should support the progressive reduction of pollution of groundwater and preventing further pollution. | No | No | No | Yes ✓ |

**Table D-24 - Relevant Plans, Programmes and strategies – Water Environment - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| The Water Environment (Miscellaneous) (Scotland) Regulations 2017 | Regulations apply regulatory control over activities which may affect Scotland's water environment. Activities covered are:<br>▪ Discharges<br>▪ Diffuse pollution<br>▪ Abstractions<br>▪ Engineering works in inland waters<br>▪ Groundwater | The Strategy should observe regulations over these activities. | No | No | No | Yes ✓ |
| River Basin Management Plan for the Scotland River Basin District 2015-2027 | The Management Plan aims to protect and improve the water environment of the Scotland river basin district. It sets out how relevant authorities can tackle the pressures and improve the condition of their watercourses. | The Strategy should support improved resilience to climate change and flood risk management and the integration of natural flood management measures | No | No | No | Yes ✓ |
| The Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Areas and Local Plan Districts) (Scotland) Amendment Regulations 2017 | Amended to further implement the assessment of the effects of certain public and private projects on the environment. | The Strategy should observe PVA's and act to positively contribute to their flood risk reduction. | No | No | No | Yes ✓ |
| Flood Risk Management (Scotland) Act 2009 | The Act introduces a more sustainable and modern approach to flood risk management which are better suited to current needs and can accommodate the impacts of climate change.<br>Under the Act the Government worked with SEPA to created 14 Flood Risk Strategies. | The Strategy should promote sustainable flood risk management and align with key actions. | No | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Delivering sustainable flood risk management: guidance (2019) | This guidance covers most potential sources of flooding in Scotland. SEPA and the responsible authorities focus on the sources of greatest risk, like river flooding, coastal flooding, surface water flooding and groundwater flooding. | The Strategy should prioritise greatest flood risk and tailor developments to these. | No | No | No | Yes ✓ |

**Table D-25 - Relevant Plans, Programmes and strategies – Water Environment - Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Flood Risk Management Strategy Forth Estuary, 2015 | The FRMS sets out the short to long term ambition for flood risk management in the Forth Estuary. The strategy states the objectives, as agreed by responsible authorities, for tackling floods in the estuaries high risk areas. Actions that will then deliver these objectives are described and prioritised in six-year planning cycles. The decisions are based on the best evidence available on the causes and consequences of flooding. Through this risk-based and plan-led approach, flood management will improve for individuals, communities and businesses at risk. | The Strategy should align itself with the objectives set out in The FRMS to contribute positively to flood risk reduction. | No | No | No | Yes ✓ |

**Table D-12 - Relevant Plans, Programmes and strategies – Material Assets - International**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Directive 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste | Waste management in the EU should be improved and transformed into sustainable material management, with a view to protecting, preserving and improving the quality of the environment, protecting human health, ensuring prudent, efficient and rational utilisation of natural resources, promoting the principles of the circular economy, enhancing the use of renewable energy, increasing energy efficiency, reducing the dependence of the Union on imported resources, providing new economic opportunities and contributing to long-term competitiveness. | The Strategy should aim to support the improvement of waste infrastructure and promote both the efficient use of resources and reduction in waste to landfill. | No | No | No | Yes ✓ |

**Table D-26 - Relevant Plans, Programmes and strategies – Material Assets - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Scotland's Zero Waste Plan, 2010 | The plan outlines Scotland's key objectives in relation to waste prevention, recycling and reducing the amount of waste sent to landfill on the journey to a zero waste Scotland. The plan proposes targets for Scotland's waste | The Strategy should aim to protect waste infrastructure from the impacts of climate change and encourage ta reduction in waste to landfill. | No | No | No | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| The Scottish Soil Framework 2009 | This aim of this framework is to instigate a process by which key stakeholders will work together to achieve better soil protection from future challenges including climate change. | The Strategy should understand the importance of the regions soils and protect resources from the impacts of climate change. | No | No | No | Yes ✓ |
| Scotland: Making Things Last - A Circular Economy Strategy 2016 | The strategy's four priority areas, based on their resource use, environmental impact and importance to the Scottish economy, are:<br>▪ Food, drink, and the broader bio-economy;<br>▪ Remanufacture;<br>▪ Construction and the built environment; and<br>▪ Energy infrastructure. | The Strategy should support the development of a circular economy. | No | No | Yes ✓ | Yes ✓ |
| Scottish Rural Development Programme, 2021 | The Scottish Rural Development Programme funds economic, environmental and social measures that benefit rural Scotland. The aim of the programme is to achieve sustainable economic growth through the following priorities:<br>• Enhancing the rural economy;<br>• Supporting agricultural and forestry businesses;<br>• Protecting and improving the natural environment;<br>• Addressing the impact of climate change; and<br>• Supporting rural communities. | The Strategy should ensure connectivity is enhanced to rural communities, as well as supporting economic investments in rural communities. | No | No | Yes ✓ | Yes ✓ |

**Table D-27 - Relevant Plans, Programmes and strategies – Overarching - National**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Environment Bill 2020 | The Environment Bill 2020 sets out how we plan to protect and improve the natural environment in the UK. Acting as one of the key vehicles for delivering the 25 Year Environment Plan, the Environment Bill brings about urgent and meaningful action to combat the environmental and climate crisis we are facing. It sets a domestic framework for environmental governance and helps to deliver on the government's commitment to be the first generation to leave our environment in a better state.<br>The Environment Bill helps to manage the impact of human activity on the environment, creating a more sustainable and resilient economy, and enhancing well-being and quality of life. It will engage and empower citizens, local government and businesses to deliver environmental outcomes and create a positive legacy for future generations. | The Strategy should align with the Environment Bill's objectives to manage the impact of human activity on the environment, creating a more sustainable and resilient economy, and enhancing well-being and quality of life. | No | No | No | Yes ✓ |
| National Planning Framework for Scotland 3 (NPF3), 2014 | The NPF3 sets out the long-term vision for development and investment across Scotland over the next 20 years. The main aim is to create opportunities for all of Scotland to flourish, through increasing sustainable economic growth. To achieve this, the Government Economic Strategy aims to share the benefits of growth by encouraging economic activity and investment across all of Scotland's communities, whilst protecting the nation's natural and cultural assets.<br>NPF4, the update to NPF3, is currently in development and will supersede NPF3 once adopted. | The Strategy should take account of the spatial and environmental issues set out in the NPF3 to deliver benefits for communities, the economy and the wider environment. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Planning Scotland Act (2019) | The purpose of the Planning Act is to manage the development and use of land in the long term public interest, being sustainable development, and achieving national outcomes, ensuring positive contributions to inclusive growth, delivering housing and infrastructure, and to empowering communities to influence future development of their areas. | The Strategy should align with planning requirements and seek to contribute to sustainable development and achieving national outcomes. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |
| Protecting Scotland's Future: the Government's Programme for Scotland 2019-2020 | This programme aims to improve the wellbeing of the people of Scotland and secure a positive future for future generations. This also includes actions for Scottish Government to take to minimise Scotland's contribution to global climate change, including a 'Mission Zero' for transport, aiming to deliver net zero emissions by 2045. | The strategy should align with this programme and seek to provide net zero developments. | No | No | No | Yes ✓ |
| Scottish Planning Policy (SPP) 2014<br>(The December 2020 update to the SPP was removed following a legal challenge at the Court of Session in August 2021) | Identifies the Scottish Government's central purpose at sustainable economic growth. SPP sets out the main purpose and tasks of the planning system and national policies across all policy sectors. | The Strategy must act in accordance with the national policies set out in the SPP including a natural resilient place; a low carbon place; a successful, sustainable place; and a connected place. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Climate Ready Scotland: Second Scottish Climate Change Adaptation Programme 2019 -2024 | This is a 5 year programme to prepare Scotland for the challenges posed by the changing climate. It includes seven key outcomes:<br>■ Our communities are inclusive, empowered, resilient and safe in response to climate change;<br>■ The people in Scotland who are most vulnerable to climate change are able to adapt and climate justice is embedded in climate change adaptation policy;<br>■ Our inclusive and sustainable economy is flexible, adaptable and responsive to the changing climate;<br>■ Our society's supporting systems are resilient to climate change;<br>■ Our natural environment is valued, enjoyed, protected and enhanced and has increase resilience to climate change;<br>■ Our coastal and marine environment is valued, enjoyed, protected and enhances and has increase resilience to climate change; and<br>■ Our international networks are adaptable to climate change. | The Strategy should align with the outcomes of the Climate Change Adaptation Programme | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| UK Green Finance Strategy, 2019<br>(due to be updated at the end of 2022) | This strategy recognises the role of the financial sector in delivering global and domestic climate and environmental objectives. It sets out:<br>▪ the proposals for green finance at the heart of delivering the UK's Clean Growth Strategy, 25 Year Environment Plan and Industrial Strategy<br>▪ how the proposals support the UK's economic policy for strong, sustainable and balanced growth | The Strategy should align aims and targets with the Green Finance Strategy to support proposals for green finance to deliver strong, sustainable and balanced growth. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |
| National Infrastructure Strategy, 2020 | The 2020 strategy includes a set of guiding principles for infrastructure investment, which provide the framework for investment decisions. These are:<br>▪ Recovery and rebuilding the economy<br>▪ Levelling up the UK<br>▪ Decarbonising the economy and adapting to climate change<br>▪ Supporting private investment<br>▪ Building faster better and greener | The Strategy should aim to follow these principles to be advised on investment decisions. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |

**Table D-28 - Relevant Plans, Programmes and strategies – Overarching - Regional**

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| The Falkirk Plan, 2021-2030 | The Falkirk Plan sets the strategic direction for community planning in Falkirk to 2030. It outlines the six priorities the council plans to improve – working in partnership with communities, poverty, mental health and wellbeing, substance abuse, gender-based violence, economic recovery details how the Partnership plans to improve those themes describes monitoring plans to measure our progress. | The Strategy should contribute positively to improving the six priorities set out in the Falkirk plan. | Yes ✓ | Yes ✓ | No | No |
| Joint Strategic Needs Assessment, 2021 | The JSNA provides a summary of information and data relevant to the Falkirk Plan. The information relates to COVID-19 and non-pandemic times, and has identified emerging themes such as widening inequality, increased poverty, grater mental health issues, drug related deaths, domestic abuse and rising unemployment. | The Strategy should use this information and be guided by it to understand the needs of the Falkirk Council Area. | Yes ✓ | Yes ✓ | No | No |
| Falkirk Local Development Plan 2, 2020 | LDP2 provides a broad vision and strategy for the area for the 20 year period from 2020-2040, involving where development should, or should not take place and provides guidance on the future provision of housing, business, transport and infrastructure, recreation and community facilities. It indicates how our town centres and greenspaces should develop, and how our natural and historic environment should be protected and enhanced. | The Strategy should use the LDP to set its own intentions for future developments and be guided by its principle visions. | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |

| Plan / Programme / Strategy | Environmental Objectives/Key Messages of the PPS | Implications for the Strategy | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Vision | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 1 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 2 | Compliance with Strategy Objectives (refer to Section 2.2 for the draft vision and objectives)<br>Objective 3 |
|---|---|---|---|---|---|---|
| Falkirk Local Transport Strategy, 2014 | The LTS sets out how the transport vision for the Falkirk Council area will be achieved, with increasing demand for high quality travel options in mind, it focuses on meeting this demand in a sustainable way, in order to minimise the negative impacts that travel can generate. This document sets out the policies that will help combat the effects of traffic growth whilst promoting sustainable active travel choices. | The Strategy should focus on meeting increasing demand for transport in a sustainable way | Yes ✓ | Yes ✓ | Yes ✓ | Yes ✓ |

# Appendix E – Consultation Comments

This Appendix sets a summary of the ATS Scoping Consultation Comments

**Table E-1 - Scoping Consultation Comments**

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
|---|---|---|---|---|
| 1 | NatureScot | Subject to the specific comments set out in the annex to this letter, NatureScot is content with the scope and level of detail proposed for the Environmental Report. | No action required – general comment. | Not applicable |
| 2 | NatureScot | NatureScot are fully supportive of encouraging more individuals to engage in active travel, particularly for shorter journeys. This will help reduce the dependency on using a car and this in turn will reduce the impact of congestion and pollution within the Falkirk Council area. Encouraging more people to walk and cycle is better for the environment and has positive effects on health and well-being. | No action required – general comment. | Not applicable |
| 3 | NatureScot | We would recommend that where possible the development of the active travel corridors are linked in with work on place-making and developing nature networks. People are more likely to walk or cycle for more of their journeys if the quality of spaces they travel through are attractive and inviting. | Falkirk Council will consider the development of positive placemaking and developing nature networks when designing proposed routes that result from the ATS. | Not applicable |
| 4 | NatureScot | There was no timescale mentioned for the consultation of the Environmental Report. The standard consultation period for Environmental Reports is 8 weeks and NatureScot recommend this timescale is used. | A 12 week consultation period will be undertaken for both the SEA Interim Report and the Active Travel Strategy. | Section 11 |
| 5 | Historic Environment Scotland | It is our understanding that the Active Travel Strategy (ATS) sets out the policy direction and investment strategy for active travel proposals. The strategy will align with the development of a new Local Transport Strategy that will prioritise active and sustainable travel through its objectives and policy direction. | No action required – general comment. | Not applicable |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
|---|---|---|---|---|
| 6 | Historic Environment Scotland | We note that the historic environment has been scoped into the assessment, and that the Scoping Report (Section 6.2) anticipates both positive and negative effects for cultural heritage from the ATS. On the basis of the information provided, we are content with this approach and are satisfied with the scope and level of detail proposed for the assessment, subject to the detailed comments provided in the annex below. | No action required – general comment. | Not applicable |
| 7 | Historic Environment Scotland | Section 8 (Next Steps) if the SEA scoping report does not give an indication of the length of time that the ATS and its associated Environmental Report will be subject to consultation. In this instance, we recommend that a minimum consultation period of 6 weeks should be implemented. | A 12 week consultation period will be undertaken for both the SEA Interim Report and the Active Travel Strategy. | Section 11 |
| 8 | Historic Environment Scotland | *Section 5 Environmental Baseline, Risks and Opportunities: 5.9 Cultural Heritage*<br>We are content with the overview of issues and opportunities presented for the historic environment in Table 5-11 and that an appropriate baseline for the historic environment has been identified. A range of spatial information including the location of listed buildings, scheduled monuments, inventory gardens and designed landscapes and historic battlefields can be downloaded from the Historic Environment Scotland Portal. | No action required – general comment. | Not applicable |
| 9 | Historic Environment Scotland | *Section 6 Scope and Level of Detail Proposed for the Assessment*<br>We are broadly content with the overview of key sustainability issues and opportunities presented for the historic environment in Table 6-2. We do, however, consider that there is some scope for greater analysis of the opportunities for the historic environment presented by the ATS. These include opportunities to promote access to and the enjoyment of Falkirk's historic environment. There is also opportunity for the ATS to promote the re-use of and investment within designated landscapes of historic interest such as the Antonine Wall, Inventory Gardens and Designed Landscapes and historic battlefields. | Opportunities to promote access to the historic environment, as well as improving the setting of the historic environment have been investigated within the main SEA report. | Section 6.1<br>Section 7.1<br>Appendix A<br>Appendix B |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
|---|---|---|---|---|
| 10 | Historic Environment Scotland | We are content with the guide questions included in Table 6-2. | No action required – general comment. | Not applicable |
| 11 | Historic Environment Scotland | *Section 7 SEA Assessment Methodology*<br>Section 7 notes that a standard matrix approach is proposed to consider policies in the ATS. The spatial options relating to a series of active travel corridors will be undertaken in two stages; the initial red, amber, green assessment using spatial indicators, as described in separate document  Appendix B, followed with a similar matrix-based assessment as the policies. The objectives, assessment questions and indicators are suitable for the assessment and should serve to focus the assessment. | No action required – general comment. | Not applicable |
| 12 | Historic Environment Scotland | *Appendix A: Table B-8 – Relevant Plans, Programmes and strategies – Cultural Heritage*<br>We are content that the relevant plans, programmes and strategies in relation to cultural heritage have been reviewed as part of the evidence gathering exercise for the SEA Scoping Report. | No action required – general comment. | Not applicable |
| 13 | Scottish Environment Protection Agency | We are generally satisfied with the contents of the Active Travel Strategy (ATS) scoping report. We do however have some recommendations to make. Please note our comments below. | No action required – general comment. | Not applicable |
| 14 | Scottish Environment Protection Agency | **Relationships with other Plans, Policies and Strategies (PPS)**<br>Some of the PPS included have themselves been subject to SEA. Where this is the case you may find it useful to prepare a summary of the key SEA findings that may be relevant to the ATS. This may assist you with data sources and environmental baseline information and also ensure the current SEA picks to environmental issues or mitigation actions which may have been identified elsewhere. | Noted. | Not applicable |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
|---|---|---|---|---|
| 15 | Scottish Environment Protection Agency | **Baseline information**<br>SEPA holds the significant amounts of environmental data which may be of interest to you in preparing the environmental baseline, identifying environmental problems, and summarising the likely changes to the environment in the absence of the PPS, all of which are required for the assessment. Many of these data are now readily available on SEPA's website.<br>Additional local information may also be available from our Access to Information unit (foi@sepa.org.uk).<br>Other sources of data for issues that fall with SEPA's remit are referenced in our SEA topic guidance notes for air, soil, water, material assets, climatic factors and human health. | No action required – general comment. | Not applicable |
| 16 | Scottish Environment Protection Agency | **Environmental problems**<br>We consider that the environmental problems described generally highlight the main issues of relevance for the SEA topics within our remit. | No action required – general comment. | Not applicable |
| 17 | Scottish Environment Protection Agency | We however note that Table 5-17 – Strategy implications – Water Environment, while acknowledging that the growing population put a strain in the existing pressures on Falkirk's water bodies from industry and pollution, only focuses on flood risk when considering the implications for the strategy. This is also reflected in the choice of objective questions (see out comments about SEA objectives in paragraph 6.7 below). | WSP have amended the supporting questions for the Water Environment to include consideration of water quality, sustainable use of water, and the state of the water environment. | Section 4.4 |
| 18 | Scottish Environment Protection Agency | **Alternatives**<br>We note that alternatives are still being considered. Any reasonable alternatives identified during the preparation of the plan should be assessed as part of the SEA process and the findings of the assessment should inform the choice of the preferred option. This should be documented in the Environmental Report. | Reasonable alternatives for the ATS have been considered within the SEA report. These alternatives have been used to inform policy development and the route of active travel options. | Section 6.2<br>Section 7.2 |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
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| 19 | Scottish Environment Protection Agency | Section 7.2 mentions the assessment of alternatives, but makes reference to Appendix C, which is not part of the scoping report. Separate document Appendix B however has title: Proposed Assessment Matrices, which we understand will be used for the environmental assessment of the alternatives. | WSP confirm that the matrices proposed within separate document Appendix B is the matrices used for the assessment of alternative options within the SEA report. | Not applicable |
| 20 | Scottish Environment Protection Agency | **Scoping in/out of environmental topics**<br>We agree that in this instance all the SEA topics should be scoped into the assessment. We note, as per Table 6.1, that the SEA topic of Soil has been incorporated into Material Assets and other non-SEA Topics have been added (i.e. Transport and Community Safety). Economy and Employment is not an SEA Topic but we note it has been scoped out.<br>While there are differences with the 'classic' SEA topics layout, we are satisfied that all the SEA topics are being considered in the assessment, albeit with different grouping. | No action required – general comment. | Not applicable |
| 21 | Scottish Environment Protection Agency | **Methodology for assessing environmental effects**<br>Including a commentary section within the matrices in order to state, where necessary, the reasons for the effects cited and the score given helps to fully explain the rationale behind the assessment results. This allows the Responsible Authority to be transparent and also allows the reader to understand the rationale behind the scores given. | Noted. This approach is taken within the SEA Report. | Section 3 |
| 22 | Scottish Environment Protection Agency | Where it is expected that other plans, programmes or strategies are better placed to undertake more detailed assessment of environmental effects this should be clearly set out in the Environmental Report. | Noted. This is considered within the cumulative effects assessment. | Section 8 |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
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| 23 | Scottish Environment Protection Agency | We would expect all aspects of the PPS which could have significant effects to be assessed. | Noted. This is considered within the cumulative effects assessment. | Section 8 |
| 24 | Scottish Environment Protection Agency | We support the use of SEA objectives as assessment tools as they allow a systematic, rigorous and consistent framework with which to assess environmental effects. | No action required – general comment. | Not applicable |
| 25 | Scottish Environment Protection Agency | When it comes to setting out the results of the assessment in the Environmental Report please provide enough information to clearly justify the reasons for each of the assessments presented. It would also be helpful to set out assumptions that are made during the assessment and difficulties and limitations encountered. | Information on the rationale for the assessment scores for the ATS policies and options have been included within both the SEA Report and the associated Appendices (Appendix A and B). | Section 3.2<br>Section 6<br>Section 7<br>Appendix A<br>Appendix B |
| 26 | Scottish Environment Protection Agency | It is helpful if the assessment matrix directly links the assessment result with proposed mitigation measures. | Noted. This format is taken within the SEA Report. | Appendix B |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
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| 27 | Scottish Environment Protection Agency | **Comments on wording of proposed SEA objectives**<br>We would recommend that the wording of the SEA objective of the Water Environment be revised to include protection and enhancement of the water environment. The current objective if focussing on flooding, but there are other aspects of the water environment that need to be considered (e.g. water quality). We therefore request that the objective includes:<br>*"To protect and enhance the state of the water environment" with sub-objectives appraisal question:*<br>*Will the policy or proposal…*<br>*Reduce levels of water pollution?*<br>*Ensure sustainable use of water resources?*<br>*Improve the physical state of the water environment?*<br>*Reduce the impact of invasive non-native species on the water environment?"*<br>Please note the SEPA SEA Guidance on Water available in our website https://www.sepa.org.uk/environment/land/planning/strategic-environmental-assessment/ | WSP have amended the supporting questions for the Water Environment to include consideration of water quality, sustainable use of water, and the state of the water environment. | Section 4.4 |
| 28 | Scottish Environment Protection Agency | **Mitigation and enhancement**<br>We would encourage you to use the assessment as a way to improve the environmental performance of individual aspects of the final option; hence we support proposals for enhancement of positive effects as well as mitigation of negative effects. | The assessment of the ATS policies and options has been utilised to support the development of mitigations and enhancements to create positive effects upon SEA objectives. | Section 9 |
| 29 | Scottish Environment Protection Agency | It is useful to show the link between potential effects and proposed mitigation/enhancement measures in the assessment framework. | Within both the SEA Report and Appendix B, potential effects are identified, with links to the associated proposed mitigations. | Section 9<br>Appendix B |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
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| 30 | Scottish Environment Protection Agency | We would encourage you to be very clear in the Environmental Report about mitigation measures which are proposed as a result of the assessment. These should follow the mitigation hierarchy (avoid, reduce, remedy or compensate). | The SEA report includes Section 9.1 Mitigation and enhancement, where proposed mitigation measures have been identified following the assessment of policies within the ATS and proposed route options. | Section 9.1 |
| 31 | Scottish Environment Protection Agency | One of the most important ways to mitigate significant environmental effects identified through the assessment is to make changes to the plan itself so that significant effects are avoided. The Environmental Report should therefore identify any changes made to the plan as a result of the SEA. | The SEA report includes recommendations for the ATS, identifying potential changes to the strategy to minimise significant negative effects and maximise positive effects where possible. | Section 10 |
| 32 | Scottish Environment Protection Agency | Where mitigation proposed does not relate to modification to the plan itself then it would be extremely helpful to set out the proposed mitigation measures in a way that clearly identifies: (1) the measures required, (2) when they would be required and (3) who will be required to implement them. The inclusion of a summary table in the Environmental Report will help to track progress on mitigation through the monitoring process. | WSP have considered the mitigation measures required within both the SEA Report and Appendix B.<br>The lead authority will be included within the mitigations table in the SEA Report.<br>The proposed timescale is not included within the mitigations table in the SEA Report as mitigations have largely been identified for proposed developments, which have as yet not been designed. | Appendix B<br>Section 9 |
| 33 | Scottish Environment Protection Agency | **Monitoring**<br>Although not specifically required at this stage, monitoring is a requirement of the Act and early consideration should be given to a monitoring approach particularly in the choice of indicators. It would be helpful if the Environmental Report included a description of the measures envisaged to monitor the significant environmental effects of the plan. | Monitoring measures have been included within the main SEA Report (Section 9.2) to monitor potential significant environmental effects of the ATS. | Section 9 |

| No. | Consultee | Comment | Summary of action taken/why no action is required | Section of the ER |
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| 34 | Scottish Environment Protection Agency | **Consultation period**<br>It is not clear from the scoping report the specific time period proposed for consultation on the Environmental Report. This period should be agreed with the Consultation Authorities at the scoping stage. Accordingly, we would welcome further dialogue with you in order to agree an appropriate timeframe. Typical consultation periods range from 6-12 weeks depending on the content and nature of the plan. The consultation period must offer Consultation Authorities and the public an early and effective opportunity to express their views and opinions. | A 12 week consultation period will be undertaken for both the SEA Interim Report and the Active Travel Strategy.<br>Falkirk Council will liaise with SEPA on the consultation timeframe. | Section 11 |
| 35 | Scottish Environment Protection Agency | **Outcomes of the Scoping exercise**<br>It would be helpful if the Environmental Report included a summary of the scoping outcomes and how comments from the Consultation Authorities were taken into account. | The SEA Report includes two appendices, outlining the updated scoping report and the scoping consultation comments.<br>Scoping consultation comments have been considered by WSP throughout the SEA Report and amendments have been made in order to consider these comments. | Appendix C<br>Appendix B |
| 36 | Scottish Environment Protection Agency | We would welcome more attention being given to proof reading reports as we noticed some inaccuracies in the introduction and numbering of tables. Please see the examples below:<br>There must have been some confusion when preparing the report, as at the same text, has been added to many paragraphs in relation to strategy implications. For example paragraph 5.12.15 "*Table 5-17 – below sets out the key risk and opportunities for air quality with regards to the ATS*" even though the reference is to the water environment.<br>Another example is Table 5-18 Strategy Implications – Water Environment, when the table actually refers to material assets.<br>As mentioned before, there is reference to Appendix C in text, but this seems to be available as Appendix B. | Noted. | Not applicable |

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