

# **Falkirk Sustainability & Climate Change Strategy 2011-2016:**

## **Environmental Report (Gateway Ref. 00526)**

### **Falkirk Council**

6<sup>th</sup> November 2011

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## **Non Technical Summary**

### **1. The Falkirk Sustainability and Climate Change Strategy 2011-16**

The Falkirk Sustainability and Climate Change Strategy (FSCCS) 2011-2016 is intended to update and supersede the existing Sustainable Falkirk Strategy (published in 2006). The aim of the strategy is to mainstream sustainability considerations into all of the Council's activities and to influence those living and working in the local authority area to do so more sustainably. Climate change forms a cross cutting theme throughout the document, with this being reflected in the title.

The plan will identify broad objectives for sustainability and climate change, with the topics to be agreed through the consultation process. It will briefly review the Sustainable Falkirk Action Plan 2006 and subsequent actions, outlining the direction of a rolling programme of action plans in the long term and for the period 2011-16. In general, it aims to :

- Promote a clear understanding of, and commitment to, sustainable development and climate change mitigation and adaptation, so that all people can contribute to the overall goal through their individual actions.
- Ensure that the Council's commitment to sustainability is fully integrated into all of its strategies, plans and programmes.
- Create objectives, indicators and targets for continuous improvement which can be monitored, reviewed and revised as conditions change.

### **2. Falkirk Council Area**

The Falkirk Council area extends to some 300 sq. km. and is located in the middle of Scotland's Central Belt. Despite its relatively small geographical extent, the area exhibits a considerable variety of landforms and habitats.

The northern part is characterised by the relatively flat and fertile carseland adjoining the Forth Estuary, supporting arable farming and some improved pasture. The adjacent estuarine mudflats and salt marsh form part of the Firth of Forth SPA, which is of international importance for wintering birds. To the east a rolling landscape of good quality agricultural land is bisected by the scenic Avon Valley. The centre of the area, which is dominated by the river valleys of the Carron and the Bonny Water, is the most urbanised, and is traversed by the Forth and Clyde and Union Canals. To the south and west, the land rises up to the more remote and less populous Slamannan Plateau which contains the Slamannan Plateau SPA, an important habitat for Taiga Bean Geese and the Black Loch Moss SAC and also the Denny and Kilsyth Hills where rough grazing predominates with some commercial forestry.

The population of over 152,480 is focused within a network of small to medium sized towns. The principal town of Falkirk, with a population of around 37,500, is centrally located and serves as the main shopping, service and employment centre for the area. Separated from Falkirk by a narrow Green Belt are the urban areas of Larbert/Stenhousemuir, Polmont and Grangemouth. The former two are largely residential in character, whilst Grangemouth is home to the largest petrochemical complex in Scotland. In the western reaches of the area lie the settlements of Denny/Dunipace, Bonnybridge and Banknock, whilst to the east, overlooking the Forth, sits the town of Bo'ness. Some 18 smaller village communities are scattered across the rural part of the area.

### **3. Consultation Process**

In accordance with Section 15 (3) of the Environmental Assessment (Scotland) Act, Falkirk Council have agreed a 8 week statutory consultation period for statutory responses (Scottish Ministers/ Historic Scotland (HS)/ the Scottish Environmental Protection Agency (SEPA) and Scottish Natural Heritage). The public consultation period will also run for a period of 8 weeks.

### **4. Purpose of Environmental Report**

A Strategic Environmental Assessment is required under the Environmental Assessment (Scotland) Act 2005 to assess the likely significance of the FSCCS 2011-16 on the environment. The assessment indicates the environmental benefits and potential environmental impacts of implementing the document.

The SEA informs the FSCCS as part of an iterative process to ensure that the environment is considered within all elements of the strategy. This approach ensures that environmental issues are identified and resolved at a strategic level.

## **5. State of the Environment**

Baseline environmental information for the Falkirk Council area is provided in Section 4 of the Environmental Report. The environmental baseline plays a critical role in informing the development of the FSCCS. The process of developing the FSCCS has considered the potential for both positive and negative environmental effects and worked to maximise positive environmental effects and avoid negative impacts. The baseline environmental information will also assist in the future monitoring and review of the FSCCS.

## **6. Likely Significant Environmental Effects of the FSCCS and Proposed Mitigation**

The implementation of the FSCCS has the potential to have significant environmental effects on biodiversity, landscape, population and human health, air, water, soil, climatic factors, material assets and cultural heritage. The assessment of environmental effects of the FSCCS is presented in full in Section 6 of the Environmental Report.

The assessment concludes that the implementation of the FSCCS is not predicted to have any significant adverse environmental effects. Overall the FSCCS is predicted to have significant environmental effects in relation to biodiversity, population and human health, water, air and climatic factors.

## **7. Alternatives Considered**

It is a statutory requirement of an SEA to consider alternatives to achieve the desired outcomes of the FSCCS. The main alternatives considered were:

- producing or not producing the FSCCS
- different aims
- different objectives
- different theme sets

Conclusions from the assessment of alternatives are detailed in Section 8 of the Environmental Report.

## **8. Monitoring**

Following adoption of the FSCCS, the effects on the environment will need to be monitored. This will ensure that any unforeseen negative environmental impacts are identified and appropriate action taken. It will also help to identify whether positive environmental benefits are being maximised as far as possible. Falkirk Council will determine a suitable monitoring framework. Section 11 of the Environmental Report sets out the suggested monitoring framework.

## **9. Next Steps**

Responses received to the Environmental Report will be analysed alongside consultation responses to the consultative draft FSCCS. If necessary, changes will be made to the strategy before a finalised version is presented to committee for adoption. Once adoption has taken place, an SEA Post Adoption Statement will be issued and environmental monitoring will be agreed and implemented.

## Environmental Report

### 1. The Falkirk Sustainability & Climate Change Strategy 2011- 16

#### 1.1 Introduction

The Falkirk Sustainability and Climate Change Strategy 2011-2016 is intended to update and supersede the existing Sustainable Falkirk Strategy (published in 2006). The aim of the strategy is to mainstream sustainability considerations into all of the Council's activities and to influence those living and working in the local authority area to do so more sustainably. Climate change forms a cross cutting theme throughout the document, with this being reflected in the title.

The plan will identify broad objectives for sustainability and climate change, with the topics to be agreed through the consultation process. It will briefly review the Sustainable Falkirk Action Plan 2006 and subsequent actions, outlining the direction of a rolling programme of action plans in the long term and for the period 2011-16. In general, it aims to:

- Promote a clear understanding of, and commitment to sustainable development and climate change mitigation and adaptation, so that all people can contribute to the overall goal through their individual actions.
- Ensure that the Council's commitment to sustainability is fully integrated into all of its strategies, plans and programmes.
- Create objectives, indicators and targets for continuous improvement which can be monitored, reviewed and revised as conditions change.

#### 1.2 Key Facts

Name of Responsible Authority	Falkirk Council
Reason for PPS	A reviewed Sustainability Strategy is now required by the timetable set out in the 2006-2010 strategy. That commitment reflects the UK Government's commitment to deliver on Local Agenda 21 at the 1996 Earth Summit in Rio. Production of the strategy also meets Falkirk Council's obligations under the Local Government in Scotland Act which secures Best Value and its public duties arising from the Climate Change (Scotland) Act 2009.
Plan Subject	Local action to promote sustainable development and climate change issues in particular
Period Covered by Plan	2011-2016
Frequency of Updates	Reviewed and updated on a five yearly basis
Plan Area	The Falkirk Council Administrative Area
Plan Purpose	<ul style="list-style-type: none"> <li>• Promote a clear understanding of, and commitment to, sustainable development and climate change mitigation and adaptation, so that all people can contribute to the overall goal through their individual actions.</li> <li>• Ensure the Council's commitment to sustainability is fully integrated into all of its strategies, plans and programmes.</li> <li>• Create objectives, indicators and targets for continuous improvement which can be monitored, reviewed and revised as conditions change.</li> </ul>
Key Contact	Brenda Roddy, Sustainable Development Officer, Falkirk Council Development Services, Abbotsford House, David's Loan, Falkirk. FK2 7YZ Tel:01324 504712, Email: Brenda.rodgy@falkirk.gov.uk

Table 1: key facts

## **2. Relationship with Other relevant Plans and Programmes**

### **2.1 National**

The plan will help to deliver the UK Government's national sustainability strategy, Securing the Future and the Scottish Government's sustainability strategy, Choosing our Future. The plan aims to align itself with the Climate Change (Scotland) Act 2009 by supporting the delivery of the Climate Change Delivery Plan (2009) and the Climate Change Adaptation Framework (2009).

This plan is a revision of the Sustainable Falkirk Strategy 2006-11. Whilst the future directions and topics detailed within this plan supersede those in the original strategy, much of the background information and aspirations remain valid and continue to provide the context to this review.

### **2.2 Local**

The Falkirk Sustainability and Climate Change Strategy (FSCCS) 2011-2016 is a high level and wide ranging document. It aims to influence policy and action throughout Falkirk Council's operations, providing a clear line of sight from the Corporate Plan down to delivery of service plans and a plethora of strategies. In doing this, it will enable the Council to meet the requirement of the Local Government in Scotland Act that "a local authority which secures Best Value will be able to demonstrate a contribution to sustainable development." It will sit above and aim to influence corporate plans, programmes and strategies such as:

- Falkirk Council Strategic Community Plan
- Falkirk Council Single Outcome Agreement
- Falkirk Council Corporate Plan
- Falkirk Council Local Development Plan
- Falkirk Council Local Transport Strategy
- Falkirk Council Local Housing Strategy
- Falkirk Open Space Strategy and
- Falkirk Council Contaminated Land Strategy
- Falkirk Council Waste Strategy

The Falkirk Sustainability and Climate Change Strategy 2011-2016 will formally state Falkirk Council's sustainable development priorities and will be a public commitment to build these into all of its work. It is intended to inform and influence policy development and implementation across the Council's activities but will not engender projects directly. The commitments made in the strategy will be reflected in the action plans of more specialist strategies relating to issues such as waste, economic development and procurement.

*A full list of plans, programmes and strategies that provide a policy context for the FSCCS is provided in Appendix D.*

### 3. Strategic Environment Assessment Process

#### 3.1 Introduction

A Strategic Environmental Assessment is required under the Environmental Assessment (Scotland) Act 2005 to assess the likely significance of environmental effects of the SFCCS 2011-16.

The Environmental Report follows the Scottish Government guidance on undertaking SEA:

- Environmental Assessment (Scotland) Act 2005
- Scottish Executive SEA Toolkit, September 2006

This SEA Environmental Report has been produced by Falkirk Council.

#### 3.2 SEA Stages

There are a number of stages of SEA as shown in Table 2 below:

SEA Stage	SEA Process	Progress
Screening	Screening report submitted to the SEA Gateway. Determination of the requirement of SEA by Responsible Authority.	Screening report submitted to SEA Gateway on 06/08/2010.
Determination	Determination is made by the Responsible Authority as to the likelihood of significant environmental effects occurring	Determination made, advertised (08/08/2011) and submitted to the SEA Gateway on 05/12/2011
Scoping	Identification of the environmental issues to be addressed, the scope and the level of detail required for presentation within the environmental report.	Scoping Request submitted to the SEA Gateway on 08/04/2011.
Scoping Consultation	The Consultation Authorities (CAs) advise on the scope of the Environmental Report. At this stage the timescale for consultation on the Environmental Report following receipt of consultation responses is determined.	Responses to Scoping Request received from Consultation Authorities via SEA Gateway on 13/05/2011.
Environmental Report	The consultative draft FSCCS is assessed against the SEA Objectives and Indicators. Assessment of alternatives to the consultative draft FSCCS are also assessed. Requirements for mitigation and monitoring are reported.	Environmental Report submitted to SEA gateway together with Consultative Draft SFCCS
Environmental Report Consultation	The Consultation Authorities will provide a response on the Environmental Report via the SEA Gateway within 8 weeks of receipt. The CA's will advise on the content of the Environmental Report and the acceptability of the FSCCS. This consultation includes public consultation.	To Follow
Adoption	The FSCCS and the Environmental Report will be finalised taking into account the consultation responses. Once finalised, the Plan will be formally adopted.	To Follow
Post-Adoption SEA Statement	The SEA Statement summarises the assessment of the FSCCS and how the consultation responses have been taken into account.	To Follow
Mitigation and Monitoring	Following adoption, Falkirk Council will be responsible for monitoring the implementation of the FSCCS .	To Follow

Table 2: SEA Stages and Progress

## **4. Environmental Baseline Information**

### **4.1 Legislative Requirement**

Schedules 3 (2) and (3) of the Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes a description of the current state of the environmental characteristics likely to be significantly affected by the Plan, Programme or Strategy. A detailed environmental baseline in relation to the FSCCS 2011-16 is provided according to SEA topics. In addition, details of the likely future status of the environmental characteristics without the implementation of the FSCCS 2011-16 are given.

### **4.2 General Overview of the Environment**

The Falkirk Council area extends to some 300 sq. km. and is located in the middle of Scotland's Central Belt. Despite its relatively small geographical extent, the area exhibits a considerable variety of landforms and habitats. This is in turn influenced by the underlying geology, comprising mainly sedimentary rocks from the Carboniferous period, and the effects of glaciation, which deposited a range of drift materials and a characteristic landscape of mounds, ridges, terraces and raised beaches.

The northern part is characterised by the relatively flat and fertile carseland adjoining the Forth Estuary, supporting arable farming and some improved pasture. The adjacent estuarine mudflats and salt marsh form part of the Firth of Forth SPA, which is of international importance for wintering birds. To the east a rolling landscape of good quality agricultural land is bisected by the scenic Avon Valley. The centre of the area, which is dominated by the river valleys of the Carron and the Bonny Water, is the most urbanised, and is traversed by the Forth and Clyde and Union Canals. To the south and west, the land rises up to the more remote and less populous Slamannan Plateau and the Denny and Kilsyth Hills where rough grazing predominates with some commercial forestry.

The population of over 152,480 is focused within a network of small to medium sized towns. The principal town of Falkirk, with a population of around 37,500, is centrally located and serves as the main shopping, service and employment centre for the area. Separated from Falkirk by a narrow green belt are the urban areas of Larbert/Stenhousemuir, Polmont and Grangemouth. The former two are largely residential in character, whilst Grangemouth is home to the largest petrochemical complex in Scotland. In the western reaches of the area lie the settlements of Denny/Dunipace, Bonnybridge and Banknock, whilst to the east, overlooking the Forth, sits the town of Bo'ness. Some 18 smaller village communities are scattered across the rural part of the area.

The area benefits from excellent road, rail and sea connections. It is at the hub of the motorway and railway network, whilst Grangemouth is a major port.

The area has a long history of industrial activity, based on the local coal reserves, and played a key role in the industrial revolution in Scotland. The traditional industries have largely disappeared. This has left a legacy of vacant, derelict and contaminated land, although considerable progress has been made over recent decades in terms of land renewal. Today, although manufacturing is still important, particularly the chemical and petrochemical sector in Grangemouth, the economy is more diverse, with the service sector increasingly predominant. The area's good accessibility allows for the population to commute outwith the area to work.

Mineral extraction has diminished in recent times, with activity currently limited to hard rock quarrying in the west, sand and gravel extraction near Polmont and at Hills of Dunipace and some peat extraction at Letham Moss. However, there are still exploitable coal reserves within the area.

The area has a wealth of built and cultural assets reflecting its interesting and varied history, and its key location in relation to key events such as the Roman occupation of Scotland, the Jacobite rebellions of the 18th century and, most importantly, the Industrial Revolution.

Key environmental issues and the environmental characteristics of the area in relation to the following environmental topics are contained within later sections of this Environmental Report.

### **4.3 Relevant Aspects of the Current State of the Environment**

This section describes the current state of the environment in the Falkirk Council area and any existing problems. It also includes the SEA objectives that we propose to use in the SEA, plus suggested indicators and data sources. As the SEA for the FSCCS progresses, the following information will be reviewed, updated and expanded on as necessary.

### **4.4 Biodiversity, Flora and Fauna**

#### **Existing Environmental Characteristics**

##### **Habitats**

The Falkirk Council area has a rich diversity of habitats considering the relatively small land area. The most extensive habitats are improved grasslands, arable and horticultural land, built up areas and gardens. This reflects the area's intensive human occupation. Despite this, Falkirk still supports 24 of the 65 UK BAP priority habitats.

##### **Species**

There are 45 UK priority species (almost 4% of the UK Biodiversity Action Plan priority species) known to occur within the Falkirk Council area. Above and beyond these there are 19 other species which feature on the Scottish Biodiversity List. The Falkirk Area Biodiversity Action Plan review process has also identified a further 38 locally important species.

##### **Protected Sites**

Falkirk Council area has a number of local, national and internationally designated sites for nature conservation. These include 4 international designations: 1 Ramsar site; 1 Special Area for Conservation; and 2 Special Protection Areas. National designations include 10 SSSIs and local designations comprise 62 Wildlife Sites, 24 SINCS and 1 Local Nature Reserve.

##### **Evolution without the Implementation of the FSCCF 2011-16**

If the FSCCS were not produced, the Falkirk Area Biodiversity Action Plan would go some way towards raising awareness of biodiversity issues and encouraging further action to support protection of biodiversity. The absence of the FSCCS could mean that biodiversity is missed out of some higher level policies and developments by Falkirk Council, its community planning partners and other groups with an interest in land development and management.

### **4.5 Population and Human Health**

#### **Existing Environmental Characteristics**

##### **Population data & trends**

The population began to rise in the mid 1990s and there have now been almost 15 years of continuous growth. It currently stands at 152,480 (2009), having grown by over 5% in the last decade - compared to an overall increase in Scotland of 1.2%. The population is projected to increase further to 152,500 by 2011, 156,000 by 2016 and 162,300 by 2031. The growing population presents a major challenge in providing services to the community planning partnership and individual agencies.

##### **Health**

Life expectancy at birth for the Falkirk Council area was 75.9 years for males and 79.8 years for females for the period 2007-2009 (source: GROS). Falkirk has a higher life expectancy than the Scottish figure for males but Falkirk female life expectancy is lower than the national equivalent.

The Council area has a long industrial history dating back to the Industrial Revolution, which continues to the present, most notably in the form of the Grangemouth Industrial Complex.

##### **Evolution without the Implementation of the FSCCF 2011-16**

The FSCCS supports a healthy population and demographic balance, however, it does not directly protect them or directly deliver actions that contribute to population and health. This will be led primarily through the:

- Falkirk Joint Health Improvement Plan
- My Future's In Falkirk (economic development strategy)

In light of this, if the FSCCS were not produced, these strategies would go some way towards promoting population and human health issues. The absence of the FSCCS could mean that consideration of population and human health issues might be omitted from some higher level policies and developments by Falkirk Council, its community planning partners and other groups with an interest in population and health issues.

## **4.6 Soil**

### **Existing Environmental Characteristics**

Approximately 17% of agricultural land in the area is of prime quality (Classes 1, 2, and 3.1). This is mainly in the eastern part of the area, and between Larbert, Bonnybridge and Denny. No information on the quality of soil within the Falkirk Council area is currently held.

Falkirk Council has been successful in redeveloping many brownfield sites especially during the 1980s and 90s. Some 44.5% of housing completions in the period 1997-2003 have been on brownfield sites. The figure has reduced from a peak of 48.2% in 1997/98

Scottish Vacant and Derelict Land Survey (2002) showed 275ha (1% of total land area) is derelict. Of the national figure, Falkirk accounts for 3% of the DVC land (2000 figure). Generally there is a reducing trend of vacant and derelict land between 1995-2001 (from 437 ha to 270 ha).

### **Evolution without the Implementation of the FSCCF 2011-16**

The FSCCS supports the assessment, improvement and restoration of soil conditions across the Council area, however, it does not directly influence their management. The lead role in this is played by the Falkirk Council Contaminated Land Strategy. The absence of the FSCCS could mean that some Council services might fail to build consideration of these soil issues into their own specialist policy and project development.

## **4.7 Water**

### **Existing Environmental Characteristics**

#### **River basins and catchments**

There are over 220 km of rivers, streams and ditches with flowing water in the area. It has two major river catchments – the River Carron and the River Avon. The two canals also perform a significant land drainage function.

There are 87 separate pressures identified as impacting on the ecological status of water bodies within the Falkirk Council area. These pressures relate to point source pollution, diffuse source pollution, morphological alteration, flow regulation and abstraction.

In the Forth area 126km of rivers are failing to achieve good status due to the presence of toxic substances such as oils and metals. These can have a harmful effect on the plants and animals in the water and are present as a result of sources such as industrial discharges and surface water run-off from urban areas

The following table summarises the Water Framework Directive classification of river water bodies associated with Falkirk Council area.

<b>2008 Classification</b>	<b>Sum of LENGTH (KM)</b>
Good	38.6
Good ecological potential	24.3
Moderate	40.52
Moderate ecological potential	17.48
Poor	6.51
Poor ecological potential	38.13
<b>Total Sum of Area (KM)</b>	<b>165.54</b>

**Table 5: WFD classification of river water bodies**

Significant bodies of open water include the Black Loch, Loch Ellrig, and artificial reservoirs at Drumbowie and Denny.

The area has a significant length of coastline along the Forth Estuary, including highly urbanised sections at Grangemouth and Bo'ness and rural sections from South Alloa to the mouth of the River Carron and from Bo'ness to Blackness. Management issues are considered through the Forth Estuary Forum.

The marine environment within the Falkirk Council area includes the tidal mudflats along the Firth of Forth and the tidal areas of the River Carron. The vast majority of this area is designated as the Firth of Forth, SPA, SSSI and RAMSAR site due to its importance for wetland birds.

#### **Flood risk**

Coastal flooding is an issue along the estuary, with particular implications for Grangemouth and Bo'ness given the prospect of sea level rise. A flood defence scheme is under construction in Bo'ness and studies are underway to design a flood prevention scheme for Grangemouth although it is not expected to be constructed in the short term.

There are 5,986 residential and 220 commercial properties within the 1 in 200 year coastal flood plain, and as identified on SEPA's Indicative Coastal Flood Map. The majority of these properties are concentrated in Grangemouth but there are significant numbers within Airth, Bo'ness and Carronshore

There are localised flooding problems associated with a number of other watercourses in the area, most notably the River Carron and River Avon.

There are 4,155 residential and 134 commercial properties within the 1 in 200 year fluvial flood plain and as identified on SEPA's Indicative Fluvial Flood Map. The majority of these properties are concentrated in Grangemouth but there are also significant numbers within Bonnybridge, Carron and Dunipace.

#### **Evolution without the implementation of the FSCCS 2011-16**

The Local Development Plan remains the lead document in terms of directing inappropriate development away from river basins and catchments which are under pressure. Action on point source pollution caused by sewage disposal and the ecological impacts of water abstraction are also areas of concern, and action on these will be led by SEPA and Scottish Water respectively. Without the FSCCS it is predicted that some higher level Falkirk Council policy and project development might take place without considering wider ranging potential impacts, such as those on water.

## **4.8 Air**

### **Existing Environmental Characteristics**

#### **Air Quality Management Areas**

The Council has 4 Air Quality Management Areas (AQMAs) in total. One relates to sulphur dioxide in the Grangemouth area, two relate to nitrogen dioxide in Falkirk Town Centre and the final one relates to nitrogen dioxide objective in the Banknock and Hags area. Air quality is obviously inextricably linked to issues of human health.

The Council is required to review and assess air quality for seven pollutants in the Council area. The Scottish Government has set objectives for these seven pollutants. The air quality objectives are generally being met in the Council area. The exceptions are for sulphur dioxide, nitrogen dioxide and potentially particulate matter (PM10) in specific locations.

#### **Industrial Emissions (CO<sub>2</sub>, NO<sub>x</sub> & SO<sub>2</sub>)**

Industrial emissions of pollutants likely to affect air quality within the Council area include the Grangemouth refinery, Longannet power station, BP Kinneil processing facility and other related industrial operations. These industrial operations and other large processes are regulated by SEPA.

The nationally important petro-chemical industries in Grangemouth pose particular environmental issues. Sulphur dioxide is being closely monitored in the Grangemouth area. Sulphur dioxide concentrations depend on variations in industrial operations and meteorological conditions, e.g. wind direction.

#### **Evolution without implementation of the FSCCS 2011-16**

Whilst the FSCCS promotes reduction of pollutants and supports air quality improvements, its direct influence on the subject is generally limited. If it were not produced, air quality issues would continue to be addressed through Air Quality Reports for specific geographical areas, through the Environmental Health Team. Failure to produce the FSCCS could potentially result in Falkirk Council or partners developing high level policy documents and failing to take full consideration of environmental issues such as air quality.

#### **Biomass Emissions**

One area where the FSCCS may have a direct impact is through promotion of alternatives to fossil fuels. It is likely to support the development of technologies such as hydro, tidal, solar and wind power. It will also comment on the potential for utilising biomass, however, this will take into account the scale of such developments, their cumulative impact on air quality and wider sustainability issues. Without the FSCCS, biomass might be less likely to be considered as an option by the Council, resulting in continued reliance on fossil fuels and resultant CO<sub>2</sub> emissions. Without it, biomass might still be developed but possibly without due consideration to the wider implications in social, economic and environmental areas.

## **4.9 Material Assets**

### **Existing Environmental Characteristics**

#### **Housing Stock – Condition**

The results from the recent Council Stock Condition Survey confirm the percentage of properties now meeting the energy efficiency criteria of the SHQS has improved from 33% in 2005 when the Standard Delivery Plan was submitted to the Scottish Government, to approximately 70% in 2010.

The installation of the combined heat and power system to 324 high flats in 6 tower blocks in Callendar Estate has assisted in greatly reducing the energy bills for those householders. Where affordable, extending the gas network to allow the installation of modern efficient gas heating systems has been a priority, especially in high fuel poverty areas.

#### **Quality of the Built Environment**

General quality of the urban environment is very variable. Whilst there are some areas of high quality that project a positive image (e.g. Falkirk Town Centre, Callendar Park), the area's industrial background, insensitive past development and road improvements have all contributed to a level of fragmentation and neglect in the townscape.

#### **Low Carbon and Renewable Energy**

A renewable energy study was commissioned in 2003 for the Falkirk Council Local Plan with the aim to identify potential for four types of renewable energy technology. Results clarified constraints and identified some limited potential. Wind has potential for small scale commercial and community projects subject to key constraints. Biomass may have commercial potential. Hydro has very limited community scale potential and geothermal has potential wide application at domestic level (ground source heat pumps).

#### **Transport Infrastructure**

Falkirk Council area is well placed and connected to Central Scotland's motorway network and national rail links. Bus services are relatively dense, serving most communities reasonably regularly.

Grangemouth Port provides freight sea connections and the potential for multi modal freight interchange and is identified in NPF 2 as a national development

Traffic on the road network has grown by 22% (approx 2.25% per annum) between 1997 – 2007 based on data collected in the Falkirk area. This is higher than the Scottish average which has grown by 14% over the same period.

#### **Evolution without implementation of the FSCCS 2011-16**

Without the FSCCS it is predicted that policy and project development might fail to identify opportunities to optimise environmental impacts, for example, a transport type project might fail to fully consider the waste and biodiversity impacts of its work.

### **4.10 Climatic Factors**

#### **Existing Environmental Characteristics**

##### **UK Climate Impact Programme national and regional climate change scenarios**

The UKCP 09 data set presents findings down to a local level. Details of the UKCP projections for Falkirk over the next 100 years based on a medium and high emission scenario, presented in three time slices, are given in the Table below.

	2020s		2050s		2080s	
	Medium	High	Medium	High	Medium	High
Summer average temperature	+1.5°C	+1.5°C	+2.6°C	+3°C	+3.7°C	+4.7°C
Winter average temperature	+1.2°C	+1.2°C	+2.0°C	+2.2°C	+2.6°C	+3.2°C
Summer precipitation	-6.6%	-4.1%	-15.3%	-15.1%	-19%	-23.6%
Winter precipitation	+5.8%	+4%	+13.5%	+13.6%	+16.4%	+26.4%
Change in relative Sea Level (m)	0.1m	0.1m	0m	0m	0m	0m

*Table 9 – UKCP 09 Projections for Falkirk*

The main changes of importance to Falkirk (as drawn from the table above) include an overall rise in temperature, a decrease in summer rainfall and an increase in winter rainfall. It is also notable that the change in relative sea level is negligible. Nationally, the increased temperatures and changes in rainfall are being associated with risks of flooding, water shortage, rising sea levels and increased risk of diseases.

#### **Reducing greenhouse gas emissions**

In 2009, Falkirk Council published a Carbon Management Strategy, pledging to cut CO2 emissions by 20% by 2013 against a 2005/06 baseline. As a signatory to the Scottish Climate Change Declaration, the Council is committed to raising the awareness of communities and businesses in the area to the threats of climate change and how they can help to address the issues.

The results from the recent Council Stock Condition Survey confirm the percentage of properties now meeting the energy efficiency criteria of the SHQS has improved from 33% in 2005 when the Standard Delivery Plan was submitted to the Scottish Government, to approximately 70% in 2010.

#### **Effects of future climate change**

Coastal flooding is an issue along the estuary, with particular implications for Grangemouth and Bo'ness given the prospect of sea level rise. A flood defence scheme is under construction in Bo'ness and studies are underway to design a flood prevention scheme for Grangemouth although it is not expected to be constructed in the short term.

There are 5,986 residential and 220 commercial properties within the 1 in 200 year coastal flood plain and as identified on SEPA's Indicative Coastal Flood Map. The majority of these properties are concentrated in Grangemouth but there are significant numbers within Airth, Bo'ness and Carronshore

There are localised flooding problems associated with a number of other watercourses in the area, most notably the River Carron and River Avon.

There are 4,155 residential and 134 commercial properties within the 1 in 200 year fluvial flood plain and as identified on SEPA's Indicative Fluvial Flood Map. The majority of these properties are concentrated in Grangemouth but there are also significant numbers within Bonnybridge, Carron and Dunipace.

No comprehensive data exists on the risk of flooding from pluvial sources or from canals and reservoirs

#### **Evolution without implementation of the FSCCS 2011-16**

The subject of climate change is relatively juvenile and because of this, the FSCCS aims to play a key role in raising awareness of such issues across the Council, its communities and community planning partners. If the FSCCS were not to be produced, it is predicted that the Council, its partners and communities would be less likely to be aware of the need for mitigation, for adaptation and for the benefits that such action can bring. If the FSCCS was not produced, Falkirk Council would fail to live up to the commitments signed up to in the Scottish Climate Change Declaration in 2007.

### **4.11 Cultural Heritage**

#### **Existing Environmental Characteristics**

##### **World Heritage Sites**

The largest and most important concentration of archaeological interest is associated with the Antonine Wall which traverses the area. These include sections of the wall itself, forts and camps. The Frontiers of the Roman Empire (Antonine Wall) World Heritage site was designated in 2008.

##### **Scheduled ancient monuments**

The area has a wealth of archaeological sites and features including over 100 Scheduled Ancient Monuments.

##### **Canals**

The Forth and Clyde, and Union canals are perhaps the most important reminders of the area's industrial history. These were restored to navigation under the Millennium Link project. There are a range of other ancient monuments including various domestic and defensive prehistoric sites, some ecclesiastical sites, castles and houses, and the canals.

##### **Listed buildings**

There are 375 Listed Buildings in the Falkirk Area. There are 40 Category A Listed, 216 Category B listed buildings and 119 Category C listed buildings. There are 30 buildings on the Scottish Buildings at Risk Register.

##### **Gardens and designed landscapes**

Three sites identified within the Inventory of Gardens and Designed Landscapes lie in the Falkirk areas.

##### **Conservation areas**

There are currently 9 Conservation Areas. All Conservation Areas are programmed to have undergone an appraisal by August 2011. Following completion of the appraisal exercise, a suite of Conservation Area Management Plans will be prepared.

##### **Other areas or concentrations of historically interesting buildings**

There are various other areas of architectural, historic or townscape merit across the Council area which do not have conservation area status. To recognise this, the Falkirk Council Local Plan designated eight Areas of Townscape Value.

##### **Archaeology**

Historic Scotland is compiling an inventory of battlefields and is currently in the process of publishing them. The site of the Second Battle of Falkirk (Battle of Falkirk Muir) has been specially designated as of sufficient interest to be protected through the Local Plan. After the Antonine Wall, the next most

important archaeological sites are the Roman forts at Camelon and the associated temporary camps (one of the largest such concentrations in the world).

#### **Evolution without implementation of the FSCCS 2011-16**

A key role of the FSCCS is to encourage all policy makers and project developers to look at opportunities to link in with other priorities and optimise the benefits of their work. If the FSCCS was not produced, the protection of cultural heritage might not be considered in other high level policy documents.

## **4.12 Landscape**

### **Existing Environmental Characteristics**

#### **Landscape Character**

Despite its small geographical area, the area exhibits a range of landscape types which have been influenced by its underlying geology and glacial history. Landscape Character Assessments have identified the following landscape character types: river valley; lowland hill fringes; lowland plateau; lowland valleys and coastal margins.

Human settlement and industrial activity have a major impact on the landscape character. Particular features of note are:

- Expanding settlements which put pressure on their original landscape setting.
- Industrial development, particularly the Grangemouth complex which is visible over a wide area.
- Major infrastructure such as motorways, railways and overhead power lines which cross the area.
- The cumulative impacts of windfarm developments

#### **Areas of Great Landscape Value**

Three AGLV are currently designated by Falkirk Council: the Avon Valley/Slamannan Plateau; the River Avon valley; and the eastern end of the Touch/Campsie/Gargunnoch Hills.

#### **Green Belts**

Green Belts have been designated since 1962, and their coverage has expanded since. They tend to form a network of wedges of varying widths rather than a continuous 'belt'. Green Belt is under particular commercial development pressure, particularly the main area of designation which follows the M9/M876 corridor.

#### **Visual Impacts from Windfarms**

Windfarms currently operate in neighbouring local authority areas at Earlsburn, Braes of Doune, Fintry, Stirling and Greendykeside in North Lanarkshire. Consent has also been granted for windfarms at Burnfoot Hill in Stirling and Pates Hill which could have a cumulative visual impact with any future windfarm developments in the Council area. Proposal of Application notices have been submitted for windfarms at Rullie near Denny and Torwood. A planning application has also been submitted for a windfarm at Burnhead near Avonbridge.

#### **Urban Open Space**

A quantitative audit of open space categorised all open space within 1200m of a settlement according to the typology set out in PAN 65 and identifies, in table 5, the following amount of open space in the Falkirk Council area

<b>Open Space Type</b>	<b>Area (Hectares)</b>	<b>Hectares/1000 people</b>
• Public Parks and Gardens	• 840.66	• 5.62
• Private Gardens or Grounds	• 1827.57	• 12.21
• Amenity Greenspace	• 928.09	• 6.2
• Play space for children and teenagers	• 3.08	• 0.02
• Sports Areas	• 353.88	• 2.36
• Green Corridors	• 52.04	• 0.35
• Natural/Semi Natural Greenspace	• 4036.83	• 26.97
• Other Functional Greenspace	• 76.67	• 0.51
• Civic Space	• 4.64	• 0.03
• Population (2006 estimate):	• 149,680	•

**Table 12: Quantity of open space Falkirk Council wide**

**Evolution without implementation of the FSCCS 2011-16**

Without the FSCCS it is predicted that policy and development projects carried out by Falkirk Council, its partners and communities might fail to consider the role of renewable energy technologies in reducing the Council area's reliance on fossil fuels and the potential impact of project and policy development on the wider landscape.

## **5. Environmental Problems**

### **5.1 Biodiversity**

- Pressures from development, agricultural practices and other land uses, resulting in habitat disturbance
- Decline in national, regional and /or locally important species.
- Spread of invasive, non-native species.
- Loss of or damage to sites/areas of high ecological importance.
- Impacts of climate change on biodiversity

### **5.2 Population & Human Health**

#### **Population**

Predicted continued population growth combined with trends towards smaller household sizes, suggests that pressure for provision of housing and amenities will continue to grow. Population growth in the Grangemouth area will be restricted through Health & Safety Executive hazard consultation zones.

#### **Health**

Primary health issues are ageing population and Scotland-wide health issues. Consideration must also be given to the potential health impacts from the post industrial legacy of contaminated and potentially contaminated sites.

Open space within urban areas is also under increasing development pressure, particularly for residential development. Open space across the Council area has been identified as having a significant positive effect on human health and wellbeing. Countryside access provision has improved over recent years.

### **5.3 Soil**

#### **Abandoned Mineral Workings**

No comprehensive record of abandoned mineral workings is kept - this can present a number of problems. Mines can leave areas of unstable ground and abandoned mine workings can be a potential source of contamination. Such sites can detract from the visual quality of the area and can also present problems in the form of contaminated soils, pollution of water bodies and potential risks to human health.

#### **Contaminated Land**

There are no sites in the Falkirk Council area on the Contaminated Land Register, however, Falkirk's long industrial history (esp. iron foundries in the urban settlements) has left significant areas of contaminated land. To date approximately 1,650 sites have been identified as being potentially contaminated.

#### **Existing problems**

Potentially considerable amount of contaminated land. Scotland-wide issues of erosion, climate change affecting organic content.

### **5.4 Water**

#### **Water pollution**

Diffuse source pollution is a particular problem on the Bonny Water and the River Carron. Point source pollution is a more widespread problem adversely affecting the River Carron; River Avon; Forth Estuary; Bonny Water and the Union Canal.

#### **Flooding threats**

Coastal flooding poses a threat to areas Bo'ness and Grangemouth whilst fluvial flooding poses a threat to areas in Grangemouth, Bonnybridge, Carron and Dunipace. Areas at risk of pluvial flooding or flooding from canals or reservoirs have not yet been identified.

## **SUDS**

Development generally affects water runoff rates and water quality. SUDS is now required on sites as a matter of course and can offer opportunities for the promotion of biodiversity and improved water quality.

## **Threats to ecology**

Morphological impact on water bodies which are a problem in the Falkirk area include: barriers to fish migration, poor quality of riparian zone and wetland habitats, poor quality of river channel/bed and/or banks/shoreline and poor quality of modified water body (canals) habitat. Abstractions taken by Longannet Power station and Carron Valley Water Treatment Works are contributing to reduced ecological potential.

## **5.5 Air**

AQMAs have been designated for Grangemouth (SO<sub>2</sub> breach), Falkirk Town Centre (NO<sub>x</sub> breach), the Banknock and Hags areas (NO<sub>x</sub> breach).

Generally the level of emissions from individual vehicles is decreasing as emission control technologies improve, however, the increase in volume of traffic has counteracted this. Traffic in Falkirk town centre is causing increased concentrations of nitrogen dioxide and particulate matter. Air quality is being monitored closely in the Falkirk Town Centre area for exceedances of air pollution objectives. A potential future problem is with biomass combustion, both domestically and industrially.

Falkirk's air quality is affected by Longannet Power Station, but is unable to control the pollution (high SO<sub>2</sub> levels depending on wind direction) coming from this source outwith Falkirk area.

## **5.6 Material Assets**

### **Transport infrastructure**

Past and present policies have been largely unsuccessful in curbing car use. Car ownership in the area is still relatively low giving potential for further increases as levels of prosperity rise. Increasing car usage creates problems with the viability of bus services, particularly in rural areas.

Relatively low levels of congestion in the area, combined with relatively cheap and abundant car parking in the centres and employment sites makes it difficult to effect a significant change in modal shift.

Off-road cycle and footpath infrastructure is still insufficiently developed to make these modes attractive. School travel is a particular issue, with an increasing proportion of children taken to school by car.

The area is well served by the rail network but accessibility to stations is a problem, with car parking inadequate to cope with demand.

### **Minerals**

Recycling of materials and the use of materials from sustainable sources in new development is not routinely practised.

Levels of opencast coal extraction in the area have fallen in recent times due to market conditions, but this could change in the future. Existing opencast coal workings and quarries have significant cumulative environmental impacts with regard to traffic generation, noise levels, air quality and impact on landscape quality.

There is only one restoration plan for operational mineral workings in the Council area. This will reduce the capacity to mitigate negative environmental effects caused by workings in the future.

There is a favourable supply of hard rock aggregates found in the west of the area with further potential that is not being worked at present. Peat is worked at Letham Moss whilst coal bed methane is collected near Letham and Standburn.

## 5.7 Climatic Factors

### Flood risk

Climate change is likely to make the occurrence of extreme flooding events more common and more severe due to increased, more intense precipitation. Both coastal and fluvial flooding pose a threat to significant settlement areas. A full picture of Council wide flood risk does not yet exist and flood maps are not due to be prepared until 2013. There is still a risk that development sites could be allocated in areas of flood risk. There may be a need to abandon areas which are increasingly prone to flood risk and find land for relocating uses within the abandoned areas. The adequacy of existing flood defences to prevent flooding from an increasing flood risk due to climate change may need to be assessed.

### Energy Use & Carbon Dioxide Emissions

Falkirk Council area's per capita CO2 emission is about 19T p.a., however, this reflects the area's strong industrial activity. Domestic energy consumption accounts for about 14% of emissions in the area. The Council's energy consumption across all its buildings in 2009/10 was a total of 14,084 mWh from electricity and 11,897 mWh from gas. The Council's CO2 emissions arising from its buildings, travel and street lights in 2008/09 was about 40,354 tonnes (the figures for 2009/10 have not been finalised).

### Renewable Energy

The installation of renewable technologies across the Council area so far is limited. Existing installations include small scale domestic solar water heater, solar panels and wind turbines. Larger installations include a series of individual wind turbines at the harbour and across the area including one in Bainsford. Asda has installed biomass heating at its Grangemouth store and the Council is currently considering a planning application for a large scale biomass power station in Grangemouth.

Other initiatives include a combined heat and power system serving about 350 of the Callendar Flats which sends excess heat energy to Callendar House. In general, the potential for renewables is significant but still in its infancy.

### Construction

Regeneration of brownfield sites does not always make best use of existing buildings, with the preferred approach of demolition followed by new build. This can have the effect of increasing the imbedded use of carbon dioxide and other greenhouse gasses in the construction process.

### Effects of future climate change

The environmental consequences of large scale flooding of Grangemouth due to pollutant spillage are significant but have not been yet quantified. Construction of adequate flood defences in Grangemouth is part of proposals in NPF2 but it is not clear how this is to be financed or when it can be realistically delivered by. Large scale flooding may cause permanent damage to the quality of housing stock as it is increasingly difficult to get insurance for housing in areas at risk of flooding and large excesses can be demanded which make practical repairs unaffordable.

A partnership has been formed to examine the various and complex issues of coastal management. Falkirk is a partner in the Forth Estuary Forum which in 1999 produced the Forth Integrated Management Strategy. An initial natural flood management project is now in operation at Skinflats. There may be other opportunities for managing parts of the natural floodplain to attenuate flood waters but this may conflict with the increased desire to protect land of prime agricultural quality. Areas of prime agricultural quality tend to be within the floodplain.

## 5.8 Cultural Heritage

There is not yet a consistent approach to the assessment of new development proposals within the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site. An SPG on the subject is urgently needed.

No inventory of historic landscapes in the Falkirk Council area has yet been compiled (other than those on the Inventory of Historic Gardens and Designated Landscapes) and no policy exists to control development which might affect them. There is therefore a possibility of a gradual degradation of this element of the historic environment.

The Sites & Monuments Record includes many sites of uncertain date and character. No policy exists within the current Local Plan to require developers of those sites to undertake an archaeological sample of the site. This would enable a large proportion of unrecorded sites to be found.

## **5.9 Landscape**

The countryside continues to be subject to pressure for a range of types of development, including sporadic residential and industrial development, leisure/tourism proposals, telecommunications, new road proposals and other infrastructure. The cumulative impact of such incremental growth can be significant on the landscape quality.

Future developments such as windfarms, telecommunications and leisure/tourism developments within AGLV and near their boundaries can impact on landscape quality and value.

Green belts have largely been maintained, although there have been a key incursions within the Falkirk/Grangemouth Green Belt.

Although there are currently no windfarms under construction or operational within the Council area, there has been an increase in the number of windfarms entering the planning system. There are a number of windfarm developments in neighbouring Council areas are visible from the Falkirk Council area. Although the impact of these cannot be controlled it should be closely monitored.

There is a continuing and sustained loss of public open space being converted to garden ground.

There is continuing take up of greenfield sites in and around the area's settlements for residential and commercial development. In part this is due to historic commitments and in part due to the reducing supply of suitable brownfield sites in relation to housing demand.

Former mining works and associated industrial development has left scars in the landscape. Some sites have been successfully restored using bond money and grants from e.g., the Woodland Trust (at Roughcastle) for countryside access.

The Local Development Plan (LDP) is the policy document with the greatest direct influence on the future landscape of the Council area. The LDP has a strong sustainability theme, referring to the current sustainability strategy and the next revision will reflect the priorities set in the FSCCS. So whilst the FSCCS will influence the landscape, it will be indirectly. Without the FSCCS, it would be more difficult for the LDP policy writers to set local sustainability priorities, however, they would refer to national policy. Following the introduction of public duties arising from the Climate Change (Scotland) Act 2009, sustainability and climate change issues would definitely be included to meet the Council's legal obligation.

## **6. Assessment of Environmental Effects of the FSCCS 2011-16**

### **6.1 Introduction**

The purpose of the SEA assessment is to highlight any aspect of the plan which has the potential for environmental effects (both positive and negative) and determine whether the strategy can be adapted to maximise the positive impacts and minimise any negative impacts.

### **6.2 Assessment Methodology**

The assessment of the FSCCS is based on a matrix approach assessing the alternative aims and criteria that the strategy could adopt against the SEA topics which have been 'scoped in' to the assessment. The assessment matrix is presented in Section 6.4 below. The assessment will ask specific questions of each aim, objective or theme, then consider how each will be likely to perform and how they might be altered to enhance performance.

### **6.3 What will be assessed?**

#### **6.3.1 THE VISION**

Vision a. A Falkirk Council area where the sustainable use of resources and partnership working has resulted in economically and socially vibrant communities living in a flourishing natural environment.

Alternative visions might include the following:

Vision b. For Falkirk Council to conduct its operations in a manner considered to be sustainable with prudent use of resources

Vision c. For Falkirk Council, its communities and community planning partners to create and support an area where the environment is protected and enhanced for future generations

Vision d. For everyone in the Falkirk Council area to have improving quality of life through sustainable development, in an environment that is protected and enhanced for future generations.

#### **6.3.2 THE AIMS**

This is translated into the following aims:

Aim a. To improve Falkirk Council's own performance with regard to its sustainable development and climate change duties.

Aim b. To support and encourage the efforts of Community Planning partners and local people in tackling the issues of sustainable development and climate change.

Aim c. To pursue goals, indicators and targets for continuous improvement, which can be monitored, reviewed and revised as conditions change.

#### **Alternatives:**

Aim d. Support and encourage the promotion of sustainable development

Aim e. Improve Falkirk Council's performance with regard to sustainable development

Aim f. Support and encourage the promotion of sustainable development by local communities and partners

### 6.3.3 THE THEMES

The vision, aims and objectives will identify a variety of work streams which must be streamlined and prioritised to reflect the concerns of those living and working in the Falkirk Council area.

Theme a: Historical set - traditionally, such themes have included:

- o Energy/ climate change
- o Resources management (including waste)
- o Green travel
- o Protecting the physical environment

Theme b. Alternative set - an alternative approach might be that suggested in the UK sustainability strategy and reflected in the Scottish Government version which moves to themes such as:

- o Living Within Environmental Limits
- o Ensuring A Strong, Healthy And Just Society
- o Achieving A Sustainable Economy
- o Promoting Good Governance
- o Using Sound Science Responsibly

*Strategic Environmental Assessment will be carried out on all of the above.*

### 6.4 SEA Objectives

Topic	SEA Objective	SEA Question
<b>Biodiversity, flora and fauna</b>	1. Ensure the sustainable management of, and avoid damage to, designated wildlife sites and protected species.	o Does the option establish a management regime and provide protection to an agreed list of habitat and species?
	2. Maintain biodiversity, avoiding irreversible losses	o Does the option contribute to the maintenance of current levels of biodiversity and take into account the negative impact of non-native invasive species?
	3. Provide opportunities for people to come into contact with and appreciate wildlife and wild places.	o Does the option encourage the general public to experience wild places and wildlife?
<b>Population and human health</b>	4. Promote healthy living	o Does the option promote healthy living and access to open space?
	5. Ensure good quality of life for residents of the area	o Does the option contribute to a good quality of life for residents
	6. Encourage a healthy balance of age ranges and population density across local communities.	o Does the option encourage a healthy balance of age ranges and population density across local communities.
<b>Soil</b>	7. Reduce contamination and safeguard soil quality and quantity, particularly in respect of prime agricultural and rare soils.	o Does the option encourage the reduction of soil contamination and protection of soil quality and quantity?
		o Does the option encourage the protection of areas of carbon rich soils and peat?
<b>Water</b>	8. Maintain and restore key ecological processes (e.g. hydrology, water quality, coastal processes), to prevent deterioration and enhance the status of	o Does the option help to maintain & restore key ecological processes (relating to hydrology, water quality etc)?

	the water environment.	
	9. Reduce vulnerability to the effects of climate change	◦ Does the option help to reduce vulnerability to the effects of climate change
<b>Air</b>	10. Keep air pollution below Local Air Quality Management thresholds.	◦ Will the option lead to Local Air Quality Management thresholds to be breached?
	11. Minimise the need to travel by private car and promote sustainable transport modes	◦ Does the option minimise the need to travel by private car?
		◦ Does the option promote the use of sustainable transport modes?
<b>Material Assets</b>	12. Improve design quality within the built environment.	◦ Will the option improve design quality within the built environment?
	13. Reduce levels of traffic growth and congestion within the Council area.	◦ Will the option reduce levels of traffic congestion and slow down the rate of traffic growth on the road network?
	14. Encourage sustainable transport alternatives to single car journeys.	◦ As above
	15. Enable the development of low carbon and renewable energy technologies within the Council area.	◦ Will the option enable the development of low carbon and renewable energy technologies within the Council Area?
<b>Climatic Factors</b>	16. Reduce greenhouse gas emissions through sustainable location of development	◦ Does the option promote the sustainable location of development? ◦ Does the option reduce overall flood risk in a sustainable way?
	17. Improve Falkirk's resilience to climate change	◦ Does the option increase Falkirk's resilience to climate change
	18. Reduce overall flood risk in a sustainable way	◦
	19. Promote renewable energy generation;	◦ Does the option promote renewable energy generation?
<b>Cultural Heritage</b>	20. Protect and, where appropriate, enhance the historic environment.	◦ Will the option protect or enhance the historic environment?
<b>Landscape</b>	21. Protect and enhance the distinctive character of the landscape and ensure new development does not exceed the capacity of the landscape to accommodate it.	◦ Does the option protect and enhance the distinctive character of the landscape? ◦ Does the option ensure that new development does not exceed the capacity of the landscape to accommodate it?
	22. Protect and enhance areas of Great Landscape Value.	◦ Does the option protect and enhance areas of great landscape value?
	23. Improve the quality of and accessibility to open space	◦ Does the option improve the quality of open space? ◦ Does the option improve accessibly to open space?
	24. Ensure the quantity of open space in any settlement does not drop below an acceptable level	◦ Does the option maintain the quantity of open space within each settlement at an acceptable level?

Each of the proposed objectives for the FSCCS will be assessed according to the following matrix. Some of the assessments are relatively self explanatory, for example, reducing pollution will reflect positively on all of the environmental factors. Further justification is provided as required for each of the proposed objectives. The assessment has been grouped by environmental factor.

Significant Positive	↑↑
Positive	↑
Significant Negative	↓↓
Negative	↓

Neutral	$\leftrightarrow$
Unknown	?

Aim/ criteria	Biodiversity , Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Cultural Heritage	Landscape	Assessment commentary:	Proposed changes to the PPS or proposed mitigation / enhancement:
<b>1. PRODUCTION OF DOCUMENT</b>											
<b>1. Production of the document</b> <b>1.a. No FSCCS is produced</b>	↓	↓	↓	↓	↓	↓	↓	↓	↓	Falkirk Council, its partners and communities might fail to consider sustainable development issues in development of their policies and their everyday activities.	None. Do not choose this option.
<b>2. VISIONS</b>											
<b>Vision option a:</b> A Falkirk Council area where the sustainable use of resources and partnership working has resulted in economically and socially vibrant communities living in a flourishing natural environment.	↑	↑↑	↑	↑	↑	↑	↑	↑	↑	Out of all 4 options, this one is preferred as it is inclusive: it reflects the breadth of the sustainable development, ensuring that local communities and businesses are involved.	Adopt
<b>Vision option b:</b> For Falkirk Council to conduct its operations in a manner considered to be sustainable with prudent use of resources	↔	↔	↔	↔	↔	↔	↔	↔	↔	This would make it an internal document, excluding communities and community planning partners. It also over emphasises the economic element and dilutes consideration of environmental issues.	None. Do not choose this option.
<b>Vision option c:</b> For Falkirk Council, its communities and community planning partners to create and support an area where the environment is protected and enhanced for future generations	↑	↔	↑	↑	↑	↑	↑	↑	↑	Inclusive and strong in environmental terms but weak on economic element.	None. Do not choose this option.
<b>Vision option d:</b>	↑	↔	↑	↑	↑	↑	↑	↑	↑	This would make it an	None. Do not choose

For everyone in the Falkirk Council area to have improving quality of life through sustainable development, in an environment that is protected and enhanced for future generations.										internal document, excluding communities and community planning partners. It also over emphasises the economic element and dilutes consideration of environmental issues.	this option.
<b>2. AIMS</b>	<b>Biodiversity, Flora &amp; Fauna</b>	<b>Population &amp; Human Health</b>	<b>Soil</b>	<b>Water</b>	<b>Air</b>	<b>Climatic Factors</b>	<b>Material Assets</b>	<b>Cultural Heritage</b>	<b>Landscape</b>	<b>Assessment commentary:</b>	<b>Proposed changes to the PPS or proposed mitigation / enhancement:</b>
<b>Aim a:</b> To improve Falkirk Council's own performance with regard to its sustainable development and climate change duties.	↑	↑	↑	↑	↑	↑↑	↑	↑	↑	Focus on getting the Council's house in order in order to lead by example, picking climate change out as the key SD issue. Specific in scope.	Adopt
<b>Aim b:</b> To support and encourage the efforts of Community Planning partners and local people in tackling the issues of sustainable development and climate change.	↑	↑↑	↑	↑	↑	↑↑	↑	↑	↑	As above but focussing on wider community. Again, specific in scope.	Adopt
<b>Aim c:</b> To pursue goals, indicators and targets for continuous improvement, which can be monitored, reviewed and revised as conditions change.	↑	↑	↑	↑	↑	↑	↑	↑	↑	If used in conjunction with previous 2 aims this will cover the whole of the Council area and allow progress to be monitored.	Adopt
<b>Aim d:</b> Support and encourage the promotion of sustainable development	↑	↑	↑	↑	↑	↑	↑	↑	↑	Vague – does not specify who will support or be supported.	Do not adopt
<b>Aim e:</b> Improve Falkirk Council's	↑	↑	↑	↑	↑	↑	↑	↑	↑	Not as strong as option A which balances climate	Do not adopt

performance with regard to sustainable development											change with SD.	
<b>Aim f:</b> Support and encourage the promotion of sustainable development by local communities and partners	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	Vague – not as strong as option B.	Do not adopt
<b>4. THEMES</b>	<b>Biodiversity , Flora &amp; Fauna</b>	<b>Population &amp; Human Health</b>	<b>Soil</b>	<b>Water</b>	<b>Air</b>	<b>Climatic Factors</b>	<b>Material Assets</b>	<b>Cultural Heritage</b>	<b>Landscape</b>	<b>Assessment commentary:</b>	<b>Proposed changes to the PPS or proposed mitigation / enhancement:</b>	
<b>Theme set a:</b> The vision, aims and objectives will identify a variety of work streams which must be streamlined and prioritised to reflect the concerns of those living and working in the Falkirk Council area. Traditionally, such themes have included:  <ul style="list-style-type: none"> <li>• Energy/ climate change</li> <li>• Resources management (including waste)</li> <li>• Green travel</li> <li>• Protecting the physical environment</li> </ul>	↑	↑	↑	↑	↑	↑	↑	↑	↑	This approach is closer to the priorities set in the past by the Scottish Government. It is easier for communities and partners to understand issues when presented in this format, using language that they are more familiar with.		
<b>Theme set b:</b> An alternative approach might be that suggested in the UK sustainability strategy and reflected in the Scottish Government version which moves to themes such as:  <ul style="list-style-type: none"> <li>• Living Within Environmental Limits</li> <li>• Ensuring A Strong, Healthy And Just Society</li> </ul>	↑	↑	↑	↑	↑	↑	↑	↑	↑	This approach is based on the model used in the UK sustainability strategy and mirrored in the Scottish approach. These themes tie in with the Scottish Government's organisation of departments and attempts to show sustainable development as a cross cutting theme. Whilst this is useful, it is challenging to	Adopt	

<ul style="list-style-type: none"> <li>• Achieving A Sustainable Economy</li> <li>• Promoting Good Governance</li> <li>• Using Sound Science Responsibly</li> </ul>										<p>communicate to community planning partners and members of the public. This set lends itself better to building climate change and other environmental issues in as cross cutting themes. Whilst more abstract and therefore difficult for the public to understand, local policy documents such as this should reflect national strategy structures.</p>	
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## 7. Mitigation

The implementation of the SFCCS is not likely to have any significant adverse environmental effects on biodiversity (including flora & fauna), population and human health, soil, water, air, climatic factors, material assets, cultural heritage or landscape.

## 8. Selection of preferred alternatives

Following the assessment process illustrated in 7.4 the following decisions regarding the alternative aims and principles to be adopted by the SFCCS have been made:

### **Production of SFCCS**

Not producing the SFCCS was assessed as have a significant negative environmental impact. Therefore the option to produce the SFCCS (which was assessed as having only positive environmental impacts) was selected as the preferred alternative.

### **Vision**

Option A was assessed as having a greater environmental benefit than options B, C or D and was selected as the preferred alternative.

### **Aim 1**

Option A was assessed as having a greater environmental benefit than options B or C and was selected as the preferred alternative, with the mitigation/provisos noted within the assessment matrix.

### **Aim 2**

Option B was assessed as having a greater environmental benefit than options B or C and was selected as the preferred alternative, with the mitigation/ provisos noted within the assessment matrix.

### **Aim 3**

Option B was assessed as having a greater environmental benefit than options B or C and was selected as the preferred alternative, with the mitigation/ provisos noted within the assessment matrix.

When taken together, we felt that aims A, B & C gave the best comprehensive coverage of environmental issues for the Council area.

### **Theme selection**

Options A & B are two different ways of looking at environmental effects and were judged as being equal in this respect. With this issue being equal, the selection of 'theme b' as the preferred option reflects the Council's preference to reflect national policy at a local level, including replicating policy structures.

## 9. Monitoring

Progress on delivery of the FSCCS 2011-16 will take place through updates to the Corporate Sustainability Team approximately 5 times per year and through a detailed annual report to Environment & Heritage Committee. In addition to this, progress on delivery of climate change related issues will be reported through the Council's annual report on progress on the Scottish Climate Change Declaration.:

The key performance indicators detailed below will assist with the monitoring of progress. This list will change over time reflecting changes to more detailed policy documents such as the Single Outcome Agreement.

Topic	Proposed Indicator
<b>Biodiversity, flora &amp; fauna</b>	<ul style="list-style-type: none"> <li>◦ Reported condition of locally and nationally important wildlife sites.</li> <li>◦ Achievement of Local Biodiversity Action Plan targets.</li> <li>◦ Number of people actively engaged in biodiversity conservation and events.</li> </ul>
<b>Population &amp; human health</b>	<ul style="list-style-type: none"> <li>◦ Years of healthy life expectancy / infant mortality rate</li> <li>◦ Single Outcome Agreement indicator</li> <li>◦ Resident perception surveys</li> <li>◦ Length and use of Core paths Network</li> </ul>
<b>Soil</b>	<ul style="list-style-type: none"> <li>◦ Contaminated land</li> <li>◦ Amount/loss of greenfield / brownfield land and proportion available for re-use</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>◦ Single Outcome Agreement indicator</li> <li>◦ Biannual flood reporting system</li> </ul>
<b>Air</b>	<ul style="list-style-type: none"> <li>◦ To be agreed with Environmental Health Team</li> <li>◦ Single Outcome Agreement indicator</li> </ul>
<b>Material Assets</b>	<ul style="list-style-type: none"> <li>◦ To be agreed</li> <li>◦ Single Outcome Agreement indicator</li> </ul>
<b>Climatic Factors</b>	<ul style="list-style-type: none"> <li>◦ Net GHG emissions</li> <li>◦ Energy consumption</li> <li>◦ Percentage energy consumption from indigenous renewables</li> <li>◦ Number of road and rail closures due to weather events</li> <li>◦ Flood risk &amp; number of significant flooding events</li> <li>◦ Cost of insurance claims</li> <li>◦ Zero Waste Plan for Scotland</li> </ul>
<b>Cultural Heritage</b>	<ul style="list-style-type: none"> <li>◦ Single Outcome Agreement indicator</li> </ul>
<b>Landscape</b>	<ul style="list-style-type: none"> <li>◦ Single Outcome Agreement indicator</li> <li>◦ As identified in the Open Space Strategy</li> </ul>


## 10. Appendices

### Appendix A

#### *Draft framework for the Sustainable Falkirk & Climate Change Strategy 2011-16*

<b>Sustainable Development Strategy 2011 - 2016</b>
<b>1. Foreword</b>
<b>2. Introduction</b>
◦ Who Will Implement this Strategy?
◦ What Is Sustainable Development?
◦ What Is Climate Change?
◦ Hasn't The Earth's Climate Always Changed?
◦ Is Climate Change Science Sound?
◦ What Could Climate Change Means For Us?
<b>3. National Context</b>
<b>4. Scottish Context</b>
<b>5. Strategic Vision And Aims</b>
◦ How Are We Going To Tackle the Strategy?
◦ Living Within Environmental Limits
◦ Achieving A Sustainable Economy
◦ Ensuring A Strong, Healthy And Just Society
◦ Promoting Good Governance
◦ Using Sound Science Responsibly
<b>6. What Can You Do to Contribute?</b>
◦ How Do I Find Out More?

## Appendix B: Summary of Consultation Authorities' Comments on Scoping Report



**Scottish Natural Heritage**  
**Dualchas Nàdair na h-Alba**  
All of nature for all of Scotland  
Nàdar air fad airson Alba air fad

Brenda Roddy  
Sustainable Development Officer  
Planning and Environment  
Falkirk Council  
Abbotsford House  
David's Loan  
Falkirk, FK2 7YZ

6 May 2011  
Our ref: CNS/DC/FAL/SEA/00526

Dear Ms Roddy

**ENVIRONMENTAL ASSESSMENT (SCOTLAND) ACT 2005:  
FALKIRK COUNCIL - SUSTAINABILITY STRATEGY AND ACTION PLAN 2011-  
2016 – SCOPING REPORT**

I refer to your scoping report, sent to the Scottish Government SEA Gateway on 8 April 2011. In our role as a Consultation Authority, in accordance with Section 15(2) of the Environmental Assessment (Scotland) Act 2005, we have reviewed the above report. Our comments on the scope and level of detail to be included in the Environmental Report and on the duration of the proposed consultation period are set out below. Detailed comments are provided in the annex to this letter.

We note the above title of the strategy as *Sustainability Strategy and Action Plan 2011-2016*. Yet the Scoping Report refers to a strategy titled the *Falkirk Sustainability and Climate Change Strategy*. We also note that the Scoping Report states that a sustainability action plan will be produced at a later date. Therefore, our comments relate to the strategy titled the *Falkirk Sustainability and Climate Change Strategy*, as referred to in the Scoping Report.


**Scope of assessment and level of detail**

Subject to the specific comments set out below and in the annex to this letter, SNH is content with the scope and level of detail proposed for the environmental report.

SNH notes that a period of 6 weeks is proposed for consultation on the Environmental Report and is content with this proposed period.

**Concluding remarks**

I hope that these points are of assistance to you. Please note that this response is in the context of the Environmental Assessment (Scotland) Act 2005 and our role as a Consultation Authority. We understand that we will be separately consulted on our



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Tel 0131 316 2600 Fax 0131 316 2660 email: [forename.surname@snh.gov.uk](mailto:forename.surname@snh.gov.uk) www.snh.gov.uk

views regarding the Environmental Report and on the Strategy. If you have any points of clarification then please contact Neville Makan (tel: 013 1316 2649 or email: [neville.makan@snh.gov.uk](mailto:neville.makan@snh.gov.uk)) in the first instance.

Yours sincerely

Zoe Kemp  
Operations Manager  
Forth

cc: [sea.gateway@scotland.gsi.gov.uk](mailto:sea.gateway@scotland.gsi.gov.uk)  
[sea.gateway@snh.gov.uk](mailto:sea.gateway@snh.gov.uk)  
[sea.gateway@sepa.org.uk](mailto:sea.gateway@sepa.org.uk)  
[HSSEA.gateway@scotland.gsi.gov.uk](mailto:HSSEA.gateway@scotland.gsi.gov.uk)

## Annex

1. We note the intention to produce a consultative draft of the *Falkirk Sustainability and Climate Change Strategy* by July 2011, which will be accompanied by the SEA Environmental Report.

2. We suggest that the following may be included in your Appendix C, plans, programmes and strategies that provide a policy context for your Strategy:

- Directive 2003/30/EC "Biofuels Directive"
- Land Reform (Scotland) Act 2003 – Part 1 Access Legislation
- Scottish Land Use Strategy

3. We note that all SEA topic areas are to be scoped into the SEA and are content with this approach. We would highlight that the inter-relationship between these issues should also be considered.

SNH agree that short, medium and long-term effects; permanent and temporary effects; positive and negative effects and; secondary, cumulative and synergistic effects should be reported.

## 4. SEA Objectives

We note that some of the proposed SEA Objective indicators have to be identified and checked against your Single Outcome Agreement.

### Population and Human Health

You are aware of the growing body of evidence linking access to high quality natural environments and open space with physical and mental health benefits. We suggest, therefore, that the SEA questions and indicators associated with this topic area include reference to accessibility to open space and the wider path network, as well as quantity of open space.

### Soils

We believe that an existing environmental issue relating to soils is to safeguard the release of green house gases and carbon from soils. Protection of prime agricultural land and rare soils is also significant. Further guidance on rare soils and issues of national interest in relation to soil can be found at: <http://www.snh.gov.uk/dpccs/A465854.pdf>. We suggest, therefore, that the SEA Objectives and assessment questions associated with this topic area refer to the protection of these soil types.

### Water

It is worth noting in this section the negative impacts that non-native invasive plant species can have on the ecology and morphology of riparian zones.

### Material Assets

We believe that path network infrastructure, including Core Paths, is a significant material asset for Falkirk. Therefore, we suggest consideration of its inclusion within this topic area.

### Climate Change

It may be feasible to record significant flood events and their type e.g. coastal, fluvial or pluvial. This may help as an indicator for the SEA Objective to reduce overall flood risk.

### Landscape

The monitoring of Falkirk's Open Space Audit should help to indicate whether some of the SEA Objectives within this topic area are being met.

## 5. Report structure

Schedule 3 of the Environmental Assessment (Scotland) Act 2005 sets out the information to be included in the Environmental Report.

## 6. Assessment Methodology

This should include consideration of alternatives, assessment criteria and where known indicators and monitoring arrangements. In general, we are content with the assessment methodology proposed. We welcome the intention to approach the SEA as a means to improve the environmental performance of the strategy rather than as a box ticking exercise.

Brenda Roddy  
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Falkirk Council  
Abbotsford House  
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Our ref:AMN/23/3 HG  
Case ID: 201100182

6 May 2011

Dear Ms Roddy

**Environmental Assessment (Scotland) Act 2005  
Falkirk Council – The Falkirk Sustainability and Climate Change Strategy  
Scoping Report**

Thank you for consulting Historic Scotland on the scoping report prepared for the environmental assessment of Falkirk Council's Sustainability and Climate Change Strategy which was received in the Scottish Government's SEA Gateway on 8 April 2011. I have reviewed the Scoping Report on behalf of Historic Scotland in its role as a Consultation Authority under Section 15 of the above Act. This letter contains our views on the scope and level of detail of the information to be included in the Environmental Report (part 1) and the duration of the proposed consultation period (part 2).

**1. Scope of assessment and level of detail**

- 1.1 My understanding from the scoping report is that the strategy is being prepared to help the Council discharge its duties including those introduced under the Climate Change (Scotland) Act 2009. I note that it will provide an overview of sustainable development activities within the local authority with the aim of mainstreaming sustainability considerations into these and to influence those working and living within the area.
- 1.2 My understanding is that the SEA will assess the strategy's vision, aims and objectives and themes and reasonable alternatives to these. I note that the historic environment has been scoped in to the assessment. In our screening response we said we agreed that significant effects for the historic environment would be likely. However this was based on our understanding that the SEA would be assessing specific actions and projects. Given the high level nature of the aims and objectives I am uncertain as to whether significant effects for the historic environment will be discernable. I am content that you have taken the precautionary measure of scoping the historic environment in to the assessment.



but this might be something that you could keep under review as the assessment progresses. Subject to my other comments below I am however content with the scope and level of detail proposed for the assessment.

**2. Detailed comments on the Scoping Report**

*Baseline Information and Objectives*

2.1 The scoping report includes a relatively comprehensive environmental baseline for the plan area. I welcome that you have gathered information, not only on the number of assets present but at their condition and related environmental issues. I am content with the environmental objective that you have proposed although it might have been possible to make the assessment questions more specific to the issues identified in the baseline. I also like the idea of trying to tie indicators in with those included in the Council's SOA, but you should ensure that any indicators identified are still relevant to the content and likely effects of the strategy.

2.2 Simply for information Historic Scotland has recently published [Scotland's Historic Environment Audit 2010 \(SHEA\)](#) which contains information about baseline trends in the historic environment and should be a useful resource in identifying relevant environmental problems.

*Alternatives and Mitigation*

2.3 I welcome that you have sought to identify alternatives for each of the aspects of the strategy that you propose to assess. You should ensure that the alternatives identified are those that arose as part of the plan-making process and not for the purposes of SEA.

**3. Consultation period for the Environmental Report**

3.1 I am content with the period of 8 weeks proposed for the consultation on the Strategy and Environmental Report. For administrative purposes, Historic Scotland consider that the consultation period commences on receipt of the relevant documents by the SEA Secretariat.

None of the comments contained in this letter should be construed as constituting a legal interpretation of the requirements of the SEA Act. They are intended rather as helpful advice, as part of Historic Scotland's commitment to capacity-building in SEA. Please contact me should you wish to discuss this response.

Yours sincerely

Hannah Garrow  
Senior Development Assessment (SEA) Officer





Our ref: PCS113309  
SG ref: SEA00526

If telephoning ask for:  
Sofia Billett

Brenda Roddy  
Sustainable Development Officer  
Falkirk Council  
Abbotsford House  
David's Loan  
Falkirk  
FK2 7YZ

By email only to: [sea\\_gateway@scotland.gsi.gov.uk](mailto:sea_gateway@scotland.gsi.gov.uk)

12 May 2011

Dear Ms Roddy,

**Environmental Assessment (Scotland) Act 2005  
Falkirk Sustainability & Climate Change Strategy 2011-2016- Scoping consultation**

Thank you for your Scoping consultation submitted under the above Act in respect of the Falkirk Sustainability and Climate Change Strategy 2011- 2016. This was received by SEPA via the Scottish Government SEA Gateway on 8 April 2011.

As required under Section 15(2) of the Act, we have considered the document submitted and comment as follows in respect of the scope and level of detail to be included in the Environmental Report (ER). Generally, the scoping report provides clear and relevant information on the proposed scope and level of detail of the assessment and covers most of the aspects that we would wish to see addressed at this stage. Subject to the comments below, we are generally content with the scope and level of detail proposed for the Environmental Report.

The Scottish SEA Toolkit (available for download at: [www.scotland.gov.uk/Publications/2006/09/13104943/0](http://www.scotland.gov.uk/Publications/2006/09/13104943/0)) provides guidance to Responsible Authorities about the type of information that is expected to be provided at each SEA stage. We have used the toolkit to inform our detailed scoping response which is attached as Annex 1.

On completion, the Environmental Report and the Strategy to which it relates should be submitted to the Scottish Government SEA Gateway ([sea\\_gateway@scotland.gsi.gov.uk](mailto:sea_gateway@scotland.gsi.gov.uk)) which will forward it to the Consultation Authorities.

Should you wish to discuss this screening consultation, please do not hesitate to contact me on 0131 2737333 or via our SEA Gateway at [sea\\_gateway@sepa.org.uk](mailto:sea_gateway@sepa.org.uk)

Yours sincerely

Dr Sofia Billett  
Senior Planning Officer (SEA)  
Planning Service



Chairman  
David Sigworth

Chief Executive  
Dr Campbell Gemmett

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**Appendix 1: Comments on the Scoping consultation**

**General comments**

1. Generally, the scoping report provides clear and relevant information on the proposed scope and level of detail of the assessment and covers most of the aspects that we would wish to see addressed at this stage. Subject to the comments below, we are generally content with the scope and level of detail proposed for the Environmental Report.
2. We provide some further comments below in relation to additional references and the proposed approach to the assessment that we hope you find helpful. For ease of reference our response follows roughly the same structure of the scoping report.
3. In undertaking the environmental assessment you may also wish to refer to the SEA guidance on how to take account of air, water and soil available at [www.seguidance.org.uk](http://www.seguidance.org.uk) and the guidance on how to take account of climate change in SEA available at [www.scotland.gov.uk/Publications/2010/03/18102927/0](http://www.scotland.gov.uk/Publications/2010/03/18102927/0).
4. As the environmental assessment is undertaken to inform the preparation of the Strategy, we would be pleased to assist in any way we can. Please do not hesitate to contact me to informally discuss any aspects of this response or, as you take the assessment forward, to discuss assessment findings.

**Detailed comments**

**1. Context**

5. We found the information provided in these sections useful in relation to the background to the Falkirk Sustainability and Climate Change Strategy. We note that the purpose of the Strategy is to mainstream sustainability considerations into all of the Council's activities and to influence those living and working in the local authority area to do so more sustainably. Climate change will form a cross cutting theme throughout the Strategy in order to contribute to the public body duties required under the Climate Change (Scotland) Act 2009.
6. We note that the Strategy will inform and influence policy development and implementation across the Council's activities, however the commitments made in the strategy will be delivered through specialist strategies and action plans and therefore the Strategy will not identify projects directly.
7. The relationship with other relevant Plans and Programmes is described in paragraphs 1.1.7 – 1.1.9, with a full list of plans, programmes and strategies and a summary of their environmental objectives provided in Appendix C. We consider that generally the relevant PPS for the SEA topics within our remit have been considered in the scoping report. In addition you may wish to consider the Flood Risk Management (Scotland) Act 2009, which requires a more integrated and sustainable approach to flood risk management and prescribes a new responsibility for the Scottish Ministers, SEPA, Scottish Water and local authorities to exercise their flood risk related functions with a view to reducing overall flood risk.
8. In relation to the SEA topic Climate Change, you may also consider highlighting how some of the climate change adaptation objectives and actions may be relevant to the Strategy in order to increase the area's resilience to the projected effects of climate change. Under the

SEA topic Material Assets, you may also wish to fully consider the objectives of the Zero Waste Plan for Scotland, which is "to achieve a zero waste Scotland, where we make the most efficient use of resources by minimising Scotland's demand on primary resources, and maximising the reuse, recycling and recovery of resources instead of treating them as waste".

9. We note that the assessment will make use of SEA objectives to ask specific questions of the Strategy's Vision, aims and objectives to consider the likely environmental effects. 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. We provide detailed comments on these within each SEA topic.
10. We note that an assessment matrix will be used to report on the environmental effects of the Vision, aims and objectives and includes a comments column to describe how the assessment conclusions have been reached for each environmental topic and we welcome this. We would recommend that enough information and justification is provided in the Environmental Report to allow the Consultation Authorities to understand how the results of the assessment were reached. We welcome the commitment to use the assessment process to inform the selection of the preferred options and enhance the environmental performance of the Strategy.
11. We note that mitigation measures will be suggested in order to address potential negative environmental effects and that mitigation may extend to recommending that an alternative is not selected as a preferred option and we support this approach. We consider that 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. We also welcome the link between the assessment findings and the proposed changes to the plan or proposed mitigation measures as shown in the sample summary matrix.
12. We welcome the early consideration to a monitoring approach particularly the consideration of adequate monitoring indicators linked to the SEA objectives and we note that the indicators proposed are still under development (Appendix B). It would be helpful if the Environmental Report included a brief description of the measures envisaged to monitor any significant environmental effects identified through the assessment process.

## 2. Scope and Level of Detail Proposed for the Environmental Assessment

13. We note that it is considered that the Strategy has the potential to have significant environmental effects on all SEA topics and therefore all SEA topics are scoped into the assessment. It is also considered that the degree of some of the effects may be unknown at this stage and we are content with this approach.
14. We welcome the detailed consideration of baseline issues and the likely future changes without the implementation of the plan. We are general content with the level of baseline detail provided. In addition to the issues identified, we provide some further comments below that we hope you find helpful.

### Soil

15. We welcome the consideration of baseline data on soil and are generally content with the proposed SEA objectives. As you undertake the assessment, you may also wish to consider the need to protect areas of carbon rich soils and peat. Disturbance of carbon rich soils, particularly peat and the loss of their integrity and stability is likely to lead to the

release of stored carbon, contributing to greenhouse gas emissions and climate change, as well as potentially resulting in the pollution/siltation of watercourses with potential significant adverse effects on their ecological status. Impacts on carbon rich soils may result for example, from wind farm development.

16. As the Strategy is likely to support renewable energy developments, it may offer opportunities to protect areas of peatland from erosion and degradation and this is likely to result in positive effect on the environment in relation to the SEA topics soil, climatic factors and water. We note that a SEA objective has been included in relation safeguarding soil quality and quantity. You may wish to specifically refer to the protection of peat resources.

### Water

17. We welcome the detailed consideration of the pressures and impacts on the ecological status of the water environment and the acknowledgement of flooding issues within the Strategy area. In relation to the SEA objectives, you may wish to align your draft objective with the Water Framework Directive objective "to prevent deterioration and enhance the status of the water environment".
18. We support the draft SEA objectives and assessment questions in relation to flood risk provided under the SEA topic water and climatic factors. As well as considering how to reduce the vulnerability of the area to the likely effects of climate change, it is important to consider the flood risk issues that already exist in the area, reducing overall flood risk in a sustainable way.

### Air

19. We welcome the consideration of baseline data on air and are content with the proposed SEA objectives. You may also wish to consider the interrelationship between air quality and human health and the potential negative effects on human health from poor air quality (air quality objectives that are exceeded in the Air Quality Management Areas were introduced to protect human health). This poor air quality is likely to particularly affect populations with specific health problems such as poor respiratory health, e.g. ex-mining communities.

### Material Assets

20. You may wish to include a specific reference in the SEA objective and assessment questions to the need to contribute to zero waste targets. There may be opportunities to enable the development of renewable energy from waste sources in line with Scotland's renewable energy goals. This may include the recovery and utilisation of the electricity and/or heat from resources which cannot be reused or recycled for greater environmental or economic benefit.

### Climatic Factors

21. We welcome the consideration of baseline data on climatic factors and are content with the proposed SEA objectives. You may also find it helpful to refer to the guidance on how to take account of climate change in SEA available at [www.scotland.gov.uk/Publications/2010/03/18102927/0](http://www.scotland.gov.uk/Publications/2010/03/18102927/0).

*Summary of the proposed level of detail of assessment*

22. We welcome the clear description of the aspects of the Strategy that will be subject to environmental assessment. We understand that the assessment will cover all aspects of the Strategy that are likely to have significant environmental effects including the Vision, aims, objectives and priority themes, as well as reasonable alternatives.
23. We note that Sustainability actions will be delivered through specialist strategies and action plans which themselves may be subject to SEA. As you undertake the assessment, there may be effects that will be uncertain at strategic level as they will depend on implementation. You may wish to highlight this uncertainty and refer to the lower level plans that will be better place to consider potential environmental effects in more detail.

**3. Alternatives & Mitigation**

24. We note the early consideration of potential alternatives and we are content with the proposed approach to the assessment of alternatives.
25. We note that mitigation measures will be proposed to address any significant environmental effects identified. As stated above, we support the approach to mitigation proposed in the scoping report. We would also welcome the consideration of opportunities for improvements within the assessment findings through enhancement actions.
26. The Environmental Report should clearly identify any changes made to the Strategy as a result of the environmental assessment and/or recommendations for changes. It would be useful for the Environmental Report to clearly set out how the detailed mitigation measures proposed are going to be delivered through the implementation of the plan, i.e. you may wish to describe some of the mechanisms that will ensure that the mitigation measures proposed in the SEA are implemented.
27. We consider that mitigation is a crucial part of SEA in that it offers an opportunity to not only address potential adverse effects of a plan, but also to make a plan even more positive than it already may be (enhancement measures). It would be extremely helpful to set out all mitigation measures proposed in a way that clearly identified: (1) the measures required, (2) when they would be required and (3) who will be required to implement them.
28. We note that the time period proposed for consultation on the Environmental Report and the draft Strategy is 6 weeks and we are content with this consultation period.

## Appendix C: Summary of Response to Consultation Authorities' Comments on Scoping

<b>SNH Comment</b> (as numbered in SNH response)	<b>Response</b>
1	Noted
2	Noted. Policy references have been added to Appendix C.
3	Noted
4.1	Consideration of the benefits of access to open space and the wider paths network has been added to the SEA questions
4.2	Consideration of protection of prime agricultural land and rarer soils as well as soil's role as a carbon sink have been incorporated into the SEA into the SEA questions and objectives.
4.3	The role of non native invasive species has been incorporated into SEA questions relating to biodiversity
4.4	The role and value of the paths and Core Path Network have been incorporated into SEA questions and objectives relating.
4.5	Noted – flooding events has been added to the list of indicators
4.6	Noted – the Open Space Audit will be referred to for monitoring purposes
5	Noted
6	Noted

<b>Historic Scotland Comment</b> (as numbered in HS response)	<b>Response</b>
1	Noted
	Noted – the issue will remain under review
2.1	Noted
2.2	Noted
2.3	Noted – alternatives posed in the draft strategy will be reviewed after consultation
3	Noted

<b>SEPA Comment</b> (as numbered in SEPA response)	<b>Response</b>
1 -	Noted
2	Noted
3	Noted
4	Noted
5	Noted
6	Noted
7	Noted. The Flood Risk Management (Scotland) Act has been added to appendix D
8	Noted. Climate change adaptation objectives and actions are addressed in sections 4.10 and 5.7 where environmental problems raised include adapting, increasing resilience and coping with a changing climate. Noted. Falkirk Council's waste strategy is mentioned as one of the specialist policy documents (section 2.2)the Zero Waste Plan for Scotland is listed in appendix D.
9	Noted
10	Noted
11	Noted

12	Noted – see section 9
13	Noted
14	Noted
15	Noted. Protection of soils rich in carbon is referred to in 6.4 and 5.3
16	Noted – see previous comment
17	Noted – objective has been amended to align.
18	Noted
19	Noted – section 4.8 amended.
20	Noted – monitoring of waste will be covered in section 9 under the climate change topic reflecting the strategy's interest in the issue as both a resource and a greenhouse gas issue.
21	Noted
22	Noted
23	Section 2.2. clarifies the role of the sustainability and climate change strategy as an overarching document and lists a series of the key documents that will deliver in detail
24	Noted
25	Noted
26	Noted – see section 7
27	Noted – see section 7
28	We have decided to extend the consultation period to 8 weeks

**Appendix D: Policy context for the guidance**

SEA Topic	Summary of Environmental Objectives	Plan, Programme or Strategy
Biodiversity, Flora and Fauna	Biodiversity policies from international to local levels aim in particular to conserve habitats, species and ecosystems. Halting the decline of key species is important, and where possible remedial action and enhancement should be implemented in degraded areas. Policies also note the importance of an ecosystem approach – an holistic, landscape approach to biodiversity conservation that goes beyond the traditional emphasis on protecting individual sites.	Council Directive 79/409/EEC on the conservation of wild birds Council 92/43/EEC the conservation of natural habitats and of wild fauna and flora Wildlife and Countryside Act 1981 Conservation (Natural habitats &c.) Amendment (Scotland) Regulations 2007 Nature Conservation (Scotland) Act 2007 UK Biodiversity Action Plan Scotland's Biodiversity – It's In Your Hands. Falkirk Area Biodiversity Action Plan
Population and Human Health	Policy outlines the need to seek to improve health and quality of life.	Improving Health in Scotland – the Challenge My Future's In Falkirk (economic development strategy) Falkirk Joint Health Improvement Plan Land Reform (Scotland) Act 2003 –Part 1 Access Legislation
Soil	Policies on soil seek to protect resources from a range of impacts, including soil sealing by development, increased susceptibility to erosion and soil pollution.	Scottish Soil Framework (2009) Scottish Land Use Strategy
Water	Water related policies aim to protect water resources, and achieve an improvement in their ecological condition where appropriate. River Basin Management Plans, which were prepared under the Water Framework Directive and WEWS Act set specific objectives for the protection and improvement of water resources within each river basin.	Water Framework Directive 2000/60/EC Water Environment and Water Services (Scotland) Act 2003 (WEWS) Act Scotland River Basin Management Plan (2009) Flood Risk Management (Scotland) Act 2009

SEA Topic	Summary of Environmental Objectives	Plan, Programme or Strategy
Air	Air quality targets have been set at the European and UK levels. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland sets objectives for Particulate Matter (PM), oxides of nitrogen (NOx), sulphur dioxide (SO <sub>2</sub> ) and ozone (O <sub>3</sub> ) amongst others. Good progress is being made towards meeting them.	2008/50/EC Directive on ambient air quality and cleaner air for Europe The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007) Directive 2003/30/EC "Biofuels Directive"
Climatic factors	Policies focus on the need to cut greenhouse gas emissions. National targets are for an 80% reduction by 2050 making a contribution to climate change abatement targets set at the UK, EU and international levels. Energy policy highlights the importance of energy efficiency, and the need to achieve a shift from fossil fuels to renewable sources of energy. The importance of adequate, planned adaptation to future climates is noted in order to increase the resilience of communities, and natural and economic systems. In addition, policy recognises the importance of increasing public engagement and awareness through co-ordinated awareness programmes.	UK Climate Change Act 2008 Climate Change (Scotland) Act 2009 Climate Change Delivery Plan (2009) Climate Change Adaptation Framework (2009) UK Low Carbon Transition Plan (2009) Conserve and Save: Consultation on the Energy Efficiency Action Plan (2009) Low Carbon Economic Strategy (Scotland), November 2010 Draft Report on Proposals and Policies (Scotland), November 2010 Public Engagement Strategy (Scotland), December 2010 Energy Efficiency Action Plan (Scotland), October 2010 Public Bodies Climate Change Duties: Putting Them into Practice (Scotland), Dec 2010
Cultural heritage	Historic environment policies aim to identify and protect historic buildings and sites from inappropriate development and damage. Policies extend beyond specific designated sites to reflect the value of wider townscapes, the setting of monuments and historic buildings, and wider cultural landscapes.	Scottish Historic Environment Policy (SHEP) 2009 Scottish Planning Policy (SPP) Managing Change in the Historic Environment Guidance Notes (consultation drafts) Falkirk Council Cultural Heritage Strategy

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Landscape	Landscape policies aim to not only safeguard protected areas, but to recognise and conserve wider landscapes. These may not be formally designated but make an important contribution to the quality of environment.	Council of Europe, European Landscape Convention (2000) SNH Landscape Policy Framework SNH Wildness in Scotland's countryside SNH Natural Heritage Futures SNH National Scenic Areas Programme
Material assets	Agricultural and forestry policies promote sustainable land use, environmental protection and stewardship, and emphasise the importance of delivering public goods out with market mechanisms. Policy sets a target of increasing forest cover to 25% of land cover. The planning system highlights the need to allow the development of high quality, well designed, energy efficient housing. Efficient design will contribute to climate change abatement targets, as will transport emission reductions.	Scottish Forestry Strategy Strategic Transport Review Project National Transport Plan Local Housing Strategy Scottish Planning Policy A Vision for Scottish Agriculture The Zero Waste Plan for Scotland