

FALKIRK COUNCIL STRUCTURE PLAN FIRST ALTERATION

TECHNICAL REPORT FIVE

STRATEGIC ENVIRONMENTAL ASSESSMENT – ENVIRONMENTAL REPORT

1. INTRODUCTION

Strategic Environmental Assessment (SEA)

1.1 Strategic Environmental Assessment (SEA) is a systematic method of assessing the likely effects on the environment of plans and programmes and integrating environmental considerations into their preparation. Under European Directive 2001/42/EC, SEA is required for any plans and programmes where they are:

- likely to give rise to a significant environmental impact
- required by legislative, regulatory or administrative means and
- prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, telecommunications, tourism, town and country planning or land use and which sets a framework for future development consent of projects.

1.2 The Directive came into effect on 21 July 2004, and applies to plans commenced after that date, or adopted after 21 July 2006. The Scottish Executive has published Regulations that implement the Directive. These Regulations will be superseded in due course with primary legislation. A draft Bill has already been consulted on that considerably extended the scope of the Directive by requiring SEA to apply to all strategies, plans and programmes developed by the public sector in Scotland.

1.3 The core requirements of the Directive are:

- Preparation of an Environmental Report which describes the likely significant effects on the environment of implementing the plan, including alternatives;
- Consultation with environmental authorities and the public on the scope and content of the Environmental Report.
- Account to be taken of the Environmental Report in decision-making; and
- Monitoring of the plan's significant environmental effects

Falkirk Council Structure Plan Alteration and the SEA Requirement

1.4 The Falkirk Council Structure Plan was approved in June 2002. In December 2003 the first annual monitoring report for the Structure Plan was approved by Falkirk Council. This report concluded that there were a number of areas where a review would be justified. A legal notice of intention to prepare an alteration to the plan was made and, on the 13th of April 2004, a Strategic Choices Report was approved by Falkirk Council with the recommendation to prepare a formal Alteration to the Falkirk Council Structure Plan. The Report identified three main choices as a) the degree of population growth and distribution of new housing development; b) the direction of future retail policy, and c) the take-up of new strategic development opportunities. It was considered that a review of these topics could incur a significant environmental impact, and as part of a plan which sets the framework for

future development consents, the Falkirk Council Structure Plan First Alteration requires a SEA.

- 1.5 Falkirk Council is attempting to meet the requirements of the Directive by progressing a SEA as an integral part of the alteration process. The Environmental Report relating to the draft version of the Alteration was presented to Falkirk Council in June 2004. Following consultation with relevant agencies on both the alteration and the SEA, both these documents have been finalised and approved by Council. This document therefore is the finalised Environmental Report relating to the finalised Structure Plan Alteration, and appears as a technical appendix to the Structure Plan Alteration. The Alteration will now be submitted to the Scottish Ministers for approval.

2. METHODOLOGY

Legislative Requirements

- 2.1 The production of the Environmental Report is a core requirement of the Directive. The Environmental Report must:

- Outline the main contents and objectives of the plan and set its context
- Collate background environmental data for the area in order to describe the current state of the environment,
- Set out the known environmental problems and issues that the plan should address.
- Explain the likely evolution of the environment without the plan's implementation
- Explain how the environmental effects of the plan were scoped with particular regard to the required consultation with environmental authorities
- Identify the key environmental protection objectives which are relevant to the plan, and against which it will be assessed
- Report the results of the assessment (the key environmental impacts)
- Identify alternatives considered, their likely environmental impacts and the reasons for the option chosen
- Set out measures taken to mitigate any adverse effects
- Identify measures for monitoring the effects of the plan's implementation

- 2.2 In terms of the broader SEA process there is a requirement to:

- Consult environmental authorities on the scope and level of detail in the Environmental Report
- Provide an opportunity for the public and environmental authorities to comment on the plan and the Environmental Report before adoption/approval
- Take account of the Environmental Report and consultations in decision-making
- On adoption/approval, provide information on how environmental considerations have been integrated into the plan
- Monitor the significant environmental effects of the plan's implementation.

General Approach to the SEA

- 2.3 In undertaking the SEA, the Council has taken account of the Scottish Executive's Interim Planning Advice on 'The Environmental Assessment of Development Plans', published in August 2003. It has tried to adopt a methodology which is not only robust in terms of the requirements of the Directive but is practical, useful and relates to the nature of the Alteration. It will not assess the whole Structure Plan again but focus only on the areas that the Alteration is reviewing or new proposals.
- 2.4 It is also important to note that the SEA is not a sustainability appraisal. It strictly assesses environmental impacts, and does not take into account social and economic impacts. Whilst social and economic factors have obviously played a major role in decision-making, it is felt that a pure SEA will be more transparent in terms of highlighting the environmental consequences of the Alteration.
- 2.5 The SEA relies heavily on the methodology, format and baseline information used in the recent SEA being carried out for the emerging Falkirk Council Local Plan. This ensures that there is continuity in the assessment format and output that allows for cross-referencing. The Local Plan SEA in turn used similar criteria for environmental objectives as used for the currently approved Structure Plan's Environmental Appraisal.

The Structure of the Environmental Report

The Environmental Report is structured as follows:

Objectives and Content of the Alteration (Chapter 3)

- 2.6 This section provides an initial overview of the Alteration. It summarises its policy context (national planning policy, the currently approved Structure Plan and other Council policies and strategies).

State of the Environment (Chapter 4)

- 2.7 This section provides a summary of the baseline environmental conditions in the area. A huge amount of information is available and only key facts are presented, along with references to more detailed sources. Key sources include the Structure Plan Report of Survey, and the 'Sustainable Falkirk' Indicators Report. Nonetheless there are areas where information is more sparse, and these gaps are identified.
- 2.8 The information has been organised according to the various 'environmental stock criteria' which form the basis for the characterisation of environmental resources with this SEA.

Environmental Problems and Issues (Chapter 5)

- 2.9 This section summarises the particular environmental problems and issues facing the area. Again this is presented under the environmental stock criteria headings.

Evolution of the Environment without the Alteration (Chapter 6)

- 2.10 This section tries to assess how the environment and land use in the area might develop were the Alteration not prepared.

Scoping (Chapter 7)

- 2.11 This section summarises how the environmental issues that the Alteration has to address were scoped. This was principally through analysis of the national and Structure Plan policy framework.

Environmental Stock Criteria and Objectives (Chapter 8)

- 2.12 This section presents the key criteria which will be used to judge the impacts of the Alteration. As noted previously, the environmental stock criteria used in the currently approved Structure Plan EA have been carried forward, with minor modification and updating, into this SEA in order to provide continuity between the stages and elements of the Development Plan process. These 10 stock criteria are:

- Transport Energy Efficiency
- Built Environment Energy Efficiency/Renewable Energy
- Biodiversity
- Air Quality
- Water Quality/Flooding
- Land and Soil Quality
- Minerals/Waste
- Landscape/Open Space/Open Land/Access
- Quality and Liveability of Settlements
- Cultural Heritage

- 2.13 The stock criteria cover all the issues specified in the Directive, i.e. biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets and cultural assets. They also integrate the 'environmental protection objectives, established at international, Community or member State level, which are relevant to the plan', as required by the Directive.

- 2.14 For each stock criterion, the key objectives are listed, together with the key questions to be asked in establishing whether the impact of any part of the Alteration in respect of that particular criterion is positive or negative.

Assessment of Impacts/Alternatives/Mitigation (Chapter 10)

- 2.15 This section assesses the significant environmental effects of the Alteration in terms of its impact on the environmental stock criteria. This forms the core of the SEA.

- 2.16 There are four parts to the assessment which correspond to the topic areas that the Alteration reviews. They are:
- Updating the housing requirement
 - The addition of two new Strategic Development Opportunities
 - The review of the Retail policy
 - The review of the Waste policy

- 2.17 For each of these topic areas a pro-forma sheet was developed to allow the outcome of the assessment, together with relevant supporting information, to be recorded. The assessment methodology is based around a standard matrix approach. However, in addition to recording whether each proposal recorded a positive or negative impact against the range of stock criteria, there is a commentary on the impacts and recommendations for improvements (Key Success Factors). The detailed methodology employed in the assessment is described in Chapter 9.
- 2.18 The identification of alternatives considered in the preparation of the Alteration, and the reasons for the chosen option, are also included in the pro-formas.
- 2.19 Mitigation is considered in the assessment pro-formas. Where the proposals reveal negative impacts, the key measures required to ensure that these impacts are minimised are highlighted.
- 2.20 A team of planning and environmental specialists within the Council, who were not involved in the production of the Alteration, scrutinised the Key Strategic Choices and agreed on the impacts that the pro-formas record.

Monitoring (Chapter 11)

- 2.20 Monitoring is integral to the Development Plan process, and the indicators which relate to the environmental effects of the Alteration are set out in this section.

Process

- 2.21 The Council sees SEA as a process which is integral to all stages of the Alteration.
- 2.22 This Report forms Technical Report Five as a background paper to the finalised Alteration. It has retained the same methodology and structure as the draft alteration. Information has been updated as required, reflecting the amendments made following consultation and the recommendation of the SEA.

3. STRUCTURE PLAN ALTERATION CONTEXT AND SUMMARY

Nature and Statutory Basis of the Structure Plan Alteration

- 3.1 The currently approved Falkirk Council Structure Plan provides the strategic statutory planning framework for the Council area in accordance with the provisions of the Town and Country Planning (Scotland) Act 1997 and its associated Regulations. It provides the strategic development strategy to guide the future development in the area and informs the Local Plan's strategy, detailed policies and proposals. The Structure Plan's Key Diagram shows indicative locations for the proposals. The Alteration updates the currently approved Structure Plan.

Purpose of the Structure Plan and its Alteration

- 3.2 The scope of a Structure Plan is informed by SPP1: The Planning System, which states that it should:
- Provide the long-term vision, looking forward at least 10 years, as part of an overview of the area's development requirements,
 - Express the settlement strategy for the area, identifying priorities for urban and rural regeneration,
 - Identify the overall supply of land to meet the requirement for development,
 - Reflect and identify priorities for the provision of infrastructure
 - Identify limitation to development
 - Support and encourage sustainable patterns of travel, and
 - Promote the protection and enhancement of the built and natural environment.
- 3.3 The Structure Plan that this Alteration refers, was prepared by the Council and approved by the Scottish Ministers in June 2002. It provides the strategic development framework for the area up to 2020. The strategy is one of 'Sustainable Growth in all our Communities', comprising the following key aspects:
- Providing for population and economic growth, so that the vitality and profile of the area as a whole is maintained and strengthened.
 - Distributing growth amongst the different settlements having regard to their physical and environmental capacity and social and economic needs, in order to ensure their future viability and a healthy level of self-containment.
 - Promoting major strategic economic development at selected mixed use development opportunities, which are, or can be made easily accessible by public transport and will stimulate economic growth in jobs and competitiveness;
 - Identifying, protecting and enhancing the area's key environmental assets
 - Ensuring that growth is realistic and achievable
- 3.4 The overall strategy aims to counter the possible trend of population decline by promoting the area for in-migration and economic development. The

housing land requirements and identified Strategic Development Opportunities are distributed across all the settlements thus supporting the local service provision of local centres. Promoting the Falkirk Council area as attractive to new investment will need to be in conjunction with enhancements to the environmental quality of the area. The currently approved Structure Plan has undergone full consultation as part of the statutory planning process. Public and environmental bodies have been given the chance to comment on its strategy and an Environmental Appraisal was published in the Structure Plan's Report of Survey Technical Appendix 6.

- 3.5 The production of the Alteration will ensure that up-to-date demographic statistics are used for assessing future housing demand and housing land requirements. It also allows for the incorporation of new Strategic Development Opportunities that are now available for development and reviews policies on retail and waste. The Alteration will allow the Falkirk Council Local Plan to have an up-to-date strategic direction. In conjunction with this SEA, the Alteration provides the opportunity to improve the robustness of existing policies with regard to environmental protection and enhancement.

National Planning Policy Context

- 3.6 The Structure Plan and its Alteration must address the objectives and requirements made by national government, which are set out in Scottish Planning Policies (SPPs), National Planning Policy Guidelines (NPPGs) and Planning Advice Notes (PANs).

Other Council Strategies

- 3.7 The Structure Plan and its Alteration must be consistent with other Council Service's strategies. The main documents include:
- Strategic Community Plan – the Alteration will play a key role in delivering the land use aspects of the vision.
 - Corporate Plan
 - Falkirk Action Plan
 - Sustainable Falkirk
 - Falkirk Local Biodiversity Action Plan
 - Community Area Regeneration Strategy
 - Housing Strategy
 - Local Transport Strategy
 - Economic Development Strategy
 - Culture and Leisure Strategy
 - Town Centres Strategy
- 3.8 Other key strategies in which the Council is a key stakeholder include:
- Forth Valley Area Waste Plan
 - Central Scotland Forest Strategy
 - Forth Estuary Integrated Management Strategy

4. STATE OF THE ENVIRONMENT IN THE FALKIRK COUNCIL AREA

General Overview

- 4.1 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 its 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.
- 4.2 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.
- 4.3 The population of around 145,000 is focused within a network of small to medium sized towns. The principal town of Falkirk, with a population of around 36,000, 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.
- 4.4 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.
- 4.5 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 commuting outwith the area to work.
- 4.6 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 some peat extraction at Letham Moss. However, there are still exploitable coal reserves within the area.

- 4.7 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.

Baseline Environmental Data

- 4.8 Detailed information on the state of Falkirk's environment is available from a number of key sources. The most comprehensive general source is the Structure Plan Report of Survey, which is itself a compilation of data from a diverse range of more specialised documents and was published in 2001.
- 4.9 The First Annual Monitoring Report of the currently approved Falkirk Council Structure Plan provides revised environmental data. A further general source of information is the Sustainable Falkirk Indicators report, published in 2003, which identifies data and trends across a number of key sustainability factors. All sources of information are available on the Council's website.
- 4.10 Figure 3 attempts to present key facts on the state of the environment based on the 10 environmental stock criteria chosen as the basis for the SEA. In addition, any key trends from the Sustainable Falkirk Indicators Report are presented, along with the key data sources and information gaps.

Figure 3 Baseline Environmental Data: Key Facts and Sources

TRANSPORT ENERGY EFFICIENCY	
Key Facts	<ul style="list-style-type: none"> • Falkirk Council area is well placed and connected to Central Scotland's motorway network (A80/M80, M876, M9 to west, north and east) and national rail links (5 mainline stations giving access to Edinburgh/Glasgow and Edinburgh/Dunblane mainlines). Bus services are relatively dense, serving most communities reasonably regularly. • Grangemouth Port provides freight sea connections and the potential for multi modal freight interchange • Two-thirds of the trips made by Falkirk Council residents are made by car, with a quarter by foot and 7% by bus. Low use of train (1.2% of the journeys), but increasing, as highlighted by the pressure on carparking spaces near to the stations. • 2001 census records 59.22% travel to work or study by driving a car or van, compared to national average of 50.03%. 4.47% travel by train, more than the national average of 3.45%. • 31% of households do not own a car, compared to national average of 34% • Traffic on the road network doubled between 1980 and 1997, a higher growth rate than for Scotland as a whole. • Traffic congestion is relatively localised and occurs at peak hours. • The completion of the Millennium Link restored coast to coast navigation along the canals, affording possible potential for freight movement. The canals serve as excellent strategic off-road pedestrian and cyclist routes. • Increasing investment in the footpath network within the area over recent years • There is presently few dedicated cycle routes, although new roads are generally now constructed with integrated cycle paths.
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Sustainable Transport - Survey of travel patterns and transport preferences – trend or movement towards sustainable development. • Traffic Congestion Levels of traffic congestion on key roads in the

	<p>Falkirk Council area, measured through annual traffic volume at key sites – trend or movement away from sustainable development.</p> <ul style="list-style-type: none"> • Sustainable Transport Infrastructure - Measure of any increase or loss in miles of path and cycle way to indicate the efforts of the Council and its partners to support sustainable transport – trend or movement towards sustainable development.
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 10 • Local Transport Strategy 2000-2004 • Road Traffic Reduction Plan • 1998 Household/Travel Diary Survey
Information Gaps and Limitations	<ul style="list-style-type: none"> • Reliance on travel diary produced in 1998. Has not been repeated, so no information on trends
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – TRANS.1 – 7 • Local Plan – EQ1(3), EQ4(2), EQ29, SC5(2), SC12(4), SC13(3), ST1-5.

BUILT ENVIRONMENT – ENERGY EFFICIENCY/RENEWABLE ENERGY	
Key Facts	<ul style="list-style-type: none"> • No comprehensive information exists on total energy usage for built development in the area • Council's Home Energy Conservation Report target of 30% improvement on energy efficiency over 10 years. • Grangemouth industries are a major user of energy and contributor to emissions • CHP potential being investigated especially for the re-use of waste heat/energy from Grangemouth industries. • Renewable energy study commissioned in 2003 for FCLP 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 (e.g. migratory birds) – wind approximately 10k W – in the Denny Hills, Slamannan Plateau (avoiding the Bean geese migrating population) and Letham Moss. Biomass may have commercial potential. Hydro has very limited community scale potential (e.g. micro-HEP project at Muiravonside). Geothermal has potential wide application at domestic level (ground source heat pumps).
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Measure of energy consumption and carbon dioxide output by Falkirk Council. The aim will be to measure this for the whole Council area in future years – trend or movement towards sustainable development. • Renewable energy – measure of “green” energy generated in the Falkirk Council area – no discernible change or trend unclear.
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 4 • Falkirk Council Home Energy Conservation Report • Renewable Energy Study 2003
Information Gaps and Limitations	<ul style="list-style-type: none"> • No comprehensive information available on the amount of energy used by Council area.
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – ENV.13 • Local Plan – EQ1(4), EQ6, ST20, ST21.

BIODIVERSITY

Key Facts

Biodiversity: Habitats

- Rich diversity of habitats considering the relatively small land area. Habitats include: rivers and streams, pond, lochs, canals and other wetlands; estuarine habitats; woodlands; farmland; grassland and meadows; heaths and upland areas; rocky outcrops, quarries and spoil heaps; peat bogs; and urban greenspace
- The most extensive habitats within Falkirk Council area 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 at least 18 (66%) of the 27 broad habitats and 21 (45%) of the 47 key habitats listed by the UK Biodiversity Group. The LBAP process has identified a further 8 locally important habitats.
- Habitats that have a disproportionately high representation within the area are: neutral grasslands, lowland dry acidic grassland, lowland raised and intermediate bog, mudflats, upland oakwoods, upland mixed ash woods, wet woodlands, saltmarsh, canals, bings.

Biodiversity: Species

- There are 24 priority species (5% of the UK Biodiversity Group priority list) and a further 156 species of conservation concern are known to occur within the Falkirk Council area.
- The LBAP process has identified a further 24 locally important species.
- Species of importance include: wintering waders and wildfowl, eg bean geese, pink footed geese, shelduck, teal, dunlin, knot, redshank, curlew, and great crested grebe; nationally endemic species, e.g. Young's helleborine; various other species in decline locally and nationally, e.g. water vole, skylark.

Protected Sites

- Falkirk Council area has a number of local, national and internationally designated sites for nature conservation.
- International designations:
 - 1 Ramsar site Firth of Forth
 - 1 SAC (candidate) Black Loch Moss
 - 1 SPA Firth of Forth
- National designations:
 - 8 SSSIs Avon Gorge, Bowmains Meadow, Carron Dams, Carron Glen, Darnrig Moss, Denny Muir, Firth of Forth, Howierig Muir
- Local designations
 - 65 Wildlife Sites
 - 28 SINCs
- Only a small number of the local sites are under active management. A review of locally designated sites study is in progress to establish a new local sites framework.

Woodland

- Overall woodland cover is 8% of land area with broadleaved woodland contributing 3.35%. This relatively rare resource is locally important and occurs in small, fragmented pockets. No overall decline and planting programmes may have succeeded in increasing overall habitat. However, limited management may result in degrading quality.
- The Central Scotland Forest covers the entire Council area, and while tree coverage is presently small in area, more coverage is actively promoted. The total area planted over the last 6 year period contains 950,000 new trees.
- There are limited, but significant, areas of ancient or long-established woodland, as follows

	<ul style="list-style-type: none"> • 27 Ancient Woodlands • 5 Long established woodlands (semi-natural origin) • 26 Long established woodlands (plantation origin) • There are 49 designated Tree Preservation Orders (TPOs)
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Net change in natural and semi-natural habitats plus changes in population of selected key species in the Falkirk Council area – trend or movement away from sustainable development.
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 6 • The Biodiversity of Falkirk 2000 • Falkirk Area Biodiversity Action Plan • Various Phase 1 and Phase 2 Habitat Surveys • CARSE records
Information Gaps and Limitations	<ul style="list-style-type: none"> • Baseline data on habitats and species is as yet insufficient to allow ongoing monitoring • Habitat survey information needs updating • Locally designated sites require review
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – ENV.3 • Local Plan - EQ1(1), EQ4(3), EQ18, EQ21, EQ24-28, EQ36, SC12(4), SC13(3), EP16(3), EP17(1,3), ST14, ST15(2), ST21(2)

AIR QUALITY	
Key Facts	<ul style="list-style-type: none"> • Government targets for pollutants have been met with the exception of sulphur dioxide and nitrogen dioxide in certain locations. Also Particles PM10 have exceeded targets. • Sources likely to affect air quality within the local area include the Grangemouth industries, Longannet Power Station and emissions from road traffic • Increase in car ownership and traffic on two motorways that traverse the Council area influence air quality.
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Levels of air pollution for key pollutants in the Falkirk Council area – trend or movement towards sustainable development.
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 7 • Stage 3 Review and Assessment of Air Quality in the Falkirk Council Area (2000)
Information Gaps and Limitations	
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – ENV.14 • Local Plan – EQ1(4), EQ4(2), SC12(4), SC13(3), ST1-5, ST20, ST21

WATER QUALITY/FLOODING	
Key Facts	<ul style="list-style-type: none"> • 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. • There are over 220 km of rivers, streams and ditches with flowing water in the area. • There are two major river catchments – the River Carron and the River Avon. The two canals also perform a significant land drainage function • Significant bodies of open water include the Black Loch, Loch Ellrig, and artificial reservoirs at Drumbowie and Denny. • In terms of the national water quality classification, most watercourses are in the 'good' or 'fair' quality categories. There has been a general improvement in water quality due to tighter regulation and reduction in industry. • Restoration work on the Forth & Clyde and Union Canals involved their dredging and decontamination, and a consequent improvement in quality. • Coastal flooding is an issue along the estuary, with particular implications for Grangemouth and Bo'ness given the prospect of sea level rise. • There are localised flooding problems associated with a number of other watercourses in the area. • SuDS are now routinely used for surface water treatment and/or attenuation in new development
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Chemical and biological quality of rivers and canals in the Falkirk Council area – no discernible change or trend unclear.
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 7 • Forth Estuary Integrated Management Strategy • Falkirk Council Flood Reports
Information Gaps and Limitations	<ul style="list-style-type: none"> • Lack of knowledge re implications of sea level rise/global warming and impacts on flooding. • Pollution incidents may have occurred in other local authority areas and continued downstream.
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – ENV.15 • Local Plan – EQ27, EQ28, ST11, ST12

LAND AND SOIL QUALITY	
Key Facts	<ul style="list-style-type: none"> • 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. • Falkirk's long industrial history (esp. iron foundries in the urban settlements) has left significant areas of contaminated land. The Council's Contaminated Land Inspection Strategy has found 1500 potentially contaminated sites, of which 100 are identified as being potentially high risk. • 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). • 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 • Relatively less brownfield land development now than previous years may be recording the success in redeveloping brownfield land in the past rather than showing that present policy to persuade brownfield development over greenfield is not working.
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Hectares of vacant and derelict land – trend or movement away from sustainable development. • Percentage of new housing developed on brownfield land - trend or movement away from sustainable development.
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapters 6 and 7 • Macaulay Institute Land Capability for Agriculture Maps • Falkirk Council Contaminated Land Inspection Strategy • Scottish Derelict and Vacant Land Survey • Structure Plan 1st Monitoring Report 2004
Information Gaps and Limitations	<ul style="list-style-type: none"> • Specific data regarding contaminated sites is only becoming available as sites are subject to detailed site investigation
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – ENV.16 • Local Plan – EQ, EQ30

NATURAL RESOURCES – MINERALS CONSERVATION & WASTE MINIMISATION	
Key Facts	<p><u>Minerals</u></p> <ul style="list-style-type: none"> • Deep coal has been mined in the area, under the Forth from Longannet Mine Complex but this is now closed • There are no active opencast workings in the area, although significant reserves of shallow opencast coal areas remain. Activity has subsided since the 1980s when 13 sites in the Council area were being worked simultaneously. • Sand and gravel is worked near Polmont, but resources are limited • There is a favourable supply of hard rock aggregates found in the west of the area and this is worked near Denny (two sites), and Banknock (one site). • Peat is worked at Letham Moss. • Coal bed methane is collected near Letham and Standburn. • Fireclay has also been mined in the area, but there are no current workings. • There are some significant mineral workings which have been abandoned and not restored, e.g. Waterslap, near Airth. <p><u>Waste</u></p> <ul style="list-style-type: none"> • Figures from 1996/97 to 2003/04 show a marked increase in waste produced (21% over a 7 year period, or an annual increase of 3%). • Bulk of household and commercial/industrial waste is landfilled with only 7.3% of household waste being recycled in 2001/2002 • The implementation of the Area Waste Plan should see recycling rates dramatically increased. For example, 2003/04 there was a 4% increase in total recycling compared to the previous year. • The main waste management sites in the Council area are: <ul style="list-style-type: none"> • Kinneil Kerse – unlined site that has accepted a range of active, inert and liquid waste. Now restricted to inert material as part of long-term restoration plan. • Avondale - a modern lined facility and is licensed for household, commercial, industrial and some special wastes. It involves the infilling of land formerly used for sand and gravel quarrying. • West Carron - accepts commercial and industrial waste. • Roughmute transfer facility
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • The total amount of waste going to landfill sites and the percentage of waste recycled – trend or movement towards sustainable development
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 4 • Forth Valley Area Waste Plan
Information Gaps and Limitations	<ul style="list-style-type: none"> • Information on workable coal reserves is not available to the Council • Lack of information on the market demands for minerals and accurate figures on production levels. • More detailed information on waste arisings (split by sector) and recycling levels is required in order to monitor trends and targets. • No data on commercial waste not collected by the Council. • Inter-regional transfers of waste can skew projected site capacity and rate of infill.
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – ENV.8, ENV.9, ENV.10, • Local Plan – EQ15, EQ31-39, ST17-19

LANDSCAPE/OPEN LAND/OPEN SPACE/ACCESS

Key Facts

Landscape

- 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:
 - East Touch Finches – Lowland Hill Fringes
 - Denny Muir – Lowland Hill Fringes
 - Slamannan Plateau – Lowland Plateau
 - Carse of Forth, Avon valley, Falkirk/Denny Urban Fringe, Middle Carron Valley – Lowland Valleys
 - Grangemouth/Bo'ness Flats, Bo'ness Coastal Hills – Coastal Margins, Coastal Hills and Flats
- Human settlement and industrial activity have a major impact on the landscape. 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
- Two AGLVs are currently designated by Falkirk Council, and a third is proposed by the Falkirk Council Structure Plan:
 - The Avon Valley/Slamannan Plateau: the plateau is characterised by its open nature. The River Avon valley contains an attractive rolling landscape of field units, hedgerows and tree belts.
 - The eastern end of the Touch/Campsie/Gargunnoch Hills: rugged landform distinctive natural and manmade features together with a pattern of vegetation interact to create a landscape of value and character.
 - A third AGLV is proposed to the South of Bo'ness.

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'. They act to separate Falkirk from Grangemouth, Larbert and Carronshore; Grangemouth from Polmont /Laurieston and Bo'ness; and Bo'ness from Polmont/Linlithgow. There are further areas at Callendar Park/Wood and east of Stenhousemuir. The Structure Plan identifies further Green Belt between Denny and Bonnybridge and Bonnybridge and Falkirk.
- Green Belt is under particular commercial development pressure, particularly the main area of designation which follows the M9/M876 corridor.

Central Scotland Forest Strategy/Falkirk Greenspace Initiative

- The whole of the Falkirk Council area is within the Central Scotland Forest (CSF) boundary. The Falkirk Greenspace Initiative is a local expression of the CSF and aims to address the landscape quality and recreational potential in the Green Belt and urban fringes. The aim is to create a well-wooded landscape encircling Falkirk that provides a permanent link between recreational spaces, public parks, river and canal corridors, the Green Belt etc. and generally improve setting of the settlements.
- Considerable progress has been over the ten years since project inception with some 379 hectares planted up over the period 1997-2003. This is starting to have a significant impact on the quality of the Green Belt/urban fringe.

	<p><u>Urban Open Space</u></p> <ul style="list-style-type: none"> • Generally there is an adequate provision of open space in Falkirk Council area in quantitative terms, but there are localised deficiencies and quality/management needs improvement. • The Culture and Leisure Strategy classifies parks into strategic, core and local parks. Callendar Park is the key strategic park for the area, and is a major resource. <p><u>Access</u></p> <ul style="list-style-type: none"> • Falkirk Council area has an improving network of paths and the Countryside Access Strategy prioritises and implements improvements to strategic and local networks. • Muiravonside Country Park is the major country park serving the area. There are some other significant areas of more accessible 'community countryside', some of which have been improved or created through the Central Scotland Forest/Greenspace such as Bantaskine Park, Kinneil Woods, Polmont Woods, and Langlees Community Woodland
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • See Sustainable Transport Infrastructure for indicator related to access.
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 6 • Central Region Landscape Assessment 1996 • Stirling/Grangemouth Landscape Assessment 1998 • Falkirk Council Culture and Leisure Strategy • Central Scotland Forest Strategy • Countryside Access Strategy
Information Gaps and Limitations	<ul style="list-style-type: none"> • Full open space audit is required.
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – TRANS1, ENV6 (Schedule – Falkirk Greenspace Initiative, CSF) • Local Plan – EQ4, EQ12, EQ13, EQ20-23, EQ26, EQ29, EP16, EP17, ST1

QUALITY AND LIVEABILITY OF SETTLEMENTS	
Key Facts	<ul style="list-style-type: none"> • 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. • This variability in quality has made it more difficult to raise standards of design in new development. However, some key recent developments (e.g. Falkirk Wheel, Falkirk Stadium, Drum Farm) have set a new benchmark for quality in design and landscaping • As elsewhere there is a problem with "volume builder" housing which does not aid settlement identity or distinctiveness. Again, the recent development at Drum Farm, Bo'ness may set a new benchmark . • The quality and image of settlements is heavily influenced by their centres. Whilst Falkirk Town Centre remains buoyant and continues to attract investment the smaller district and local centres suffer from a poor environment. The Council's Town Centres Strategy aims to improve the fabric and townscape of the local centres, especially the upgrading of the 1960s centres of Stenhousemuir, Denny and Grangemouth, to increase viability, improve liveability of the towns and reduce need to travel into Falkirk for services.
Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Measure of criminal activity – crimes recorded annually/1000 population – trend towards sustainable development • Levels of homelessness measure of the number of people applying for homeless classification – no discernible change or trend unclear • Measure of number of dwellings below tolerable standard – trend or movement towards sustainable development
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 5
Information Gaps and Limitations	<ul style="list-style-type: none"> • Indicators of quality and liveability of settlements comprise a mixture of factors, some are difficult to quantify objectively.
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan – ECON4, COM3, COM6, ENV5, ENV6, ENV7 • Local Plan – EQ3, EQ5, EQ7, Eq12-13, EP6, SC4-5, SC10-11, SC14-15

CULTURAL HERITAGE

Key Facts

Conservation Areas

- There are nine Conservation Areas: Airth, Allandale, Bo'ness Grange, Bo'ness Town Centre, Dunmore, Falkirk Arnothill, Falkirk Town Centre, Letham, Muirhouses. Falkirk Town Centre, Bo'ness Town Centre and Dunmore are deemed to be "outstanding" Conservation Areas.
- The character of some of the conservation areas has been eroded by insensitive development and by general lack of investment
- There are various other areas of architectural, historic or townscape merit across the Council area which do not have conservation area status. These include the model village of Westquarter, and various Victorian/Edwardian districts in Falkirk, Grangemouth, Larbert and Polmont

Listed buildings

- There are 329 Listed Buildings in the Falkirk Area. Most of the Listed Buildings are concentrated in the Town Centres of Falkirk and Bo'ness, as well as a notable amount in Airth and the hamlets of Dunmore and Muirhouses. There are 21 Category A Listed Buildings including such landmark buildings as the Pineapple, Dunmore, Blackness Castle, Callendar House and the Steeple.
- There are a number of important buildings at risk including the former RSNH buildings at Larbert and the Hippodrome in Bo'ness.

Archaeology

- The area has a wealth of archaeological sites and features including over 100 Scheduled Ancient Monuments.
- The largest and most important concentration is associated with the Antonine Wall which traverses the area. These include sections of the wall itself, forts and camps. The wall is proposed for nomination as a World Heritage Site along with other Roman frontier works around Europe.
- 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.

Gardens and Designed Landscapes

- Two sites identified within the Inventory of Gardens and Designed Landscapes lie in the Falkirk areas: Dunmore Park, which dates from the 1820s, and The Pineapple ornamental gardens. Other sites which may merit inclusion in the inventory include, for example, Callendar Park.

Sustainable Falkirk Indicators	<ul style="list-style-type: none"> • Protection of heritage: Measures of trends in conservation of historic buildings/features and important trees in the Falkirk Council area, using records of listed buildings and tree preservation orders – trend or movement towards sustainable development
Key References from Documents	<ul style="list-style-type: none"> • Structure Plan Report of Survey Chapter 5 • Buildings at Risk Register
Information Gaps and Limitations	<ul style="list-style-type: none"> • Conservation Area Character Appraisals are required. • Survey of Gardens and Designed Landscapes of Regional or Local Significance could be undertaken.
Cross reference to policy sections of SP/LP	<ul style="list-style-type: none"> • Structure Plan - ENV.5 Built Environment and Heritage. • Local Plan - EQ12, 13, 14, 18.

5. KEY ENVIRONMENTAL ISSUES AND PROBLEMS

5.1.1 The main areas where there exists environmental issues or problems and where the Alteration could influence are summarised in Figure 4 below.

Figure 4 Key Environmental Issues and Problems

	Key Environmental Issues and Problems
Transport Energy Efficiency	<ul style="list-style-type: none"> • Traffic growth and increasing car dependency is the key problem. • 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. • Further growth in traffic results from development at settlement fringes/rural locations where more trips are required to reach range of services/employment and public transport is limited. • 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. • Increasing levels of commuting are evident from the area to Edinburgh and Glasgow.
Built Environ- ment – Energy Efficiency/ Renew- able Energy	<ul style="list-style-type: none"> • There is considerable scope for improvement in the energy efficiency of the built environment, although it arguable how much scope there is to influence the situation through the planning system. • Combined Heat and Power and district heating schemes are as yet uncommon, and their potential for energy saving is relatively under utilised. • There is some renewable energy potential in the area, although much of it is at a domestic and community scale. • There are some key constraints on the development of wind energy, including the built up nature of the area, conflict with bird habitats and aviation interests. • Built heritage conservation objectives can restrict potential for increasing energy efficiency where this affects the building's structure. • Scope for greater attention to housing layout to maximise solar gain.

Bio-diversity	<ul style="list-style-type: none"> • Habitat loss or degradation through development and lack of management is a key issue, although there is no data as yet to quantify this. Development is a particular threat in urban or urban fringe locations. • Individual habitats and species face particular problems, as identified within the Falkirk LBAP. • Non-statutory sites are particularly vulnerable and can be lost or damaged by operations that are outwith planning control • The profile of the biodiversity has been raised greatly by the LBAP process, but its appreciation by local developers and integration into development proposals is generally poor.
----------------------	---

Air Quality	<ul style="list-style-type: none"> • The nationally important concentration of petro-chemical industries in Grangemouth pose particular environmental issues. Air quality is being monitored closely in the Grangemouth area for exceedencies of air pollution standards. • Falkirk's air quality is affected by Longannet Power Station, but is unable to control the pollution (High SO2 levels depending on wind direction) coming from this source outwith Falkirk area. • Increase in car use and congestion in traffic cause negative impact on air quality in general.
--------------------	--

Water Quality/ Flooding	<ul style="list-style-type: none"> • Although water quality is generally improving, there are ongoing concerns about pollution incidents and ongoing pollution from agricultural run-off and discharges from mine workings. • Culverting poses a threat to water quality and may heighten flood risk. • Coastal flooding poses a threat to areas Bo'ness and Grangemouth. • Fluvial flooding poses a threat in various parts of the area, and has been exacerbated in some cases by new development. • Development generally effects 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. • There are known sewerage constraints in the Falkirk Council area and without maintenance of the infrastructure there could be potential impacts on water quality or ecological value of watercourses. Significant impacts would occur if poorly maintained private plants were used as a result of lack of investment.
------------------------------------	---

Land & Soil Quality	<ul style="list-style-type: none"> • There is still a considerable amount of vacant and derelict land within the area, including some severely contaminated sites from past industrial works. For these sites to become effective brownfield land, soil remediation is required with environmental benefits. • The safeguarding of prime agricultural land has been accorded less weight in recent times and there has been some loss due to development.
--------------------------------	---

Natural Resources - Minerals Conservation and Waste Minimisation	<ul style="list-style-type: none"> • Increasing levels of development and outstanding major infrastructure projects are likely to increase demand for construction aggregates. • Recycling of materials and the use of materials from sustainable sources in new development is not routinely practised, and is not yet seen as a factor that the planning system can influence strongly. • Levels of opencast coal extraction in the area have fallen in
---	--

	<p>recent time due to market conditions, but this could change in the future.</p> <ul style="list-style-type: none"> • Existing opencast workings and the rehabilitation of former sites have significant cumulative environmental impacts with regard traffic generation, noise levels and impact on landscape quality. • The vast majority of waste within the area is still landfilled, with recycling rates relatively static over recent years. A step change is needed if government targets are to be met. Measures are being taken in through the Area Waste Plan. • The Area Waste Plan will have implications for land use in terms of sites for recycling facilities and the continuing requirement for landfill. • Opportunities for future landfill capacity within the Forth Valley area are relatively limited.
--	--

<p>Land- scape, Open Land, Open Space, Access</p>	<ul style="list-style-type: none"> • 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. • As a predominantly urban area with narrow strips of open countryside separating the settlements, pressure for development on peripheral greenfield land/fringe countryside risks coalescence of settlements, and has an adverse impact on landscape quality. • Green belts have largely been maintained, although there have been a key incursions within the Falkirk/Grangemouth Green Belt. • 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 value. • Open space within urban areas is also under increasing development pressure, particularly for residential development. • The quality, management and level of investment in open space needs to be improved, but there are limited resources to effect such a change. • There are particular problems with the quantity, quality and maintenance provision for open space in new development. • Countryside access provision has improved over recent years. The Land Reform Act will increase access opportunities but there will be a need to manage the increased 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 eg, the Woodland Trust (at Roughcastle) for countryside access.
--	---

<p>Quality and Liveability Of Settlement</p>	<ul style="list-style-type: none"> • The housing growth the area is experiencing provides the opportunity to revitalise and sustain centres. • HSE hazard consultation zones related to the petro-chemical industries places a restriction on population increases. Therefore, the areas that fall within the consultation zone have restricted opportunities for regeneration development. • The area still suffers a post-industrial legacy of vacant and derelict sites, and of townscapes fragmented by roads/parking infrastructure and insensitive development of recent decades. • Quality of design is still generally poor, and there is a lack of
---	---

	<p>local distinctiveness particularly in new suburban housing developments. Some recent high profile examples of good design may help to raise expectations.</p> <ul style="list-style-type: none"> • Care of and investment in the public realm is poor and suffers from lack of resources. • Some communities have been adversely affected by opencast coal extraction in the past, and there is a current problem with abandoned workings that have not been restored. • Noise pollution is a widespread problem but is particularly marked in areas with potentially conflicting land uses such as residential properties in the Town Centre. • Light pollution is a becoming an issue of concern.
--	--

<p>Cultural Heritage</p>	<ul style="list-style-type: none"> • Insufficient priority and resources has been given to the area's valuable built heritage over a period of some years, although there are some isolated examples of good conservation initiatives. • Conservation areas and other areas of quality historic townscape have been subject to insensitive development, and there has been a lack of resources devoted to enhancement. There is a need to reappraise the quality and extent of conservation areas. • A number of key listed buildings are redundant, deteriorating in condition and at risk unless a beneficial use is found. • The area's Scheduled Ancient Monuments have generally been effectively safeguarded in recent times, but more attention may need to be accorded to the setting of sites, particularly those related to the Antonine Wall, bearing in mind draft proposals to nominate the wall as part of a Roman frontiers World Heritage Site. • The canals are an important part of Falkirk's cultural and natural heritage, and are a valuable wildlife corridor, and protected by nature conservation designations. The Canal Corridor Framework identifies key development opportunity sites along the route, taking advantage of canal-side setting and amenity.
---------------------------------	---

6. EVOLUTION OF THE ENVIRONMENT WITHOUT THE ALTERATION

- 6.1 The logic of carrying out a SEA is to understand the impact the Alteration is likely to have on the environment. However, the Directive also seeks examination of how the environment is likely to evolve without adoption and implementation of the Alteration.
- 6.2 The Structure Plan has to be up-to-date in order to inform and direct the emerging Local Plan. Without this Alteration the emerging Falkirk Council Local Plan would be unable to release strategic development opportunities that have become available as a result of recent manufacturing closures. If these strategic sites were not included in the Development Plan, there would be less control over their future development, and any decisions on individual applications would be taken in a more arbitrary and less co-ordinated manner. This Alteration will direct the emerging Falkirk Council Local Plan to allocate these opportunity sites and allow for their effective development imposing robust criteria to mitigate negative impacts and maximise environmental benefits.
- 6.3 Without this Alteration, the development plan would not be using the most recent demographic statistics available and therefore, the actual pressures for land and housing growth demand would not be reflected. This Alteration updates the housing requirement to maintain the Council's growth strategy.
- 6.4 It is anticipated that the further allowances made for the growth strategy to continue will result in potential conflict with the environmental objectives, as described in Figure 5. However, there will also be positive spin-offs. Development and investment in the area will allow for investment into the built and natural environment and potentially reduce out-commuting.

Figure 5 Environmental Trends Without the Structure Plan Alteration

Environmental Problem/Issue	Trend without Alteration to the Structure Plan
Traffic growth/car dependency	The alteration proposes some key growth areas that are in fairly rural locations, thus traffic generation is likely.
Energy inefficiency in the built environment	With the extra growth in housing and promotion of strategic business sites, energy consumption is likely to increase. However, there is greater potential to achieve more energy efficient designs on larger scale developments that are planned and controlled with masterplans and development briefs.
Habitat loss/degradation	Many of the strategic development areas are on greenfield land or land previously developed but has been allowed to naturally regenerate. It is therefore inevitable that there will be an impact on biodiversity.
Air quality	Related to traffic generation.
Water quality/flooding	Impact on watercourses will result from increase in development and loss of undeveloped land.
Vacant/derelict land	Potential positive impacts where brownfield sites are being promoted.
Waste management	Structure Plan safeguards an extension to an existing landfill site for future use.

6.5 In the absence of the Alteration, therefore:

- The growth strategy would not be updated to match recent in-migration levels. This would result in less planned development, and therefore less negative impacts associated with more housing and a larger population.
- Investment in infrastructure and environmental enhancement would not be co-ordinated as effectively or focussed sufficiently on priority areas.
- Predicting future development patterns and mitigating their cumulative negative effects would be harder.
- Development investment can release financial contributions towards environmental enhancement projects identified in a Plan. Releasing such potential benefits of development would be less certain and transparent without going through the Development Plan process.
- Waste planning would not be up-to-date with the Area Waste Plan.

7. SCOPING

- 7.1 As explained in paragraph 1.4, the need for an Alteration followed from the publication of the first annual monitoring report in December 2003 and a Strategic Choices Report in April 2004. The areas for review would clearly have environmental effects and this was self evident from the currently approved Structure Plan Environmental Appraisal and government guidance.

Consultation

- 7.2 The approval process for the Alteration requires the Council to publish a consultative draft Alteration, consider any comments, make appropriate changes and then submit a finalised Alteration to Scottish Ministers for approval. This SEA therefore relates to the consultative draft Alteration and comments on the Environmental Report will be sought as part of this process.

National Guidance

- 7.2 The pro-forma notes which national guidance is relevant for each of the Strategic Choices.

Structure Plan Environmental Appraisal

- 7.3 This Alteration reflects on the currently approved Structure Plan's Environmental Appraisal which was particularly important in terms of scoping and identifying those broad areas where the adopted strategy could potentially have negative environmental impacts. The pro-formas refer back to the target areas where relevant to this Alteration's Key Strategic Choices.
- 7.4 The Structure Plan Environmental Appraisal identified the following potential impacts of a strategy of growth, and they remain relevant to the Alteration's proposals:
- Increase in the number of trips by private motor transport, the extent of the increase being determined by the locations selected for development and the scale of development.
 - Increases in emissions from transport arising from increase in trips, adversely affecting air quality.
 - Possible loss of landscape quality/countryside and open land.
 - Possible damage to the quality/liveability of settlements.
 - Possible pressure for higher levels of mineral resource use to support growth.
 - Possible threat to protected areas arising from particular development categories.
 - Mitigating these negative factors was the accommodation of this projected growth within the Council area, where it is generated. An alternative development option which resisted growth might have the effect of shifting the population and any traffic generated to another administrative area. Growth created in an adjacent local authority area might generate increased trips as the households involved travel further to work and services.

8. ENVIRONMENTAL OBJECTIVES – ENVIRONMENTAL STOCK CRITERIA

- 8.1 A key requirement in the SEA process is to identify environmental objectives that cover all the areas as set out in Annex I (f) of the Directive, namely: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. It must integrate any requirements, established at international, community or national level, which are relevant to the currently approved Structure Plan and specifically the Alteration. How Falkirk Council's environmental objectives relate to the Directive's Annex I (f) is shown in Figure 6 below.
- 8.2 Objectives for Population and Human Health have not been explicitly recorded but are taken to be implicitly related to almost all of the ten objectives. Similarly, table B.1 in the Scottish Executive's interim guidance on Environmental Assessment of Development Plan, has not made specific objectives for population nor human health but they are found to be relevant factors for each environmental objective.
- 8.3 It is the aim of the SEA to reveal how the Alteration affects the environment. This is done by assessing the Alteration against the environmental objectives.
- 8.4 In formulating the objectives, the Council has sought to establish continuity with the 11 environmental stock criteria used in the Structure Plan Environmental Appraisal. These criteria, and their corresponding objectives, have been reviewed, amended (reduced to 10) and updated for use in this SEA, and are shown in Figure 6. Each stock criterion also includes the key questions which are used in the assessment to judge whether policies and proposals will have positive or negative impact, and also any relevant targets derived from other international, national or local strategies.

Figure 6 Environmental Stock Criteria

	Objectives	Questions	Targets	Annex I (f) Factors
Transport Energy Efficiency	<ul style="list-style-type: none"> • Reduce non-essential trips • Reduce the number of trips by private motor transport • Increase public transport • Increase/promote walking and cycling • Reduce emissions from transport 	<ul style="list-style-type: none"> • Will the policy lead to an increase or decrease in traffic levels/emissions? • Will the policy promote/encourage public transport, walking or cycling? 	<p>Aim to stabilise traffic growth at 2001 levels (Indicators of Sustainable Development for Scotland)</p> <p>Survey of Travel Patterns</p>	Human Health, Air, Climatic Factors, Water,
Built Environment – Energy Efficiency/ Renewable Energy	<ul style="list-style-type: none"> • Reduce heat loss from buildings • Reduce energy input to the development/building process • Increase combined heat and power potential • Reduce energy use/emissions from industry • Safeguard wind, water, wave, biomass industry • Increase direct solar gain 	<ul style="list-style-type: none"> • Will the policy encourage energy efficiency? • Will the policy lead to a reduction or increase in overall energy use in the area? • Will the policy lead to an increase or decrease in emissions from industry? • Does the policy promote renewable energy generation or safeguard renewable energy potential? 	<p>30% improvement in energy efficiency over 10 years from 1997 baseline (Falkirk Council Home Energy Conservation Report)</p> <p>Increase % of energy generated from renewable sources to 18% by 2018 and 40% by 2020 (Indicators of Sustainable Development for Scotland)</p>	Air, Climatic Factors, Water, Biodiversity, Population, Human Health
Biodiversity	<ul style="list-style-type: none"> • Safeguard priority habitats and species (as defined in the LBAPS) 	<ul style="list-style-type: none"> • Will the policy conserve/enhance or degrade biodiversity? 	% of Biodiversity Action Plan species and habitats which are identified as stable or increasing (Indicators of Sustainable Development for Scotland)	Biodiversity, Fauna, Flora, Water, Landscape

	<ul style="list-style-type: none"> • Safeguard designated sites • Increase/enhance biodiversity in the wider environment 	<ul style="list-style-type: none"> • Does the policy protect or degrade designated sites? • Does the policy assist or obstruct the delivery of the LBAP Targets and Actions? 		
Air Quality	<ul style="list-style-type: none"> • Reduce levels of pollutants (CO2, SO2, NO2, O3, Pb, NH3 etc.) 	<ul style="list-style-type: none"> • Will the policy result in the quality of air being maintained, improved or reduced? 	<p>Reduce CO2 emissions by 20% from 1990 levels by 2010 (Kyoto Protocol)</p> <p>Number of exceedencies of government pollutant targets in Falkirk Council area (Sustainable Falkirk Indicators).</p>	Population, Human Health, Air, Climatic Factors, Water, Biodiversity, Flora, Fauna, Material Assets
Water Quality/ Flooding	<ul style="list-style-type: none"> • Avoid/reduce pollution • Improve/maintain drinking water quality • Conserve ground water resources and river levels • Reduce flood risk 	<ul style="list-style-type: none"> • Will the policy result in the quality of water being maintained, improved or reduced? • Will the policy impact on river levels or ground water? • Will the policy result in the policy or proposal increase flood risk or be at risk from flooding? 	Water quality samples of rivers in the Falkirk Council area using national quality classifications (Sustainable Falkirk Indicators).	Population, Human Health, Air, Climatic Factors, Water, Biodiversity, Flora, Fauna, Material Assets
Land and Soil Quality	<ul style="list-style-type: none"> • Reduce contamination/dereliction • Safeguard quality agricultural land • Safeguard soil quality retention 	<ul style="list-style-type: none"> • Will the policy result in land and soil being conserved, upgraded or degraded or result in large land take? • Will the policy protect quality agricultural land? • Will the policy reduce the area 	<p>% of new housing developed on brownfield land (Sustainable Falkirk Indicators).</p> <p>Scottish Vacant and Derelict Land Survey</p>	Human Health, Population, Soil, Biodiversity, Water

		of contaminated/derelict land?		
Natural Resources – Minerals Conservation & Waste Minimisation	<ul style="list-style-type: none"> • Reduce consumption of fossil fuels and minerals • Increase reuse/recycling of materials • Conserve minerals resources • Stabilise or reduce production of waste 	<ul style="list-style-type: none"> • Will the policy result in the quantity or rate of extraction increasing or decreasing? • Will the policy stabilise or reduce the amount of waste produced? • Will the policy increase level of re-use or recycling? 	<p>25% of Municipal Solid Waste recycled by 2006 (Sustainable Falkirk Indicators).</p> <p>2.6 million tonnes (mt) of municipal waste arising by 2010; 2.3 mt by 2020 (Indicators of Sustainable Development for Scotland).</p>	Human Health, Water, Air, Soils, Climatic Factors, Material Assets
Landscape, Open Land, Open Space, Access	<ul style="list-style-type: none"> • Enhance general landscape quality and reinforce local distinctiveness • Retain/protect countryside and open land • Retain/protect designated land • Increase quality/distribution/availability of open space • Enhance access opportunities 	<ul style="list-style-type: none"> • Will the policy lead to enhancement of the landscape character? • Will the policy affect protected areas? • Will open land/green belt be lost? • Will policies have an impact on the provision or quality of open space? • Will the policies enhance or detract from access network development? 	<p>?</p> <p>Open Space Strategy</p>	Biodiversity, Fauna, Flora, Population, Human Health, Landscape

Quality and Liveability of Settlements	<ul style="list-style-type: none"> • Enhance townscape quality • Ensure good building design/maintenance • Ensure community safety is maintained or enhanced • Improve aural/sensory environment 	<ul style="list-style-type: none"> • Will the policy enhance or maintain townscape quality? • Will the policy lead to improved quality of building? • Will the policy maintain /enhance local distinctiveness? • Will the policy increase safety or the sense of security? 	Crimes, cleanliness, noise pollution.	Population, Human Health, Material Assets, Cultural Heritage
Cultural Heritage	<ul style="list-style-type: none"> • Safeguard listed buildings and Conservation Areas • Safeguard sites of archaeological interest 	<ul style="list-style-type: none"> • Will the policy lead to an enhancement or loss of cultural heritage? 	Increase in number of listed buildings in Falkirk Council area (Sustainable Falkirk Indicators).	Material Assets, Cultural Heritage

9. ASSESSMENT METHODOLOGY

Screening

- 9.1 It is established that development plans and reviews of development plans require a SEA. In this case, however, it was considered that a SEA would be required as the Alteration proposes Strategic Choices that relate to:
- the release of further housing land,
 - two new Strategic Development Opportunities,
 - review of the retail policy with the potential to substantially increase the retail floorspace, and
 - waste policy review
- 9.2 As stated before, this assessment only covers the Strategic Choices and waste and retail policy review. Other minor amendments and changes to the currently approved Structure Plan text to bring it up to date with the Alteration, were not considered to have a significant environmental impact and therefore, under the terms of the Directive, would not need to be included in the SEA.

Assessment Pro-Forma and Matrices

- 9.3 Pro-formas were developed for the assessment. These allowed ancillary information to be recorded alongside the core impact matrices. A pro-forma was completed for each of the Alteration's Key Strategic Choices/policy review. The pro-forma records the following:
- Key Legislation/Guidance – Sets the context of national legislation and guidance and local strategies which have a bearing on that Key Strategic Choice.
 - Structure Plan EA Target Areas – Identification of key scoping concerns arising from the Structure Plan Environmental Appraisal that are relevant to the Key Strategic Choice.
 - Policy Approach Description – Brief description of overall policy approach and background to the Key Strategic Choice.
 - Alternatives Considered – Indicates the extent to which there were alternative policy approaches available for a given Key Strategic Choice.
 - Nature of Impact and Commentary – Provides an overall commentary on detailed impacts, identifies whether the impact is likely to be positive/negative/mixed/uncertain or dependent on details, and identifies any recommended amendments to scope or wording of policy.
 - Key Success Factors and Mitigation – Identification of key areas where impact needs mitigated or managed, and issues to be taken into account of in detailed design. This could include the use of Masterplans, briefs, planning conditions, need for full EIA etc.
 - Summary of Impact – General summary of the cumulative environmental impact of the Key Strategic Choice.

Scoring

- 9.4 Within the matrices, the impact of each Key Strategic Choice on the environmental stock criteria was systematically recorded using symbols, as shown in Figure 7 below.

Figure 7 Matrix Symbols

✓ Positive	Likely to have a positive impact; move towards a positive outcome for the environment.
X Negative	Likely to have a negative impact; move away from environmental sustainability
= Neutral	No outcome envisaged that would be either negative or positive. No known effects.
? Uncertain	Unsure of the likely environmental outcome. Insufficient information/details to predict environmental impact.
?X Uncertain negative potential	Where there is a potential for a negative impact, but there is uncertainty about the exact nature and degree of negative impact.
? ✓ Uncertain positive potential	Where there is a potential for a positive impact, but there is uncertainty about the exact nature and degree of positive impact.
X ✓ Mixed	Where the policy/proposal could potentially have both positive and negative impacts.

- 9.5 It should be noted that the impact of a given policy or proposal is made on absolute criteria (i.e. answering the absolute questions in the stock criteria), and is not based on comparative impacts between two developments or alternative policies.
- 9.6 The symbols can be quite a general or crude measure of the various environmental impacts. The additional information in the pro-forma is therefore important in terms of
- in depth analysis on the detail or context of the Key Strategic Choice,
 - commentary on any specific environmental impacts and
 - recommendations regarding changes, monitoring and mitigating measures that may be required.
- 9.7 Figure 8 below gives examples of how the symbols are employed for some standard type of development against the 10 stock environmental criteria:

Figure 8 Use of Symbols

Transport Energy	Assumptions that all development will to some degree generate traffic/increase traffic movement. A judgement has to be made on the significance/degree of increased traffic/movement.
Built Energy	All new developments is likely to increase overall energy use, but to what degree or significance depends on size and details of the development. Generally, a positive result will be recorded where there is a conversion or re-use of a building. Most other developments/policies will be neutral. Large developments could have the potential to use economies of scale to increase energy efficiency/promote sustainable energy, therefore impact could record "mixed".
Biodiversity	Most developments impact on biodiversity will be dependent on the design details. Also mixed results, for example where a development results in the loss of agricultural land or open space, but design creates many private garden grounds and landscaped and planting areas.

Air Quality	Generally mirrors transport impact.
Water Quality	Many new developments may have indirect impact on water quality by increasing run-off. However, most factors influencing water quality are controlled by SEPA permissions, including SUDS requirements, which should improve water conditions. Generally neutral or uncertain
Land & Soil	Generally brownfield developments should record positive impact and greenfield developments should record negative impact
Minerals	Re-use of buildings, positive results. Any large development would increase the rate of extraction, and have negative impact. Large road building project would result in negative impact. Otherwise generally neutral
Landscape etc	Development on greenfield sites would record negative impact unless there was no particular landscape interest (neutral) or proposal would create greater access.
Liveability	Positive results recorded for brownfield and gap sites.
Cultural Heritage	Positive results recorded for specific improvements.

- 9.8 The scoring and commentary was undertaken by a group of environmental specialists and planners not directly involved in the Alteration. The group discussed the impacts and a consensus was formed on the perceived impacts and recommendations.

10. ASSESSMENT RESULTS

10.1 The following is a summary of the assessment of the Key Strategic Choices against the environmental stock criteria and objectives, as recorded in the pro-formas.

10.2 Housing Requirements

- While accommodating the growth will inevitably bring negative environmental impacts, the requirement for the developer to provide adequate infrastructure should mitigate against some of the impacts. If the specific sites indicated for regeneration prove not to be viable, the increase housing will not have to be met elsewhere.
- This strategy provides a strategic policy directing priority areas for housing-led growth and the investment should create environmental benefits.
- The requirement for the areas of growth to be Masterplanned should encourage the use of energy efficient design and provide for public transport services.
- The precise nature of the negative environmental impacts associated with any housing growth will be dependent on the details and site specifics.
- However, in general, three of the four SRRs are in peripheral areas, with limited access to public transport, few existing employment sites or services and substantially on greenfield land. Significant impacts recorded therefore for land take, landscape quality, and transport efficiency and air quality.

10.3 Retail Policy

- The results clearly show that a significant impact on the environment would result if the retail floorspace at Middlefield/Westfield was to be left unrestrained. It was felt that too much retail at this location has the potential to generate unacceptable levels of traffic and may adversely impact on the Town Centre retail. On the other hand, to increase the investment capacity of the site could potentially maximise the environmental benefits of the site's development. The finalised Alteration has opted to retain a ceiling, but extended from 10,000 to 25,000m². This protects the town centre to some extent while also allowing for greater investment to bring environmental benefits.

10.4 Strategic Development Opportunities

- Across the stock criteria, negative impacts result from the allocation of Manuel Brickworks, Whitecross.
- The new SDO would generate significant new traffic trips, and the cumulative impacts of this across the Falkirk Council area could be significant.
- However, the development can bring regenerative effects, maximising the use of the brownfield site and investment into the area that can lever positive environmental benefits.

10.5 Waste Policy

- Clearly the impact of landfill sites are significant especially on minerals/natural resources conservation with the objective to stabilise or reduce production of waste. The operation of the landfill facility will generate significant levels of traffic and impact on the landscape. However, as this particular proposals is for an extension to an existing waste management facility, these impacts will not be so great as if it was a new proposed site. The environmental stock criteria for minerals conservation and natural resources has as its objective the reduction of waste produced and the levels of re-use and recycling increased. The extension of landfilling capacity has to be in conjunction with initiatives to increase levels of recycling etc and should not automatically assume that the extra capacity will produce an increase in waste.

11. MONITORING

- 11.1 Monitoring is built in to the development plan process and there is a commitment to reviewing the Structure Plan on an annual basis and produce an annual Monitoring Report. This process will also refer to the potential environmental conflicts identified in this SEA.

12. REFERENCES

Falkirk Council Local Plan Consultative Draft, September 2003

Falkirk Council *Structure Plan Written Statement*, Adopted June 2002

Falkirk Council *Structure Plan Report of Survey*, 2nd Edition, February 2001

Falkirk Council *First Annual Monitoring Report of the Structure Plan*, Dec 2003.

Falkirk Area Biodiversity Partnership, *The Falkirk Area Biodiversity Action Plan*, 2002

Falkirk Council, *Sustainable Falkirk 2002-2004*, April 2002

Falkirk Council Local Transport Strategy 2000-2004

Scottish Executive, Development Department, *Environmental Assessment of Development Plans, Interim Planning Advice*, August 2003

Scottish Executive, Indicators of Sustainable Development for Scotland, February 2003

SEPA, *Forth Valley Area Waste Plan*, February 2003

APPENDIX 1

ASSESSMENT PRO-FORMAS AND MATRICES

KEY STRATEGIC CHOICE

Updating Housing Requirements

KEY LEGISLATION/GUIDANCE

Housing related guidance – SPP3 Planning for Housing, PAN38 Housing Land, PAN 67 Housing Quality.

STRUCTURE PLAN ENVIRONMENTAL APPRAISAL TARGET AREAS

The Structure Plan's Environmental Appraisal concluded that to pursue the growth strategy would result in negative environmental impacts such as an increase in trips by private motor transport, loss of greenfield land on the fringes of settlements and open land within settlements, threats to areas protected for their environmental value, and increased use of non-renewable natural resources. However, it recommended that other policies contained in the Structure Plan would mitigate the worst of the impacts. These included:

- presuming in favour of brownfield development,
- attempting to find sustainable location from a transport perspective,
- encouraging energy efficiency in housing design, and
- trying to ensure that each community receives a fair share of the allocation.

In addition, the Local Plan will have rigorous policies to mitigate against the detailed effects of development, and relies on Development Control to implement the policies and ensure monitoring of conditions.

POLICY APPROACH DESCRIPTION

This alteration proposes to express the area's future housing requirement in two parts –

1. COM.1a – The baseline housing requirement which must be met and is based on the demographic assumptions necessary to keep the population stable; and
2. COM.1b – An element of growth made up of special initiatives for residential-led regeneration. These will allow the area to sustain the high levels of in-migration experienced in the recent past that new demographic information has highlighted. This ensures that policy accurately reflects the current demand based on up-to-date information on in-migration rates, natural demographic rates and household increases. It is estimated that to continue to meet the rate of 500 people/year in-migration, approximately 3,000 extra housing units would be required. Schedule COM.1b accommodates the increased housing land in the following general locations:
 - Bo'ness Foreshore,
 - Manuel Works,
 - Slamannan, and
 - Banknock

The finalised draft adds a broad range of indicative number of units for each of the four special initiatives for residential-led regeneration areas.

The Council will support these sites provided that they can demonstrate that adequate social and physical infrastructure is in place and is accompanied by a Masterplan. If the sites are unable to provide the required infrastructure, the growth will not have to be met elsewhere.

ALTERNATIVES CONSIDERED

- Status quo/no extra growth – Roll forward the housing requirement but based on maintaining a stable population. Distribute the housing requirement between the main communities. It should be noted this would require approximately 11,000 new dwellings which represents a reduction in the implied annual house building rate compared to the currently approved plan.
- Single tier allocation of growth – Using the latest census figures, and to match demand as demonstrated with recent in-migration rates of 500 people per year, the Alteration calculates 13,800 housing units are required to meet target population figure for 2020. This alternative option would be to distribute this figure amongst all the main communities, without specified conditions nor allocated to identified regeneration settlements or brownfield sites.

ALTERATION PROPOSAL, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY	KEY SUCCESS FACTORS AND MITIGATION
	1	2	3	4	5	6	7	8	9	10		
	Transport Energy	Built Energy	Biodiversity	Air Quality	Water Quality	Land & Soil	Minerals	Landscape	Liveability	Cultural Heritage		
<p>Key Strategic Choice</p> <p>Two Tier Approach:</p> <ul style="list-style-type: none"> • Baseline housing requirement • 4 special initiatives for residential-led regeneration (SIRRs) (conditional on provision of appropriate infrastructure) 	X	X ✓	X ?	X	X ✓	X ✓	X	?	?	=	<p>Negative and mixed results recorded.</p> <p>The large-scale sites/general areas indicated in Schedule COM.1b are a mixture of sites across various settlements in the Falkirk Council area. The site's specific location and characteristics will determine the detailed impacts and this part of the assessment only makes general comments (see below for the detailed assessment of each of the four SIRRs).</p> <p>To accommodate such an increase in housing, many environmental objectives will be tested.</p> <ul style="list-style-type: none"> • Such housing and population growth would inevitably lead to more car trips, which in turn impacts on air quality. • The larger population would lead to an increase in energy consumption. However, larger developments have a greater potential to employ energy efficient designs. • The impact on water quality is mixed – run-off rates increase with greater area developed but SuDS should mitigate the effects and, in some cases, have the potential to improve overall water quality. • Land and soil quality depends largely on whether the sites are brownfield or greenfield. • Mineral consumption is likely to be high as a result of the construction materials required for this scale of growth. This can be minimised where possible by converting existing structures. • The impact on the landscape depends on previous use of the land, the existing landscape quality, and can be mitigated by building design and a landscape framework. • Such a level of growth will have uncertain impacts on settlement's liveability. It could increase the pressure on the settlement's limited resources or it could ensure their viability with contributions to the provision of community infrastructure. 	<p>Policy states that Development Frameworks/Masterplans will be required – this should ensure that the details of each development re environmental issues, are planned for.</p> <p>Ensure high overall design quality, in particular –</p> <ul style="list-style-type: none"> • Energy efficient and resource minimising construction and design. • Add to townscape value with good design. • Mitigate impact on landscape through landscape assessments and new planting schemes, with biodiversity promotion integrated. • Incorporate sustainable transport links and access, including travel plans and infrastructure for public transport. • Promote intense use of brownfield land. • Promote the conversion of buildings over demolition and new build. • Incorporate SuDS with biodiversity promoted. <p>Improvements to the environment should be secured through the developer contributions to infrastructure provision and enhancement schemes.</p>

											<p>This policy has an in-built control element as it ensures that if sites cannot meet their own infrastructure requirements, the units do not need to be allocated to other sites. It is the responsibility of the developer to demonstrate that a site can be made to work. If not, the additional housing allocation will be unable to be delivered and then only existing commitments will be valid.</p>	<p>All the proposals will be assessed according to criteria-based policies in the Structure Plan that cover design, nature conservation, infrastructure etc, that remain unaltered in the Structure Plan.</p>
--	--	--	--	--	--	--	--	--	--	--	--	---

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
Banknock SIRR	X	X	X	X	X ?	X ?	X	X	?	=	<p>This SIRR significantly impacts this peripheral small settlement. Negative impacts will be recorded for most of the environmental objectives as a result of increases in traffic generation and the impact of developing open land. In particular, negative impacts are anticipated against the following environmental objectives:</p> <ul style="list-style-type: none"> • traffic generation and air quality from the increase in households, the fact that this is a peripheral rural area where public transport is limited, and relatively good access to motorway is likely to attract commuters; • land take, even though part of this scheme redevelops the previously developed land at Cannerton Works; • biodiversity as the development affects areas of land that have been left to regenerate naturally – especially around Cannerton Brickworks; • landscape quality, as infilling the open spaces impacts on the rural setting. The major land take at Cannerton Works will particularly affect the landscape quality due to its sloping topography and edge of settlement location; • resource use as the SIRR proposes the construction of new build and road infrastructure. <p>Water quality may have a mixed impact as the co-ordinated provision of sewerage infrastructure should make an improvement to water quality.</p> <p>Soil quality may be improved if the Cannerton Works site is decontamination.</p> <p>Generally, Banknock has not has any recent investment into its townscape quality despite being highly visible from motorway and train line. Potential exists to raise the quality of the settlement with townscape and safety improvements, and increasing likelihood of attracting higher quality local services.</p>	<p>The SIRRs concept aims to co-ordinate the delivery of infrastructure that is required to accommodate the growth. The SIRR site as a whole (compound of all the individual sites) will be the subject of a development framework. The detailed criteria must include ways to mitigate the impact on the landscape quality and setting, the provision for sustainable transport links and SuDs that promote biodiversity.</p> <p>Materials excavated during construction phase should be reused/recycled.</p> <p>Cannerton Works has South facing aspect which site should use to maximise solar gain for housing energy efficiency.</p>

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
Bo'ness Foreshore SIRR	X	X	X	X	X ?	X	X	X	✓	?	<p>This SIRR site is within the urban area of Bo'ness, close to the town centre. However, as it is predominately located on open space, and the large scale nature of a SIRR, the following negative impacts are recorded:</p> <ul style="list-style-type: none"> • traffic generation and air quality from the growth in household numbers. However, proximity to town centre is advantageous as it would promote the viability/vitality of local services, reducing the need to travel further field, and close to the bus station. • land take and biodiversity is affected from the loss of greenfield/open space; • water quality has the potential to be affected, as development is adjacent to the Firth of Forth SPA; the area has the potential to be affected by flooding, especially in the long-term. However, the proposal would address the contamination of the dock area by dredging. • resource use as the SIRR proposes the construction of new build. <p>Cultural Heritage could be affected as the SIRR covers the Scottish Railway Preservation Society site which is within the Bo'ness Town Centre Conservation Area.</p>	<p>The SIRR will be subject to a development framework which should address most of the concerns.</p> <p>The success of this development will depend on the quality of the buildings and how the scheme is designed to integrate into the town centre.</p> <p>The design of the foreshore buildings should take into account ways to mitigate exposure to the prevailing wind.</p>

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
Slamannan SIRR	X	X	X	X	X ✓	X	X	X	✓ ?	=	<p>The SIRR boundary encompasses the village and a large amount of greenfield land between two parallel roads as well as open fields to the north. Significant negative impacts are anticipated as a result of this development. In particular, negative impacts are recorded against the following environmental objectives:</p> <ul style="list-style-type: none"> • traffic generation and air quality from the increase in households, the fact that this is a peripheral rural area where public transport is limited, and commuting to larger service and employment centres is inevitable; • land take, as this scheme is exclusively on greenfield land/open space; • biodiversity, general impact resulting from loss of greenfield land; specific impact on beaneese (LBAP priority species) as site includes 2 fields where records have shown the birds to have used for wintering; • landscape quality, expansion into the countryside will impact on the rural setting which is covered by an AGLV designation; • water quality – increased runoff resulting from growth; impact on areas already affected by flooding; • resource use as the SIRR proposes the construction of new build and road infrastructure. <p>Development investment may increase the viability and vitality of the village's services. At present it is well served but possibly underused. However, there is the potential that Slamannan goes from being a small community with good facilities to a larger community with few services. Improvements to social infrastructure must be commensurate with the proposed increase in households.</p> <p>Potential exists to raise the quality of the settlement with townscape and safety improvements.</p> <p>While increased development generally affects water quality issues, the proposal will address the existing flooding issue and it is anticipated that the drainage solutions will make the situation better than existing.</p>	<p>The SIRR will be subject to a development framework which should address most of the concerns.</p> <p>Improvements to quality and range of service provision will improve the liveability of the village and reduce the need to travel.</p> <p>The quality, location and landscape schemes of the residential areas will determine the impact of the housing growth on the landscape setting.</p> <p>Links to public transport have to be made to give people an alternative to car use.</p> <p>The necessary SuDS solutions must make provision for the promotion of biodiversity.</p>

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
Whitecross/ Manuel Works SIRR	X	X	X	X	X	X ✓	X	X	✓ ?	✓ ?	<p>This SIRR will result in a large expansion of a peripheral rural village. This will have major negative impacts against the following environmental objectives:</p> <ul style="list-style-type: none"> • traffic generation and air quality from the increase in homes, the fact that this is a peripheral rural area where public transport is limited, and relatively good access to motorway is likely to attract commuters; • land take, even though part of this scheme redevelops the Manuel Works (brownfield land); • biodiversity as the development affects Haining Wood SINC; • landscape quality, as the site proposes a major development over previously open land, in a rural setting; • resource use as the SIRR proposes the construction of new build and road infrastructure. <p>Almond Castle is currently affected by the works and the redevelopment gives opportunity to improve the setting of the castle.</p> <p>The SIRR has the potential however, to positively impact on the Built Environment objectives by co-ordinating shared power, employing innovative designs to reduce energy consumption.</p> <p>The landscape value around Whitecross is high as it is between designated Green Belt and an AGLV.</p> <p>Planning permission has been granted for an abattoir nearby – this could produce an employment opportunity, but may conflict with liveability objectives for new settlement.</p>	<p>The SIRR will be subject to a development framework which should address most of the concerns.</p> <p>Particular effort should be made to minimise the impact on Haining Wood and Almond Castle, and conservation initiatives should be in the development framework.</p> <p>The quality, location and landscape schemes of the residential areas will determine the impact of the housing growth on the landscape setting.</p> <p>Links to public transport have to be made to give people an alternative to car use.</p>

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
<p>Alternative</p> <p>Baseline housing requirement Schedule COM.1a only – population remains stable.</p>	=	?	=	=	=	?	=	?	=	=	<p>The effect on the environment will generally be neutral as a stable population should not generate any more impacts on the environment than presently recorded.</p> <p>However, restricting potential future in-migration to that which just maintains population at a stable level, means that no significant investment will be attracted to the area. Without new sources of investment, and the potential for contributions as part of planning permissions, the opportunities for environmental improvement works are perhaps more limited.</p> <p>Population would likely decrease, unable to support a higher level of local services and public transport.</p>	<p>Existing housing commitments would be used. These have already been subjected to an environmental appraisal and are subject to criteria in Structure Plan and Local Plan policies.</p>
<p>Alternative</p> <p>Single tier allocation of Housing growth – requirement increased to 13,800</p>	X	X	?	X	=	X	X	X	?	?	<p>Negative environmental impacts are recorded, and are likely to be long-term covering the whole Structure Plan period to 2020.</p> <p>Without a strategic steer to sustainable locations, accommodating the growth will result in the following impacts:</p> <ul style="list-style-type: none"> continued pressure for the release of Greenfield sites, with a loss in environmental amenity land take in sites that will lead to settlement coalescence and will adversely impact on landscape quality and a reduction in access to countryside for recreational purposes accelerated growth in traffic, with impacts on air quality <p>Difficulties may also exist in co-ordinating the provision of the necessary infrastructure to achieve the increased housing requirement.</p>	<p>The scale of negative impacts is large and all the possible mitigating factors will have to be used on a site-by-site basis.</p> <p>The Local Plan would allocate individual sites to accommodate the growth, making site-by-site assessments.</p>

SUMMARY OF IMPACT

Key Strategic Choice – two tier approach

The option for the two-tier approach continues and updates the Council's growth strategy, as set in the approved Structure Plan. Accommodating this growth will undoubtedly produce a number of adverse environmental impacts. However, the main growth allocation in this option is directed to four areas identified for regeneration and they are conditional on overcoming infrastructure constraints with developer contributions. Failure to overcome the constraints to the Council's satisfaction will not lead to the housing allocation being met elsewhere.

The summary of the four SIRRs is as follows:

- Bo'ness will impact negatively on most of the environmental objectives, due to the scale of the housing and the land take involved. However, the Bo'ness option is the most sustainable location - close to town centre and bus station. The development can be linked to the wider town centre/heritage initiatives and could improve the overall townscape quality. The potential for flood risk requires detailed investigation.
- The Banknock SIRR will result in long-term irreversible negative impacts on most of the environmental objectives. These are particularly related to the fact that the Banknock is a peripheral village, with few amenities and services, and development will result in a large greenfield land take, the coalescence of settlements and impact on landscape quality.
- There is particular concern for the SIRR at Slamannan which proposes a very large expansion of a remote village into greenfield/open countryside. The adverse environmental impacts will be long-term and irreversible. There will also be particular issues re transport implications especially on this rural substandard road and the potential impact on the habitat of a LBAP priority species (bean geese). While development and investment will support the facilities and services already in place, there remains concern over the scale of growth proposed.
- The Whitecross SIRR will result in negative impacts on most of the environmental objectives, resulting from the proposed large-scale development in a peripheral location. In particular, issues of traffic generation and the likelihood of increases out-commuting and landscape quality.

Alternative – Baseline housing requirement

Providing for only the baseline housing requirement does not show any definitive environmental impacts. However, the consequences of not planning for the actual in-migration rates the area is experiencing, may bring other problems. For example, the growth will be accommodated and transferred to other Local Authority areas which may lead to an increase in commuting. The population will decline, and be unable to support the level of services that the existing communities' aspire for. It would be harder to secure new investment to enhance the environment.

Alternative – Single tier allocation

Because the SIRRs are co-ordinated, must be accompanied with a development framework etc. and are conditional on overcoming infrastructure constraints, it is felt that they are preferred over the single tier allocation of the extra growth. Allocating 13,800 houses without any restrictions on location or ability to provide for the growth's infrastructure needs could exacerbate even further the expected impacts relating to growth. In particular, settlement coalescence, impact on landscape and loss of accessible countryside for recreation purposes. In other words, without a strategic policy directing priority areas for housing-led growth, local planning will be less co-ordinated and unable to bring benefits, such as improved infrastructure. Furthermore, the focussed direction of the growth will relieve pressure on existing settlements to further expand. On the other hand, focussing a substantial growth allowance in one place may conflict with the Structure Plan's commitment to see growth in all the communities as it would leave little regeneration/investment across the other settlements.

However, in general, the precise nature of the negative environmental impacts associated with any housing growth will be dependent on the details and site specifics.

KEY STRATEGIC CHOICE

Reassessing the Retail Policy

KEY LEGISLATION/GUIDANCE

SPP2 Economic Development
NPPG8 Retail

STRUCTURE PLAN ENVIRONMENTAL APPRAISAL TARGET AREAS

- Negative impacts re traffic generation and settlement liveability associated with off-centre retail

Key Strategic Choice POLICY APPROACH DESCRIPTION

- The draft alteration proposed the deletion of the retail floorspace threshold of 10,000m² retailing at Middlefield/Westfield Strategic Development Opportunity. The potential additional non-food retail will be controlled through the general retail policies of the Plan which are unaltered. The reason for this approach was the result of a significant projected growth in consumer expenditure of non-food retail and at the same time practical difficulties in identifying new sites in existing centres. If the Structure Plan could not direct new non-food retail to town centres it could act as a discouragement to inward development. Therefore, more provision of floorspace could be made by identifying Westfield/Middlefield and Glasgow Road, Camelon as sites for bulky household goods retail.
- The finalised draft alteration has retained a retail ceiling at Westfield/Middlefield, but extended it to 25,000m².

ALTERNATIVES CONSIDERED

- Status quo – retention of the 10,000m² floorspace ceiling.

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
	Transport Energy	Built Energy	Biodiversity	Air Quality	Water Quality	Land & Soil	Minerals	Landscape	Liveability	Cultural Heritage		
<p>Draft Alteration Key Strategic Choice</p> <p>Remove ceiling on non-food retail floorspace at Westfield/ Middlefield</p>	X	?	X	X	=	X	X	?	?	=	<p>This allows for the unrestricted potential growth in non-food retail at Westfield/Middlefield. Such a concentration of retail will encourage more car trips, impacting on transport efficiency and air quality. It could lead to a negative impact on the vitality of Falkirk Town Centre, which should be promoted as a sustainable location. More intensive development will result in greater use of energy and resources.</p> <p>However, without knowing the exact floorspaces and mix of uses on the site it is difficult to predict the actual impact on traffic levels. Generally, it would be assumed that the more retail allowed, the greater the traffic generation, whereas, high office floorspace could employ green travel plans to manage traffic to the site.</p> <p>More investment into the site can lever a higher design quality and other environmental benefits.</p> <p>Impact on land take will not be affected as there is no proposed change to the site's size.</p>	<p>Transport Impact Assessment required.</p> <p>The impacts are likely to be great and this assessment can be used to demonstrate the need for investment into the environment and measures to mitigate and compensate for the inevitable effects.</p> <p>Such mitigating factors will comprise:</p> <ul style="list-style-type: none"> Public transport provision and Green Travel Plans Landscape framework and design strategy. Increase energy efficiency in the design <p>The proposal would be considered against the criteria in Policy ECON.6.</p>
<p>Alternative</p> <p>Retain as existing, with 10,000m2 restriction</p>	X	X ✓	?	X	=	X	X	?	?	=	<p>For the purposes of this assessment, it should be noted that the Structure Plan has already assessed the site and principle of the gateway, and is committed to this development. This SEA should only assess the alteration's proposal to remove the floorspace ceiling. Nevertheless, it records general negative impacts of the site's location.</p> <p>The ceiling restricts the amount of traffic the site has potential to generate and aims to protect Falkirk Town Centre, which is more accessible by sustainable transport.</p> <p>However, the ceiling restricts the investment potential of the site and therefore the potential to secure greater environmental benefits with development.</p>	<p>Regardless of the size of the retail ceiling, the site should employ the following mitigating measures:</p> <ul style="list-style-type: none"> Public transport provision and Green Travel Plans Landscape framework and design strategy. Increase energy efficiency in the design

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
Finalised draft Alteration Key Strategic Choice Retention of non-food retail floorspace ceiling at Westfield/Middlefield, but extended to 25,000m2	X	=	=	X	=	=	=	=	?	=	This option realises the benefits of investment into the Council area, and particularly enhancing the attractiveness of sites at this key gateway site. This option is essentially a compromise between the draft proposal and the existing Structure Plan policy. However, the impacts on increasing the ceiling will still result in further traffic generation to an out of centre location and impact on the viability of Falkirk town centre.	Mitigation as above.

SUMMARY OF IMPACT

The results clearly show that a significant impact on the environment would result if the retail floorspace at Middlefield/Westfield were to be left unrestrained. Concentrating retail at this location has the potential to generate unacceptable levels of traffic. There is, however, the potential to increase the investment capacity with the unrestrained growth and therefore maximise the environmental benefits.

Therefore the finalised draft has opted for a compromise – further growth is allowed, but with an upper limit in place. The site will still benefit from the additional investment in the site.

KEY STRATEGIC CHOICE

Strategic Development Opportunities (SDOs)

The finalised Alteration proposes to increase the number of SDOs by 8 to 9 by adding the following new opportunity to the strategic list:

- Manuel Brickworks, Whitecross

The draft Alteration proposed Glasgow Road, Camelon, which has since been dropped, as the main development site is no longer available for redevelopment, and it is therefore not considered to be a strategic development area. The uses will remain the same as existing (business and industry), no longer the retail competition with the Town Centre.

KEY LEGISLATION/GUIDANCE

Retail NPPG8, SPP2 Economic Development

STRUCTURE PLAN ENVIRONMENTAL ASSESSMENT TARGET AREAS

There is no precedent in Structure Plan's EA re development of a new community. However, the main anticipated issues with the Whitecross new community will be similar to those recorded for large growth e.g. trip generation, and greenfield land take, landscape quality etc.

Key Strategic Choice POLICY APPROACH DESCRIPTION

This policy to allocate Manuel Brickworks, Whitecross as a SDO is related to the residential growth in COM.1b which also allocates Whitecross as a Special Initiative for Residential-led Regeneration (SIRR). This assessment should only assess the effects of adding a new SDO, in practice however, it looks at the Whitecross site specifically.

- Manuel brickworks is a priority brownfield site that can assist in achieving the Structure Plan's revised population growth figures and create a regenerated community with new employment opportunities. The development of this new community would have to meet its own infrastructure needs.

ALTERNATIVES CONSIDERED

- No additional SDOs.

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
	Transport Energy	Built Energy	Biodiversity	Air Quality	Water Quality	Land & Soil	Minerals	Landscape	Liveability	Cultural Heritage		
<p>Key Strategic Choice</p> <p>Add Manuel Works as a SDO</p>	X	X ✓	X	X	?	X ✓	X	X	?	=	<p>This large development opportunity was made available following the closure of the Manuel brickworks. The large site proposed as a Strategic Development Opportunity comprises the former brickworks (brownfield) and surrounding greenfield land. This would be a significant new development for the rural area to absorb. The impact on land take and landscape value could be high. Impacts are still likely to be great regarding traffic generation, access to public transport will be limited and reliance on private car will be high and commuting outwith the Falkirk Council area is likely.</p> <p>Promoting the site for employment uses will be important as an alternative to commuting.</p> <p>However, as a single large scale development it is likely to ensure a more co-ordinated approach to its planning (with masterplans etc). A package of infrastructure and environmental benefits can be sought as it would be subject to this alteration's proposals that the growth must be able to meet its own infrastructure needs (see this Alteration's key strategic choice on updating the housing requirements).</p> <p>The development of this site and the formation of a new settlement would concentrate a substantial amount of the extra growth proposed in this alteration and would relieve existing settlements of further housing pressure.</p> <p>On the other hand, focussing a substantial growth allowance in one place would not be in accordance with the Structure Plan's commitment to see growth in all the communities as it would leave little regeneration/investment across the other settlements.</p>	<p>A range of mitigating factors and environmental benefits would have to be sought through the Masterplanning of the site and by meeting its own social and physical infrastructure needs.</p> <p>Such mitigating factors will comprise:</p> <ul style="list-style-type: none"> • Public transport provision and Green Travel Plans • Landscape framework and design strategy. • Increase energy efficiency in the design

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
Alternative Status Quo – no additional SDO identified.	=	=	=	=	=	=	=	=	=	=	No impacts would occur as a result of not allocating new SDOs. However, the SDOs are linked to the housing growth proposal (see Key Strategic Choice: Updating Housing Requirement), so that employment can support the increased population. It would be difficult to achieve the large proposed housing growth without allocating large strategic development sites. There may then be a greater pressure on the Council to allocate growth in areas that do not meet the environmental objectives.	

SUMMARY OF IMPACT
<ul style="list-style-type: none"> • Across the stock criteria, negative impacts will result from the addition of the new SDO. • The SDO would generate significant new traffic trips, and the cumulative impacts of this across the Falkirk Council area could be significant. • However, the development can bring regenerative effects, bring an underused brownfield site into greater use and investment into the area that can lever positive environmental benefits. • This policy supports the strategic housing SIRR at the same location and with employment and mixed uses, the site will be more sustainable.

KEY STRATEGIC CHOICE

Waste Policy

KEY LEGISLATION/GUIDANCE

Waste Planning NPPG10, PAN63, Forth Valley Area Waste Plan

STRUCTURE PLAN EA TARGET AREAS

No negative impacts on waste policies as they sought to encourage recycling and restricting land available for landfill sites.

Option POLICY APPROACH DESCRIPTION

- This reviews Policy ENV.12 Landfill Sites following the publication of the Forth Valley Area Waste Plan. The FVAWP was approved by Scottish Ministers in February 2003 and requires there to be a 10 year forward supply of landfill capacity. The preferred location would be within or adjacent to existing waste management facilities. The Council has considered advice from the Area Waste Group and concluded that safeguarding land for the possible extension to the site at Avondale strikes the best balance between operational efficiency and environmental impact.

ALTERNATIVES CONSIDERED

- No alternatives within the Falkirk Council area have been assessed as this proposal is in reaction to the results of the Forth Valley Area Waste Plan and accords with the recommendations made by the Area Waste Group.

ALTERATION PROPOSALS, ALTERNATIVES AND STATUS/ BACKGROUND	STOCK ENVIRONMENTAL CRITERIA										NATURE OF IMPACT COMMENTARY & RECOMMENDATIONS	KEY SUCCESS FACTORS
	1	2	3	4	5	6	7	8	9	10		
	Transport Energy	Built Energy	Biodiversity	Air Quality	Water Quality	Land & Soil	Minerals	Landscape	Liveability	Cultural Heritage		
Key Strategic Choice Policy ENV.12 Safeguarding of land at Avondale, Polmont to permit extension of existing landfill facility.	X	?	?	X	?	=	X	X ?	=	=	<p>Mainly negative impacts are likely which are inherent to landfill sites. However, extending an existing facility is better than creating a new facility to meet the area's needs. This location means that the Council's waste arising don't have to travel far, but it will also receive waste imported from other areas, and there will be a likely net increase in traffic to the site.</p> <p>Involves the infilling of a sand and gravel quarry, so does not result in a loss of greenfield land or productive agricultural land. While landfill sites have significant visual impacts, this proposal extends an existing landfill site, and the impact on the landscape may be less significant.</p> <p>Potential impacts on biodiversity as habitats of protected species may be adversely affected by the potential extension.</p> <p>Extends the level of renewable energy that can be harnessed.</p>	<p>Mitigating the environmental effects of this facility will be controlled under various legislative means. Planning the site must include landscape strategies and traffic impact assessments.</p> <p>The potential to harness more energy (methane) from the site should be investigated.</p> <p>To reduce the impact of the traffic to the plant, a reduction in the amount of waste landfilled is needed and therefore support needs to be given to recycling/composting initiatives.</p>

SUMMARY OF IMPACT

Clearly the impact of landfill sites are significant especially on minerals/natural resources conservation with the objective to stabilise or reduce production of waste. The operation of the landfill facility will generate significant levels of traffic and impact on the landscape. However, as this particular proposals is for an extension to an existing waste management facility, these impacts will not be so great as if it was a new proposed site. The environmental stock criteria for minerals conservation and natural resources has as its objective the reduction of waste produced and the levels of re-use and recycling increased. The extension of landfilling capacity has to be in conjunction with initiatives to increase levels of recycling etc and should not automatically assume that the extra capacity will produce an increase in waste.