

Table of Contents

NON TECHNICAL SUMMARY

- 1.0 Falkirk Local Development Plan – Main Issues Report
- 2.0 Strategic Environmental Assessment Methodology
- 3.0 Relationship with Other Plans, Programmes and Strategies
- 4.0 Environmental Baseline
- 5.0 Environmental Assessment
- 6.0 Proposals for Monitoring
- 7.0 Next Steps

Appendices

- Appendix 1: Environmental Baseline Report
- Appendix 2: Detailed Environmental Assessment Matrices
- Appendix 3: Detailed Monitoring Proposals
- Appendix 4: Record of Scoping Comments

NON TECHNICAL SUMMARY

Strategic Environmental Assessment

The Environmental Assessment (Scotland) Act 2005 requires that any Plan, Programme or Strategy prepared by Falkirk Council which is likely to have significant effects on the environment should go through a process of Strategic Environmental Assessment.

This report (which is a key stage of the Strategic Environmental Assessment process) is called the Environmental Report and its purpose is to set out the likely significant environmental effects of implementing the strategy for development set out within the Falkirk Local Development Plan, Main Issues Report. It also sets out the likely significant environmental effects of alternative strategies for development as well as actions to prevent, reduce and as fully as possible, offset any significant negative effects.

Falkirk Local Development Plan – Main Issues Report

We are preparing our second Local Development Plan (LDP) for our area. This will replace our first LDP which was adopted in July 2015. The LDP will set out both the broad vision and strategy for the area for a 20 year period, and detailed, site-specific policies and proposals which will guide development for the first 10 years.

The Main Issues Report is an important stage of the LDP preparation process and identifies the main issues to be addressed by the LDP and sets out its preferred proposals for the future development in the area, together with alternatives.

The Main Issues Report (MIR) for the Falkirk LDP has been informed by a range of consultation activity with key stakeholders in the area, as well as by a range of technical studies which provide the evidence base for the LDP.

The MIR is intended to be the main tool for consulting on the final content of the LDP, and to stimulate genuine debate on the proposed approach to development in the area, and alternatives to it. It indicates the Council's preferred approach to the key planning and land use issues facing the area over the coming years. However, it is not a draft plan, and although it indicates the sites which the Council is minded to propose for development, it does not contain detailed wordings of all the policies which will ultimately be included in the proposed plan.

The MIR for the Falkirk LDP will present an overarching vision statement, with alternatives, which will be subject to assessment in the Environmental Report. The subsequent themed chapters will present a number of issues and sub-issues, for each of which a preferred option, and reasonable alternatives (if these exist) will be provided. The following structure of 11 main issues arranged under 4 broad chapters is proposed:

Place and Environment

1. Making Better Places
2. Green Network

Homes and Communities

3. Housing Targets and Requirements
4. Existing Housing Land Supply and 'Stalled Sites'
5. Sustainable Community Growth

Jobs and Economy

6. Business Locations
7. Town Centres
8. Tourism

Infrastructure and Resources

9. Infrastructure
10. Energy
11. Onshore Gas, Minerals and Waste

Consultation Process

In accordance with Section 15 (3) of the Environmental Assessment (Scotland) Act, Falkirk Council have agreed a 12 week Statutory Consultation period for Statutory responses (Scottish Ministers/ Historic Environment Scotland (HS)/ The Scottish Environmental Protection Agency (SEPA) and Scottish Natural Heritage). The public consultation period will also run for a period of 12 weeks from 10th February 2017 until 5th May 2017.

Falkirk Council Area

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

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

The population of 158,460 is focused within a network of small to medium sized towns. The principal town of Falkirk, with a population of around 39,000, 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.

State of the Environment

Baseline environmental information for the Falkirk Council area is provided in the Environmental Baseline Report which forms an appendix to this Environmental Report. The environmental baseline report summaries existing environmental issues; existing environmental characteristics; likely future changes to the environment without the implementation of the Local Development Plan, current environmental protection objectives and how those objectives have been taken into account for 9 distinct environmental topic areas. The following strategic environmental issues affecting the area have been identified:

Environmental Topic Area	Strategic Environmental Issues
Biodiversity Flora and Fauna	<ul style="list-style-type: none"> Habitat disturbance, degradation or loss and/or species disturbance or loss; Decline in species population distribution and numbers; Spread of invasive, non-native species; Loss of or damage to sites/areas of high ecological importance; Fragmentation and isolation of habitats; and Protection and enhancement of ecosystems
Population and Human Health	<ul style="list-style-type: none"> Development pressure on open space within urban areas; The quality, management and level of investment in existing public open space; Considerable amount of vacant, derelict land within the area, some of which is severely contaminated; The impacts new recycling/waste disposal infrastructure needed to enabling a zero waste society will have on the local population; The impacts of new housing development on waste handling capacity in the local area; Health and Safety Executive hazard consultation zones and the restrictions they place on development; and Not all of the Council area meets the standards for accessibility to open space identified within the Open Space Strategy.
Soil	<ul style="list-style-type: none"> Severely contaminated sites in need of remediation; and Protection of rare and carbon rich soils.
Water	<ul style="list-style-type: none"> Pollution of the Bonny Water from the urban runoff; Pollution of the River Carron; River Avon; Forth Estuary; Bonny Water and the Union Canal from sewage disposal, refuse disposal, chemical production, food production and other manufacturing processes; Coastal flooding in Bo'ness and Grangemouth; Fluvial (river) flooding Grangemouth, Bonnybridge, Carron and Dunipace; and Widespread pluvial flood risk.
Air	<ul style="list-style-type: none"> Five Air Quality Management Areas declared within the Council area; and Level of traffic growth is counteracting reductions to emissions from vehicles due to improved emission control technologies
Climatic Factors	<ul style="list-style-type: none"> Increased occurrence of extreme flooding events due to climate change; and

	<ul style="list-style-type: none"> • The adequacy of existing flood defence infrastructure to prevent flooding from an increasing flood risk; • The potential for the area to significantly reduce greenhouse gas emissions through development of Carbon Capture and Storage technology.
Material Assets	<ul style="list-style-type: none"> • Traffic growth and increasing car dependency; • Adequacy of off-road cycle and footpath infrastructure to make these modes attractive and encourage reduced car use; • Potential for new development to enable a significant increase in the installed capacity of Low and Zero Carbon generating Technologies; • Adequacy of existing quarries in the Council area to meet future levels of development in the local market area
Cultural Heritage	<ul style="list-style-type: none"> • Assessment of new development proposals within the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site. • Vulnerability of sites on the Sites and Monument Register to development without adequate archaeological investigation
Landscape	<ul style="list-style-type: none"> • Risk of settlement coalescence; and • The cumulative impact of incremental growth on landscape quality.

Likely Significant Environmental Effects of the Falkirk Local Development Plan Main Issues Report

Likely significant environmental effects of implementing the overall vision of the Main Issues Report of the preferred options for addressing the main issues and sub issues are detailed in the table below and are organised under broad environmental topic area. Measures for mitigating the significant negative effects and ensuring the significant positive effects of implementing the preferred options are set out within section 5 of the Environmental Report. The alternatives to the preferred option that were considered, their likely significant environmental effects as well as the reasons for selecting the preferred options are also set out within section 5 of the Environmental Report. Detailed matrices showing the assessment of the overall vision, main issues, sub main issues and reasonable alternatives against the environmental objectives set out in the Environmental Baseline Report are included in appendix 2 of the Environmental Report.

Biodiversity	
Significant Positive Effects	Significant Negative effects
<ul style="list-style-type: none"> • creation of new habitat and reinforcing the habitat network; • enhance and restore existing habitat; • introduce significant new woodland planting; • connect up significant fragmented habitat networks; • prevent a large scale pollution leak from the Grangemouth petrochemical complex in an extreme flooding event; 	<ul style="list-style-type: none"> • loss of significant amounts of habitat; • loss of ancient and semi natural woodland; • potentially disturbing the qualifying interests features of the Firth of Forth and Slamannan Plateau SPA and River Teith SAC • increasing the risk of pollution feeding into the Firth of Forth SPA; • loss of Firth of Forth SPA supporting habitat; • loss of habitat at Black Loch Moss SAC; • Adverse impacts on the Bo'mains

	<p>Meadow, Howierig Muir, Carron Glen and Firth of Forth SSSI</p> <ul style="list-style-type: none"> • adverse impacts on legally protected species; • increasing the disturbance of Firth of Forth/Forth Islands SPA, Firth of Forth and St Andrew's Bay pSPA, River Teith SAC species caused by additional shipping movements; • increasing the disturbance of Firth of Forth/Forth Islands SPA, Firth of Forth and St Andrew's Bay pSPA, River Teith SAC species.
<p>Population and Human Health</p>	
<p>Significant Positive Effects</p>	<p>Significant Negative effects</p>
<ul style="list-style-type: none"> • an increase in population; • significant enhancement of recreational opportunity; • significant improvement to the quality and connectivity of the green network; • creation of new open spaces which addresses existing deficiencies in access to open space; • significant improvement in the quality and fitness for purpose of existing open space; • regeneration of significant amounts of vacant/ derelict land; • increase in the proportion of households with access to public park or garden or amenity space of over 0.2ha within 400m; • removal of a current hazardous substances consent and its associated consultation zones; and • safeguarding against alarge scale pollution leak from the Grangemouth petrochemical complex in an extreme flooding event. 	<ul style="list-style-type: none"> • an increase in population • significant cumulative loss of open space • significant cumulative increase road traffic noise • decrease the proportion of households with access to an open space containing a playspace within 400m; • decrease in the proportion of households with access to an open space containing a sports area within 800m; • reduction of the likely scale of compensation received for the loss of open space; • reduction of the extent to which remaining open spaces can have their biodiversity and nature conservation value improved in compensation for the loss of open space; • reduction of the extent to which remaining open spaces can have their design and aesthetic quality improved in compensation for the loss of open space; • an increase in the population exposed to risk of injury from major hazards and major hazard pipelines.
<p>Soil</p>	

Significant Positive Effects	Significant Negative effects
<ul style="list-style-type: none"> • making safe significant amounts of unstable ground; • creation of carbon rich soil; • removal of significant amounts of existing contamination 	<ul style="list-style-type: none"> • loss of significant amounts of agricultural land; • loss of prime quality agricultural land.
Water	
Significant Positive Effects	Significant Negative effects
<ul style="list-style-type: none"> • restoration of watercourses; • restore natural coastal processes • enhance natural flood storage capacity • reduce flood risk 	<ul style="list-style-type: none"> • increase the population at risk of flooding • alter coastal processes
Air	
Significant Positive Effects	Significant Negative effects
<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • significant increase in emissions from motorised transport; • increase in the population exposed to reduced air quality; • increase in traffic and industrial related air pollution within an Air Quality Management Area.
Climatic Factors	
Significant Positive Effects	Significant Negative effects
<ul style="list-style-type: none"> • creation of significant low carbon energy generation capacity which will significantly reduce greenhouse gas emissions. • creation of new carbon sinks 	<ul style="list-style-type: none"> • increased greenhouse gas emissions
Material Assets	
Significant Positive Effects	Significant Negative effects
<ul style="list-style-type: none"> • significant improvement in the quality of the active travel network; • significant increase in the capacity to generate energy from renewable or low carbon sources; • significant increase in the capacity of the road network; • significant improvement of townscape quality through regeneration of vacant/ derelict land; • significantly improvement in 	<ul style="list-style-type: none"> • significantly increase in the use of primary resources in the construction process; • significant increase in traffic on the local and strategic road networks; • reduction of the extent to which active travel networks can be improved in compensation for the loss of open space; • adverse impacts on the local sewerage network in Banknock; • adverse impacts on the local water supply network in

<p>townscape quality within Bo'ness conservation area and Denny Town Centre.</p>	<p>Banknock and the Polmont area;</p> <ul style="list-style-type: none"> • breach of the capacity of the local road network in Banknock, Hags and Denny; • breach of the capacity of the waste water treatment in Denny, Airth, Torwood and Whitecross; • impact on a major hazard pipeline; • adverse impact on townscape quality through installation of poorly designed LZCGT.
<p>Cultural Heritage</p>	
<p>Significant Positive Effects</p>	<p>Significant Negative effects</p>
	<ul style="list-style-type: none"> • adverse impact on the Battle of Falkirk Battlefield Site; • adverse impact on the setting of the Antonine Wall World Heritage Site; • adverse impact on the Callendar Park and the Pineapple Inventory Designed Landscapes; • adverse impact on the Forth and Clyde Canal, Union Canal, James Bruce Monument, Airth Old Church Scheduled Ancient Monument; • adverse impact on the setting of the category A listed Dundas Church, Larbert Old Church, Airth Castle, Airth Old Church, Kinneil House
<p>Landscape</p>	
<p>Significant Positive Effects</p>	<p>Significant Negative effects</p>
<ul style="list-style-type: none"> • positive landscape change along the Forth and Clyde Canal 	<ul style="list-style-type: none"> • significant impact on the landscape setting of Bo'ness • adverse landscape and visual impacts in areas of high sensitivity

Monitoring

Following adoption of the LDP, the effects on the environment will need to be monitored. This will ensure that any unforeseen negative environmental impacts are identified and appropriate action taken. Falkirk Council will

determine a suitable monitoring framework with specific indicators in liaison with the Statutory Consultees. Section 6 and Appendix 3 of Environmental Report sets out the suggested monitoring framework.

Next Steps

Responses received to the Environmental Report will be analysed alongside consultation responses to the MIR. A revised Environmental Report will then be prepared to accompany the Proposed Plan and this will again be consulted on. Again, responses received to both documents will be analysed and the need for revisions considered.

Once the Proposed Plan has been through a process of examination in public and has been modified by Scottish Ministers it will be adopted by Falkirk Council. Once adoption has taken place a SEA Post Adoption Statement will be issued and environmental monitoring will be agreed and implemented.

1.0 FALKIRK COUNCIL'S 2ND LOCAL DEVELOPMENT PLAN – MAIN ISSUES REPORT

1.1 Introduction

1.1.1 The purpose of the LDP is to guide the future use of land and the development and appearance of towns and rural areas. The LDP should indicate where development, including regeneration, should happen and where it should not. Development plans must be accessible to the communities they serve; they should be concise and written in plain English. There is a statutory duty on development plans to contribute to sustainable development and respond to the challenges of climate change.

Key Facts

Name of Responsible Authority	Falkirk Council
Reason for PPS	The preparation of the Local Development Plan is a requirement of the Planning etc (Scotland) Act 2006
Plan Subject	Land Use Planning
Period Covered by Plan	The LDP will cover the period from 2020-2030 but will provide a long term vision for the period to 2040
Frequency of Updates	The LDP will be revised at least every five years
Plan Area	The Falkirk Council Administrative Area
Plan Purpose	To guide the future use of land and the development and appearance of towns and rural areas.
Key Contact	Danny Thallon Planning Officer Falkirk Council Development Services Abbotsford House, David's Loan, Falkirk. FK2 7YZ Tel:01324 504927 Email: danny.thallon@falkirk.gov.uk

Table 1: Key Facts

2.0 STRATEGIC ENVIRONMENTAL ASSESSMENT METHODOLOGY

2.1 Introduction

2.1.1 A Strategic Environmental Assessment is required under the Environmental Assessment (Scotland) Act 2005 to assess the likely significance of the environmental effects of the implementation of the LDP.

2.1.2 The preparation of this Environmental Report has followed the Scottish Government's SEA Guidance which was published in August 2013.

2.2 SEA Stages

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

SEA Stage	SEA Process	Progress
Screening	Screening report submitted to the SEA Gateway. Determination of the requirement of SEA by Responsible Authority.	It is considered that SEA of the Falkirk Council LDP is compulsory under the Section 5(3) of the Act and accordingly no previous screening exercise has been carried out.
Determination	Determination is made by the Responsible Authority as to the likelihood of significant environmental effects occurring	It is considered that SEA of the Falkirk Council LDP is compulsory under the Section 5(3) of the Act and accordingly no screening determination was necessary.
Scoping	Identification of the environmental issues to be addressed, the scope and the level of detail required for presentation within the scoping report.	Scoping Request submitted to the SEA Gateway on 12 November 2015
Scoping Consultation	The Consultation Authorities (CA's) advise on the scope of the Environmental Report. At this stage the timescale for consultation on the Environmental Report following receipt of consultation responses is determined.	Responses to Scoping Request received from Consultation Authorities via SEA Gateway on 17 December 2015
Environmental Report – Main Issues Report	The Local Development Plan Main Issues Report is assessed against the SEA Objectives. Assessment of alternatives to the preferred options for addressing the main issues are also assessed. Requirements for mitigation and monitoring are reported.	This report
Environmental	The Consultation Authorities will	To follow

Report Consultation	provide a response on the Environmental Report via the SEA Gateway within 12 weeks of receipt. The CA's will advise on the content of the Environmental Report and the acceptability of the approach set out in the MIR. This consultation includes public consultation.	
Revised Environmental Report – Proposed Plan	The Local Development Plan – Proposed Plan is assessed against the SEA Objectives. Assessment of alternatives to the preferred options for addressing the main issues are also assessed. Requirements for mitigation and monitoring are reported. In practice this document should focus on the changes in approach between the MIR and Proposed Plan. The consultation process will be identical to that undertaken for the MIR Environmental Report. This Environmental Report will form a key piece of evidence at the Examination of the Proposed Plan	To follow
Revised Environmental Report – Proposed Plan as Modified	The Local Development Plan – Proposed Plan as modified is assessed against the SEA Objectives. Assessment of alternatives to the preferred options for addressing the main issues are also assessed. Requirements for mitigation and monitoring are reported. In practice this document should focus on the changes in approach between the MIR and Proposed Plan. The consultation process will be undertaken for a minimum of 6 weeks.	To follow if necessary
Post-Adoption SEA Statement	The SEA Statement summarises the assessment of the Local Development Plan and how the consultation responses have been taken into account.	To Follow
Mitigation and	Following adoption, Falkirk	To Follow

Monitoring	Council will be responsible for monitoring the implementation of the LDP.	
------------	---	--

Table 2: SEA Stages and Progress

3.0 RELATIONSHIP WITH OTHER PLANS, PROGRAMMES AND STRATEGIES

3.1 The following Plans Programmes and Strategies are the main influences on the preparation of the Falkirk Council LDP:

- National Planning Framework 3
- Scottish Planning Policy
- The Scotland River Basin Management Plan
- The Forth Area River Basin Management Plan
- The Forth Area Flood Risk Management Strategy and Local Flood Risk Management Plan
- The Forth Estuary Flood Risk Management Strategy and Local Flood Risk Management Plan
- The Falkirk Council Strategic Outcomes and Local Delivery Plan 2016-2020
- The Economic Strategy for Falkirk 2015-2025
- The Falkirk Council Local Transport Strategy
- The Falkirk Council Local Housing Strategy
- The Falkirk Council Sustainability Strategy and Action Plan
- The Falkirk Open Space Strategy;
- Falkirk Greenspace – A Strategy for our Green Network;
- Inspiring Active Lives – A Culture and Sport Strategy for Falkirk 2014-2024
- The Falkirk Area Local Biodiversity Action Plan
- The Falkirk Council Contaminated Land Strategy; and
- Falkirk Zero Waste Strategy 2012-2022

3.2 The Falkirk Council LDP will also have an inter-relationship with the documents which form the Development Plans of neighbouring Local Authorities.

3.3 Other PPS which provide a policy context for the LDP are shown in the appropriate environmental topic chapters of the Environmental Baseline Report forms appendix 1 of this report.

3.4 The Local Development Plan will set the policy framework for forthcoming statutory Supplementary Guidance and will influence future supplementary planning guidance, development frameworks and development briefs.

4.0 ENVIRONMENTAL BASELINE

4.1 Legislative Requirement

4.1.1 Schedule 3 subsection 2-5 of the Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes a description of:

- The current state of the environment and environmental characteristics of areas likely to be significantly affected by the Local Development Plan;
- The likely evolution of the environment without the implementation of the Local Development Plan;
- Any existing environmental problems which are relevant to the Local Development Plan;
- The environmental protection objectives which are relevant to the Local Development Plan; and
- The way those objectives have been taken into account during the preparation of the Local Development Plan

4.2 Approach to the Description of the Environmental Baseline

4.2.1 The Scoping Report for the Local Development Plan indicated that all environmental topic areas were to be scoped into the Environmental Report. Given the broad and comprehensive scope of the Environmental Report, it has been decided to deal with the environmental baseline for each environmental topic area within a specific chapter of a separate Environmental Baseline Report which forms appendix 1 of this Environmental Report. Each chapter of the environmental baseline report will be structured with the following sub-sections:

1. A review of current environmental protection objectives and a summary of how these have been taken into account during the preparation of the Main Issues Report.
2. A review of existing environmental data including existing environmental characteristics and issues and an indication of the likely future change without the implementation of the plan.

4.2.2 A general overview of the environment in the Falkirk Area and a broad indication of the likely future changes to environment without the plan are given below.

4.3 General Overview of the Environment

4.3.1 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.

4.3.2 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.

4.3.3 The estimated population of 158,460 is focused within a network of small to medium sized towns. The principal town of Falkirk, with a population of around 39,000, 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.

4.3.4 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.

4.3.5 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 the population to commute outwith the area to work.

4.3.6 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 at Hills of Dunipace and some peat extraction at Letham Moss. However, there are still exploitable coal reserves within the area.

4.3.7 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.

4.4 Summary of likely future changes to environment without the plan

4.4.1 The logic of carrying out Strategic Environmental Assessment is to understand the likely environmental effects of the implementation of the plan. However, the Directive also seeks examination of how the environment is likely to evolve without adoption and implementation of the Local Development Plan.

4.4.2 Local Development Plans need to be up-to-date in order to comply with the latest policy guidance from national government and reflect the area's actual development pressures and environmental issues. If they are not, then less weight is generally attached to them in decision-making.

4.4.3 In the absence of an updated Local Development Plan, the development plan framework in the Falkirk Council area would comprise the Falkirk Local Development Plan which was adopted in July 2015 and its suite of 17 Supplementary Guidance documents. 15 of these are approved but 2 are still under preparation.

4.4.4 Key environmental issues and existing environmental characteristics of each topic area are identified within the Environmental Baseline Report which forms appendix 1 of this report. Some of these may not be greatly affected by the policies and proposals of the Local Development Plan. However, in many cases, the absence of an up-to-date Local Development Plan may exacerbate environmental problems. Likely future changes to each environmental topic area without the implementation of our 2nd Local Development Plan are summarised within the Environmental Baseline Report.

5.0 Environmental Assessment

5.1 Scope

5.1.1 The implementation of the Local Development Plan has the potential to have significant environmental effects on all areas of the environment. A breakdown of sub-issues to be scoped in and scoped out of each topic was given within the Falkirk Council's 2nd Local Development Plan Scoping Report (November 2015). A record how the views of the Consultation Authorities at the scoping stage have been taken into account is included at Appendix 4 of this document.

5.2 Summary of the proposed level of detail

5.2.1 The first stage of the LDP is the preparation of a Main Issues Report (MIR), and it is this document which will be scrutinised initially through the SEA process. Legislation dictates that the MIR sets out the Council's preferred proposals for development, as well as reasonable alternatives. The requirement to consider alternatives, where these exist, is aligned with the similar requirement in the SEA process.

5.2.2 The MIR for the Falkirk LDP will present an overarching vision statement, with alternatives, which will be subject to assessment in the Environmental Report. The subsequent themed chapters will present a number of issues and sub-issues, for each of which a preferred option, and reasonable alternatives (if these exist) will be provided. At present the following structure of 11 main issues arranged under 4 broad chapters is proposed:

Chapter	Main Issue/Sub Issues	Key Question
Place and Environment	1. Making Better Places	How do we create high quality places that function well?
	2. Green Network	How can we extend and improve our greenspaces and green infrastructure?
Homes and Communities	3. Housing Targets and Requirements	How many homes should we plan to build?
	4. Existing Housing Land Supply and "Stalled Sites"	How many homes will our existing land supply deliver?
	5. Sustainable Community Growth	Where should new homes be located?
Jobs and Economy	6. Business Locations	What should the vision be for our major employment locations?
	7. Town Centres	How can we promote active, accessible and attractive town

		centres?
	8. Tourism	Are there additional opportunities to capitalise on the growth of tourism in the area?
Infrastructure and Resources	9. Infrastructure	<i>What infrastructure is needed to support growth and how can we deliver it?</i>
	10. Energy	<i>How can we meet energy needs and move towards a low carbon economy?</i>
	11. Onshore Gas, Minerals and Waste	<i>Do existing policies on mineral and gas extraction and waste management accord with national policy?</i>

Table 2: Main Themes and Issues of the MIR

5.2.3 For each issue, one or a number of preferred option and alternatives will be subject to assessment. Depending on the issue, options and alternatives will be presented at different levels. In terms of the location of sustainable community growth (Main Issue 5), this will be examined on a settlement by settlement basis, with options created through combinations of sites. For other issues, options will be generally be considered at an area-wide level.

5.2.4 In selecting alternatives for environmental assessment this has been done on the basis that they must be realistic, feasible and relevant. In some cases alternatives have been limited by higher level policy documents such as the National Planning Framework and Scottish Planning Policy.

5.2.5 For settlement growth options, clearly there are almost an unlimited number of permutations of sites which could be put together to form an alternative and an effort has been made to rationalise the number of alternatives for assessment by grouping sites together which have a distinct geographical proximity (growth to the east, growth to the south etc) and equate to different scales of growth relating to the different strategies for housing growth.

5.2.6 Mitigation and enhancement measures to reduce the significant negative effects and ensure significant positive effects of the preferred options will also be presented.

5.3 Assessment Method Summary

5.3.1 A set of SEA objectives have been formulated for each environmental topic area and are reported in the corresponding section of the Environmental Baseline Report (Appendix 1 of this document).

5.3.2 The proposed approach to assessment will be to ask specific questions of main and sub issue alternatives which relate to the SEA objectives set out in the Environmental Baseline Report, then consider how each will be likely to perform and how they can be altered to enhance performance.

5.3.3 After detailed consideration has been given to the magnitude of likely environmental effects, mitigation measures will be suggested in an attempt to reduce potential negative environmental effects. Mitigation may extend to recommending that the alternative is not selected as a preferred option.

5.3.4 A detailed assessment matrix is presented in appendix 2 detailing what effect main and sub issue alternatives will have on each environmental topic together with an explanation of how significant environmental effects have been discerned from non significant environmental effects. This will be for illustrative purposes only, as the aim of the assessment process is to inform the selection of preferred options to enhance environmental performance rather than to complete a box ticking exercise. The detailed assessment matrix demonstrates the rigorous and systematic process applied to identifying the environmental effects of the implementation of preferred options and their reasonable alternatives as set out in the Main Issues Report.

5.4 Assessment of Significant Environmental Effects

Overall Vision

1. Preferred Vision: The place to be: a dynamic and distinctive area at the heart of Central Scotland characterised by a network of thriving communities and greenspaces and a vibrant and growing economy which is of strategic importance in the national context, providing an attractive and sustainable place in which to live, work, visit and invest.

1. Predicted Environmental Effect: Significant environmental effects are predicted in all environmental areas. As with any growth strategy it will lead to increased traffic growth, use of natural resources, increased pressure on environmental infrastructure and have an adverse landscape impact, however it will also stimulate investment in the green network, lead to the creation of new public open spaces, enable the decontamination of derelict sites.

3. Enhancement/Mitigation: The mix of sites for housing and economic growth and for infrastructure provision should be selected with the aim of minimising significant negative effects and maximising significant positive effects.

4. Alternatives Considered: The Local Development Plan's role is to express the spatial dimension of high level visions set out within the Council's Strategic Outcomes and Local Delivery Plan 2016-2020 and the Economic Strategy for Falkirk 2015-2025. It is not considered to be reasonable for the Main Issues Report to set out any alternative vision.

Objectives - Thriving Communities

Objective 1

1. Preferred Option: Facilitate continued population and household growth, and the delivery of housing to meet the full range of housing needs.

2. Predicted Environmental Effect: Any population and household growth objective is likely to have a range of cumulatively significant effects on the environment including:

- An increase in population
- creation of new habitat and reinforcing the habitat network;
- improving the quality of the active travel network;
- improving the quality and connectivity of the green network;
- creation of new open space which addresses existing deficiencies in access to open space;
- improving the quality of existing open space;
- making safe unstable ground;
- restoration of watercourses;
- increasing the capacity to generate energy from renewable or low carbon sources;
- improving townscape quality through regeneration of vacant/ derelict land
- loss of habitat;
- loss of open space;
- increasing road traffic noise;
- loss of significant amounts of agricultural land;
- significantly increasing emissions from motorised transport;
- significantly increasing the use of primary resources in the construction process;
- significantly increasing traffic on the local road network.

Other, less generic significant environmental effects will depend on the sensitivity of the location of any new housing development.

3. Enhancement and Mitigation: Sites for housing growth should be selected with the aim of avoiding or minimising significant negative effects and enhancing significant positive effects. Measures to ensure positive environmental effects and mitigate negative environmental effects should be included within the policies and individual site requirements in the Proposed Plan.

4. Alternatives Considered: Reasonable alternatives are considered under main issue 5.

Objective 2

1. Preferred Option: Build sustainable attractive communities which are distinctive, safe and pleasant, welcoming, adaptable, resource efficient, and easy to move around in.
2. Predicted Environmental Effect: This objective is likely to facilitate the significant improvement of the quality and connectivity of the green network, the significant improvement of overall townscape quality and the significant improvement of the quality and connectivity of the active travel network.
3. Enhancement and Mitigation: Positive environmental effects should be secured through specifically noting the green network, active travel network and townscape improvement opportunities to be delivered by specific development sites at the Proposed Plan stage.
4. Alternatives Considered: No reasonable alternatives are considered.

Objective 3

1. Preferred Option: Provide infrastructure to meet the needs of an increasing population and to further improve the area's connectivity.
1. Predicted Environmental Effect: The environmental effects of providing infrastructure to meet the needs of an increasing population and the further improve the area's connectivity will be dependent on the appropriate suite of infrastructure needed. These are set out in more detail under Main Issue 9 – Infrastructure Delivery.
2. Enhancement and Mitigation: Environmental effects should be secured, mitigated and avoided by specifically noting the required enhancement and mitigation measures to be used in specific infrastructure proposals at the Proposed Plan stage.
3. Alternatives Considered: No reasonable alternatives are considered.

Objectives – Growing Economy

Objective 4

1. Preferred Option: Foster economic growth, investment and inclusion, reinforcing the area as a strategic component of the Scottish economy.
2. Predicted Environmental Effect: The reinforcing of the area as a strategic component of the Scottish economy will have a range of significant positive and negative environmental effects dependent on the appropriate suite of strategic employment locations identified. These are set out in more detail under Main Issue 6 – Employment Locations.
3. Enhancement and Mitigation: Environmental effects should be secured, mitigated and avoided by specifically noting the required

enhancement and mitigation measures to be used in specific economic development allocations at the Proposed Plan stage.

4. Alternatives Considered: Reasonable alternatives are considered under Main Issue 6.

Objective 5

1. Preferred Option: Make our town centres vibrant and viable focal points within our communities

2. Predicted Environmental Effect: Making our town centres vibrant and viable focal points within our communities will have a range of significant positive and negative environmental effects dependent on the range of development opportunities identified within our strategic, district and local centres. These are set out in more detail under Main Issue 7 – Town Centres.

3. Enhancement and Mitigation: Environmental effects should be secured, mitigated and avoided by specifically noting the required enhancement and mitigation measures to be used in specific town centre development opportunities at the Proposed Plan stage.

4. Alternatives Considered: Reasonable alternatives are considered under Main Issue 7.

Objective 6

1. Preferred Option: Capitalise on the area's tourism potential and build a strong visitor economy

2. Predicted Environmental Effect: Capitalising the area's tourism potential and building a strong visitor economy could have a range of significant positive and negative environmental effects dependent on the sensitivity of the locations promoted for tourism development and the type of development proposed there. These are set out in more detail under Main Issue 8 – Tourism.

3. Enhancement and Mitigation: Environmental effects should be secured, mitigated and avoided by specifically noting the required enhancement and mitigation measures to be used in specific tourism development opportunities at the Proposed Plan stage.

4. Alternatives Considered: Reasonable alternatives are considered under Main Issue 8.

Objectives – Sustainable Place

Objective 7

1. Preferred Option: Support a low carbon, circular economy and build resilience to climate change.

2. Predicted Environmental Effect: This objective could: enable the reconnection of fragmented habitat networks; maximise the reuse, recycling and recovery of resources; restore peatland; reduce overall flood risk; increase the amount of renewable energy generated in the area; reduce the use of primary resources in the construction process; reduce overall greenhouse gas emissions; and improve overall resilience to climate change. The significance of any environmental effects will depend on the suite of measures contained within the LDP to help achieve this objective.

3. Enhancement and Mitigation: Enhancement and mitigation measures are best identified in relation to specific proposals rather than at a strategic level.

4. Alternatives Considered: No reasonable alternatives are considered.

Objective 8

1. Preferred Option: Extend and improve the green network and protect the area's natural environment and resources.

2. Predicted Environmental Effect: This objective could: extend and improve the quality of the habitat network; improve the quality and connectivity of the green network; restore peatland; improve the ecological status of waterbodies; improve the quality connectivity of the active travel network; improve overall resilience to climate change and improving landscape quality. The significance of any environmental effects will depend on the suite of measures contained within the LDP to help achieve this objective.

3. Enhancement and Mitigation: Enhancement and mitigation measures are best identified in relation to specific green network opportunities rather than at a strategic level.

4. Alternatives Considered: No reasonable alternatives are considered.

Objective 9

1. Preferred Option: To protect, enhance and promote our historic environment

2. Predicted Environmental Effect: This objective could: enhance the historic environment and townscape quality. Promoting our historic environment will probably encourage visitors increasing the number of trips on the road network and the resultant emissions of greenhouse gasses and airborne pollutants. The significance of these environmental effects will depend on the suite of measures contained within the LDP to help achieve this objective.

3. Enhancement and Mitigation: Enhancement and mitigation measures are best identified in relation to specific proposals to enhance the historic environment rather than at a strategic level.

4. Alternatives Considered: No reasonable alternatives are considered.

Main Issue 1: Making Better Places

Communities and Place

1. Preferred Option: Prepare 'place statements' for each settlement which would be adopted as supplementary guidance.

2. Predicted Environmental Effect: Preparing place statements should encourage development which enhances townscape quality and the quality of the historic environment.

3. Enhancement and Mitigation: None proposed.

4. Alternatives Considered: An alternative approach would be to continue the current approach of promoting place-making through topic based policies and guidance, and site-specific briefs and masterplans.

5. Environmental Effects of Alternatives: This alternative would also enhance townscape quality and the quality of the historic environment but to a lesser degree than the preferred option.

6. Reason for selecting the preferred option: The preferred option was selected as we consider it to be the best option for encouraging development which enhances townscape quality and the quality of the historic environment.

Historic Environment

1. Preferred Option: In general terms the existing policies on the historic environment are considered robust, and are expected to remain largely unchanged.

2. Predicted Environmental Effect: The historic environment policies in LDP1 were predicted to significantly enhance townscape quality but were also predicted to allow (in exceptional circumstances) adverse effects on scheduled monuments or the integrity of their setting; the total or substantial demolition of listed buildings and the degradation of townscape quality.

3. Enhancement and Mitigation: Policy wording which makes clear that identified significant negative effects on scheduled monuments and listed buildings will only be permitted in exceptional circumstances should be retained in the Proposed Plan.

4. Alternatives Considered: As there has been no significant change in national policy direction or local circumstances no reasonable alternatives have been considered.

Main Issue 2: Green Network

CSGN and Falkirk Greenspace

1. Preferred Option: The CSGN/Falkirk Greenspace will continue to be spatially defined in terms of the components and corridors identified in LDP1. An updated set of specific green network opportunities will be promoted as highlighted in Figures 3.2 and 3.3

2. Predicted Environmental Effect: The updated set of specific green network opportunities have potential to:

- enhance and restore existing habitat;
- create new habitat;
- enlarge, improve and reconnect existing habitat networks;
- introduce significant new woodland planting;
- improve the quality and fitness for purpose of existing open space;
- enhance recreational opportunity by creating new and improving existing path networks and enhancing the quality and connectivity of the green network;
- create carbon rich soil and sequester carbon dioxide;
- enhance natural flood storage capacity
- restore natural coastal processes
- make a positive change in the landscape;
- potentially disturb the qualifying interests features of the Firth of Forth and Slamannan Plateau SPA and River Teith SAC;
- increase the risk of pollution feeding into the Firth of Forth SPA;
- cause loss of habitat at Black Loch Moss SAC;
- have an adverse impact on the Howierig Muir, Carron Glen and Firth of Forth SSSI;
- adversely impact on the Battle of Falkirk Battlefield Site
- adversely impact on the setting of the Antonine Wall World Heritage Site; and
- adversely impact on the Callendar Park Inventory designed landscape and the listed buildings within it

3. Enhancement and Mitigation: Significant positive effects on the environment will be secured through implementing the green network opportunities. No further enhancement measures have been identified. The following mitigation measures should be used to mitigate and avoid significant negative effects on the environment:

- Appropriate assessment should be carried out at the: John Muir Way; Kinneil Kerse; Bothkennar/Skinflats; River Carron Corridor Improvements; Braes Wetland and Peatland Restoration; Black Loch

Access; and River Avon Corridor opportunities to ensure that they do not have an adverse effect on the integrity of the Firth of Forth and Slamannan Plateau SPA or the River Teith and Black Loch Moss SAC either alone or in combination with other plans and projects;

- Path creation/ upgrading proposals at the John Muir Way and River Carron Corridor Improvements opportunities should be undertaken sensitively to avoid adverse impact on sites designated for their nature conservation value;
- Upgrading of visitor facilities at Kinneil Estate should be undertaken sensitively to avoid negative effects on the setting of the Antonine Wall WHS;
- Path creation/upgrading proposals at the River Avon Corridor opportunity should be undertaken sensitively to avoid an adverse impact on the Antonine Wall WHS or its setting;
- Enhancement opportunities at Lionthorn Policy Bing should be undertaken sensitively to avoid negative effects on the Battle of Falkirk Battlefield Site; and
- Path creation/upgrading proposals along the John Muir Way should be undertaken sensitively to avoid an adverse impact on the Antonine Wall WHS or its setting and the Battle of Falkirk Battlefield Site;

4. Alternatives Considered: A review of the spatial extent of the CSGN/Falkirk Greenspace could have been undertaken focussing only on the NPF3 priorities of derelict land; disadvantaged communities and active travel.

5. Environmental Effects of Alternatives: Reviewing the spatial extent of Falkirk Greenspace in this way would be likely to mean that a number of the proposed habitat enhancement, landscape enhancement, climate change related and placemaking opportunities were not pursued. In general this would mean that the number and magnitude of significant positive and significant effects would reduce.

6. Reason for selecting the preferred option: The preferred option was selected as it better reflects our local approach to improving the green network aligning with the objectives of the Falkirk Greenspace Strategy.

Green Infrastructure and New Development

1. Preferred Option: Prepare consolidated supplementary guidance on incorporating green infrastructure into new development.
2. Predicted Environmental Effect: Consolidating current guidance into a green infrastructure SG unlikely to have any environmental effect.
3. Enhancement and Mitigation: None proposed.
4. Alternatives Considered: Continue to provide separate guidance on the different types of green infrastructure.

5. **Environmental Effects of Alternatives:** Retaining separate guidance on different types of green infrastructure is unlikely to have any environmental effects.

6. **Reason for selecting the preferred option:** The preferred option was selected as it will provide developers with a more integrated context for considering green infrastructure opportunities associated with their sites and guidance on incorporating provision into masterplans and development frameworks.

Open Space

1. **Preferred Option:** Amend open space policies and supplementary guidance to reflect revised open space standards and other changes to the Open Space Strategy and review the policy and guidance on compensation payments for the loss of open space to achieve a more proportionate approach.

2. **Predicted Environmental Effect:** Amending policy to reflect revised open space standards could:

- increase participation in outdoor recreation and improve the fitness for purpose of open spaces containing a playspace;
- increase the proportion of households with access to public park or garden or amenity space of over 0.2ha within 400m
- decrease the proportion of households with access to an open space containing a playspace within 400m;
- decreasing the proportion of households with access to an open space containing a sports area within 800m;

Reviewing the policy and guidance on compensation payments for the loss of open space could:

- reduce the overall amount of open space;
- reduce the extent to which remaining open space can be improved in compensation for the loss of open space
- reduce the extent to which remaining open space can have its biodiversity and nature conservation value improved in compensation for the loss of open space;
- reduce the extent to which remaining open space can have its design and aesthetic quality improved in compensation for the loss of open space; and
- reduce the extent to which active travel networks can be improved in compensation for the loss of open space

3. **Enhancement and Mitigation:** The revised open space standards have been set through the review of the Open Space Strategy. It is the LDP's role to transpose these into planning policy not to review their appropriateness. No mitigation of the significant environmental effects of them is therefore proposed.

The effects of reviewing the policy and guidance on compensation payments for the loss of open space can be mitigated by setting quite restrictive criteria for the circumstances where compensation for the loss of open space will not be sought thereby reducing the amount of open space and money for the improvement of other open space lost.

4. Alternatives Considered: Change the policy on developer contributions so that the scale of contributions is dependent on the quality and accessibility of local open space, rather than being purely related to the scale of the residential development.

5. Environmental Effects of Alternatives: Making this policy more discretionary based on the relative quality and accessibility of local open space would:

- reduce the overall amount of new open space delivered through development;
- reduce the extent of improvement to existing open spaces in lieu of provision of new open space;
- reduce the extent of improvement to the biodiversity and nature conservation value of existing open space in lieu of provision of new open space;
- reduce the extent of improvement to the design and aesthetic quality of existing open space in lieu of provision of new open space;
- reduce the extent of improvement to active travel networks in lieu of provision of new open space.

6. Reason for selecting the preferred option: The preferred option was selected in an attempt to improve the proportionality of financial compensation requirements for the loss of open space in association with development.

Forestry and Woodland

1. Preferred Option: Continue the existing policy on trees, woodland and hedgerows, but with appropriate reference to the Falkirk Forestry and Woodland Strategy as key guidance on future woodland management and expansion in the area.

2. Predicted Environmental Effect: No significant environmental effects are predicted

3. Enhancement and Mitigation: A more effective method of increasing the rate of new woodland planting might be to identify specific woodland planting related green network opportunities which new developments could then help to deliver.

4. Alternatives Considered: Maintain the existing policy on trees, woodland and hedgerows, with no reference to the Falkirk Forestry and Woodland Strategy.

5. Environmental Effects of Alternatives: No significant environmental effects are predicted.

6. Reason for selecting the preferred option: The preferred option was selected as there hadn't previously been an opportunity to embed the Falkirk Forestry and Woodland Strategy within the LDP and it was considered worthwhile to provide planning policy support for the Strategy's aims.

Protected Habitats

1. Preferred Option: Review and update the list of locally designated sites (Wildlife Sites, Sites of Importance for Nature Conservation and Geodiversity Sites) through the LDP2 preparation process based on criteria already established in supplementary guidance.

2. Predicted Environmental Effect: Reviewing and updating the list of locally designated sites should allow currently undesignated sites of significant ecological or geodiversity value to be protected, however, current policy on protected biodiversity and geodiversity sites still allows negative effects to occur on locally designated sites where they are clearly outweighed by social or economic benefits of substantial local importance so negative effects could still occur.

3. Enhancement and Mitigation: The policy on biodiversity and geodiversity in the Proposed Plan could be tightened to rule out significant negative effect on important species, habitats and geodiversity sites in any circumstances. It could state that only proposals where mitigation can be designed to reduce the level of impact to an acceptable level (in consultation with the Council and SNH) will be supported.

4. Alternatives Considered: Review locally designated sites through the preparation of supplementary guidance, rather than through the LDP itself.

5. Environmental Effects of Alternatives: Effects will be the same whether sites are reviewed through LDP2 preparation or through subsequent supplementary guidance.

6. Reason for selecting the preferred option: The preferred option was selected as it was considered to be the most transparent way of reviewing our suite of locally designated sites and allows the issue to be considered by the Department of Planning and Environmental Appeals during the examination in public if necessary.

Main Issue 3: Housing Targets and Requirements

How Many Homes?

1. Preferred Option: The target will be to build 9,600 homes over the period 2020-2040, with 4,800 over the initial period of 2020-2030, at an

average rate of 480 homes per year. A flexibility allowance of 15% would be applied, giving a requirement to identify land for 5,520 homes deliverable between 2020-2030.

2. Predicted Environmental Effect: Any significant requirement to identify land for new homes is likely to have a range of cumulatively significant effects on the environment including:

- An increase in population
- creation of new habitat and reinforcing the habitat network;
- improving the quality of the active travel network;
- improving the quality and connectivity of the green network;
- creation of new open space which addresses existing deficiencies in access to open space;
- improving the quality of existing open space;
- making safe unstable ground;
- the promotion of watercourse restoration opportunities;
- increasing the capacity to generate energy from renewable or low carbon sources;
- improving townscape quality through regeneration of vacant/ derelict land
- loss of habitat;
- loss of open space;
- increasing road traffic noise;
- loss of agricultural land;
- increasing emissions from motorised transport;
- increasing the use of primary resources in the construction process;
- increasing traffic on the local road network.

Other, less generic significant environmental effects will depend on the sensitivity of the location of any new housing development.

3. Enhancement and Mitigation: Sites for housing growth should be selected with the aim of avoiding or minimising significant negative effects and enhancing significant positive effects. Measures to ensure positive environmental effects and mitigate negative environmental effects should be included within the policies and individual site requirements in the Proposed Plan.

4. Alternatives Considered: The first alternative is for a more generous level of flexibility to be provided, giving a greater housing land requirement. For example, choosing a level of 20% would increase the requirement by 240 homes.

The second alternative is for a less generous level of flexibility to be provided, giving a lower housing land requirement. Choosing a level of 10% would reduce the requirement by 240 homes.

5. Environmental Effects of Alternatives: In general the first alternative is likely to increase the number and magnitude of environmental effects but specific environmental effects would depend on the sites selected to make up the increased housing land supply.

In general the second alternative is likely to decrease the number magnitude of environmental effects but specific environmental effects would depend on the sites selected for deletion.

6. Reason for selecting the preferred option: The preferred option was selected as a moderate level of flexibility of 15% is considered appropriate given the degree of uncertainty over the timescale for delivery of some of the larger sites in the land supply.

Affordable and Special Needs Housing

1. Preferred Option: Affordable housing need is assessed as 205 homes per year. The current policy of requiring private housing sites of over 20 units to contribute to affordable and special needs housing, based on a two tier quota system, would be continued. The quota for Larbert/ Stenhousemuir, Rural North, and Braes and Rural South will be 25%; elsewhere it will be 15%.

2. Predicted Environmental Effect: No significant environmental effects are predicted.

3. Enhancement and Mitigation: None proposed

4. Alternatives Considered: The affordable housing policy could be relaxed, either by raising the threshold above which it is applied, or by removing the requirement to contribute to affordable housing in communities where there is less of an affordability issue.

5. Environmental Effects of Alternatives: No significant environmental effects are predicted.

6. Reason for selecting the preferred option: The preferred option was selected as, given the ongoing levels of housing need, a relaxation in policy is currently inappropriate.

Main Issue 4: Existing Housing Land Supply and Stalled Sites

1. Preferred Option: De-allocate Strategic Growth Areas at Bo'ness Foreshore and Slamannan, sites at East Bonnybridge and Kilsyth Road, Haggs, and selected sites in the Rural South villages, as indicated in Figure 4.3.

2. Predicted Environmental Effect: The de-allocation of sites won't have any environmental effects in itself however the positive and negative effects caused by the development of these sites (see main issue 5) will no longer occur.

3. Enhancement and Mitigation: None proposed
4. Alternatives Considered: Other sites which are not currently progressing and have high development costs, e.g. Portdownie and Whitecross, could be de-allocated, based on a more pessimistic view of their long term viability.
5. Environmental Effects of Alternatives: The de-allocation of sites won't have any environmental effects in itself however the positive and negative effects caused by the development of these sites (see main issue 5) will no longer occur.
6. Reason for selecting the preferred option: The preferred option was selected as de-allocating the sites at Whitecross and Portdownie would mean that the substantial regeneration benefits of those sites, including some significant positive environmental effects would not be realised.

Main Issue 5: Sustainable Community Growth

Bo'ness

1. Preferred Option: Promote a new Strategic Growth Area through release of green belt at Crawfield Road (site 102), to replace the de-allocated Bo'ness Foreshore (site 63). Continue to focus on delivering the Bo'ness South East Strategic Growth Area (sites 1, 2, 3, 64) including increased housing content within Drum South (site 64) and a neighbourhood centre to serve the wider Drum development. Retain the Bo'ness Foreshore Strategic Growth Area (Site 63) as a long term aspiration.
2. Predicted Environmental Effect: Development of these sites could:
 - increase the population of Bo'ness by between 10.3% and 28.0%;
 - connect up fragmented habitat networks;
 - remove significant amounts of historic contamination;
 - improve townscape quality by regenerating significant amounts of vacant/derelict land;
 - significantly improve townscape quality within a conservation area ;
 - significantly improve the active travel network
 - adversely impact on legally protected species;
 - result in the loss of Firth of Forth SPA supporting habitat;
 - result in the disturbance of the qualifying species of the Firth of Forth SPA and the River Teith SAC
 - adversely impact on the Bo'mains Meadow SSSI;
 - increase the population exposed to risk of injury from major hazard pipelines;
 - result in the loss of prime quality agricultural land;
 - increase the population at risk of flooding; and
 - have a significant impact on the landscape setting of Bo'ness

3. Enhancement/Mitigation: Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development of the Drum Farm North, Kinglass Farm 1, Bo'ness Foreshore, Crawfield Road and Links Road (001,002, 063, 102 & 198) sites should explore opportunities to link up fragmented habitat networks through on site habitat creation;
- Development of the Cadzow Avenue, Union Street, Bo'ness Foreshore, Crawfield Road and Links Road (005, 006, 063, 102 & 198) sites should investigate and safely remove sources of historic contamination;
- Development proposals at the Bo'ness Foreshore (063) site should be accompanied by an appropriate assessment which demonstrates that development can take place without having an adverse effect on the integrity of the Firth of Forth SPA or the River Teith SAC;
- Carry out further survey work at the Crawfield Road (102) site to determine whether or not the land acts as supporting habitat to the Firth of Forth SPA and if it does then carry out an appropriate assessment which demonstrates that the site can be developed without adversely affecting the integrity of the Firth of Forth SPA;
- Development of the Crawfield Road (102) site should incorporate a substantial strip of habitat/greenspace between development and the SWT reserve at Bo'mains Meadow;
- Protected species checks should be carried out at the Drum Farm North and South Street/ Main Street (001 & 004) sites;
- Development of the South Street/ Main Street, Union Street and Bo'ness Foreshore (004, 006 & 063) sites should avoid unacceptably increasing the population at risk of injury from major hazards;
- Flood Risk assessments should be carried out at the Kinglass Farm 1, Bo'ness Foreshore, Drum Farm South and Crawfield Road (002, 063, 064 & 102) sites and areas subject to flooding should not be built on
- Development at the Crawfield Road (102) site should retain all existing structure shelterbelt planting and existing boundary trees / hedgerows; and establish substantial screen / structure planting around full boundary of area and internally in advance of any development as part of an approved master plan.
- The highest, most elevated part of the Crawfield Road (102) site in the south east is not appropriate for development.

4. Alternatives Considered: The first alternative would be to extend the Bo'ness South East Strategic Growth Area to include land at North Bank Farm (site 103), involving green belt release.

The second alternative would be for the allocation of a new Strategic Growth Area to the east of the town.

The third alternative is consolidation, focusing on the delivery of the

existing Bo'ness South East SGA, with no new allocations.

5. Environmental Effects of Alternatives: Development of the first alternative could:

- adversely impact on legally protected species;
- result in the loss of Firth of Forth SPA supporting habitat;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding; and
- have a significant impact on the landscape setting of Bo'ness

Development of the second alternative could:

- adversely impact on legally protected species;
- result in the loss of Firth of Forth SPA supporting habitat;
- result in the loss of ancient and semi natural woodland;
- increase noise/vibration effects on Muirhouses residents;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- have an adverse impact on the Antonine Wall World Heritage Site; and
- have an adverse landscape/ visual impact in an area of high sensitivity to landscape change.

Development of the third alternative would avoid the environmental effects caused by the development of the Crawfield Road (102) site.

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Bonnybridge and Banknock

1. Preferred Option: Focus on delivering the existing Banknock and Dennyloanhead Strategic Growth Areas (sites 7, 8, 65). The sites at East Bonnybridge (site 77) and Kilsyth Road (site 9) are de-allocated.

2. Predicted Environmental Effect: Development of these sites could:

- increase the population of Bonnybridge and Banknock by between 22.6% and 24.8%;
- connect up significant fragmented habitat networks;
- significantly enhance the quality and connectivity of the green network;
- remove significant amounts of existing contamination ;
- make safe significant amounts of unstable land;
- improve townscape quality by regenerating significant amounts of vacant/derelict land;
- adversely impact on legally protected species;
- increase the population at risk of flooding;

- increase the population exposed to reduced air quality;
- cause adverse impacts on the local sewerage and water supply network;
- breach the capacity of the local road network;
- cause an adverse impact on the Forth and Clyde Canal Scheduled Ancient Monument; and
- cause an adverse impact on setting of the Antonine Wall World Heritage Site.

3. Enhancement/Mitigation: Approved masterplans for the development of the Dennyloanhead and Banknock North (008 & 065) and the Banknock and Higgs SIRR Development Framework already act to ensure some of the significant positive effects and mitigate some of the significant negative effects above. Additional measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development at the Seabegs Road and Garngrew Road (011 & 061) sites should incorporate new broadleaved woodland planting to connect up fragmented parts of the habitat network;
- Development proposals at Broomhill Road 1, Garngrew Road and Bonnybridge Town Centre (010, 061 & 066) sites should be accompanied by a flood risk assessment and areas at risk of flooding should not be developed;
- Development at Seabegs Road and Garngrew Road (011 & 061) should be undertaken sensitively to avoid adverse impact on the setting of the Antonine Wall WHS;
- Development at Bonnybridge Town Centre (066) should be undertaken sensitively to avoid adverse impact on the Forth and Clyde Canal;

4. Alternatives Considered: The first alternative is to identify a new Strategic Growth Area at High Bonnybridge incorporating large greenfield sites at Broomhill Road (110, 112) and/or Reilly Road (113)

The second alternative is to identify minor settlement extensions at Longcroft Holdings (114) and/or Hillview Road, High Bonnybridge (111).

5. Environmental Effects of Alternatives: Development of the first alternative could:

- adversely impact on legally protected species;
- increase the population at risk of flooding;
- breach the capacity of the local road network; and
- cause an adverse impact on setting of the Antonine Wall World Heritage Site.

Development of the second alternative could:

- adversely impact on legally protected species;
- breach the capacity of the local road network; and

- cause an adverse impact on setting of the Antonine Wall Wold Heritage Site.

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Braes and Rural South – Maddiston and Rumford

1. Preferred Option: Focus on delivering the East Maddiston Strategic Growth Area (sites 33-37), together with limited additional housing as part of the former Maddiston Fire Station site (site 140).

2. Predicted Environmental Effect: Development of these sites could:

- increase the population of Maddiston and Rumford by between 16.6% and 17.9%;
- result in the loss of ancient and semi natural woodland;
- sever significant broadleaved woodland habitat networks;
- adversely impact on legally protected species;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- have an adverse impact on the setting of the Union Canal Scheduled Ancient Monument; and
- have adverse landscape and visual impacts in an area of high sensitivity.

3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:

- Development proposals at the Haining, Toravon Farm and Parkhall North East (036, 037 & 142) sites should be accompanied by protected species surveys and appropriate mitigation employed;
- Development at the Haining and Parkhall North East (036 & 142) sites should avoid severing the broadleaved woodland habitat network;
- Development of the Haining, Toravon Farm and Parkhall North East (036, 037 & 142) sites should incorporate appropriately sized undeveloped buffer zones around areas of ancient and semi natural woodland; and
- Development proposals at the Parkhall 2, 3 & 4 and Toravon Farm (033-035 & 037) should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Development at the Parkhall Farm North East (142) site should be undertaken sensitively to avoid adversely impacting on the setting of the Union Canal SAM; and
- Development at the Parkhall Farm North East (142) site should: ensure no tree removal other than any essential for the access point; provide

only high quality, low density housing that would be in keeping with landscape character of the designed landscape; retain woodland / parkland character with substantial open space, parkland tree planting and additional woodland incorporated into any design in order to respect the local character of the area and the designed landscape; accommodate and provide linkages to the core path on western and northern boundary.

4. Alternatives Considered: The first alternative is to focus on delivering the East Maddiston Strategic Growth Area (sites 33-37), together with limited additional housing as part of the former Maddiston Fire Station site (site 140).

The second alternative is to extend the Maddiston East Strategic Growth Area, involving additional greenfield release to the north west (site 189).

The third alternative is to identify a new Rumford East Strategic Growth Area, involving large scale greenfield release for mixed use extending north to the Union Canal (site 141).

The fourth alternative is to identify a moderate settlement extension to the west of Maddiston at Greenwells Farm (sites 138, 139)

The fifth alternative is to identify a new Maddiston South Strategic Growth Area, involving greenfield release at Gillandersland (site 144).

5. Environmental Effects of Alternatives: Development of the first alternative could:

- result in the loss of ancient and semi natural woodland;
- adversely impact on legally protected species;
- result in the loss of prime quality agricultural land; and
- increase the population at risk of flooding;

Development of the second and third alternatives could:

- adversely impact on legally protected species;
- result in the loss of ancient and semi natural woodland;
- sever significant broadleaved woodland habitat networks;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- have an adverse impact on the setting of the Union Canal SAM;
- have adverse landscape and visual impacts in an area of high sensitivity.

Development of the fourth alternative could:

- adversely impact on legally protected species;
- increase the population at risk of flooding; and

- have adverse landscape and visual impacts in an area of high sensitivity to landscape change.

Development of the fifth alternative could:

- adversely impact on legally protected species;
- result in the loss of prime quality agricultural land; and
- increase the population at risk of flooding;

6. Reason for selecting the preferred option: The preferred option was selected as it balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause and meets a perceived need for the development retirement housing and a care home.

Polmont, Laurieston and Westquarter

1. Preferred Option: No further housing development beyond currently allocated sites (029 & 038).
2. Predicted Environmental Effect: Development of these sites could:
 - increase the population of Polmont, Laurieston and Westquarter by between 1.9% and 2.1%;
 - adversely impact on legally protected species;
 - result in the loss of prime quality agricultural land; and
 - have adverse landscape and visual impacts in an area of high sensitivity.
3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:
 - Development at the Lathallan House (029) site should be accompanied by protected species surveys and appropriate mitigation employed to avoid significant negative effects on biodiversity; and
 - The scale of enabling development at the Lathallan House (029) site should be minimised to mitigate adverse landscape and visual impacts.
4. Alternatives Considered: The first alternative is to identify a new Gilston Strategic Growth Area, with residential use introduced as part of the mix of uses within the current business site (site 95).

The second alternative is to promote moderate settlement extension to Polmont, involving greenfield release at Station Road (site 136).

The third alternative is to promote moderate settlement extension to Polmont, involving green belt release at the Polmont Park (site 195).

5. Environmental Effects of Alternatives: Development of the first alternative could:

- connect up significant fragmented habitat networks;
- adversely impact on legally protected species;
- result in the loss of prime quality agricultural land; and
- increase the population at risk of flooding.

Development of the second alternative could:

- increase the population at risk of flooding; and
- have an adverse impact on the setting of the Union Canal SAM;

Development of the third alternative could:

- connect up significant fragmented habitat networks;
- increase the population at risk of flooding.
- cause an adverse impact on setting of the Antonine Wall Wold Heritage Site; and
- adversely impact on the landscape setting of Polmont.

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Wallacestone, Redding and Reddingmuirhead

1. Preferred Option: No further housing development beyond existing commitments at Redding Park and Hillcrest

2. Predicted Environmental Effect: Development of these sites could:

- increase the population of Wallacestone, Redding and Reddinmuirhead by between 2.0 and 2.2%
- have an adverse impact on legally protected species
- increase the population at risk of flooding
- have an adverse impact on the Union Canal SAM and its setting; and
- have an adverse landscape and visual effect in an area of high sensitivity.

3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:

- Development proposals at the Hillcrest (056) site should be accompanied by protected species surveys and appropriate mitigation employed;

- Development proposals at the Hillcrest (056) site should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Development at the Redding Park (031) site should be undertaken sensitively to avoid adversely impacting on the Union Canal SAM or its setting;
- Development of the Hillcrest (056) site should employ careful siting, design and landscaping.

4. Alternatives Considered: The first alternative is to identify a new Wallacestone Strategic Growth Area, involving greenfield expansion at Standrigg Road (site 147).

The second alternative is to promote minor settlement extension at Redding Park North (site 145).

The third alternative is the allocation of a greenfield site for residential use at Redding Road (site 146)

5. Environmental Effects of Alternatives: Development of the first alternative could:

- adversely impact on legally protected species;
- increase the population at risk of flooding;
- have adverse landscape and visual impacts in an area of high/ medium sensitivity to landscape change.

Development of the second alternative could:

- adversely impact on legally protected species;
- increase the population at risk of flooding;
- have an adverse impact on the setting of the Union Canal SAM; and
- have adverse landscape and visual impacts in an area of high/ medium sensitivity to landscape change.

Development of the third alternative could:

- adversely impact on legally protected species;

6. Reason for selecting the preferred option: The preferred option was selected as the negative environmental effects caused by the alternatives were considered to outweigh the positive contribution they could make towards meeting the overall housing growth target.

Rural South Villages

1. Preferred Option: Rationalise existing allocated housing sites, with some sites (including most of the Slamannan Strategic Growth Area) de-allocated to better reflect low market demand, but with the Whitecross

Strategic Growth Area (site 76) retained along with selected sites in other villages.

2. Predicted Environmental Effect: Development of these sites could:

- increase the population of the Rural South Villages by between 8.8% and 46.1%;
- remove significant amounts of existing contamination ;
- improve townscape quality by regenerating significant amounts of vacant/derelict land;
- adversely impact on legally protected species;
- result in the loss of ancient and semi natural woodland;
- increase the population exposed to risk of injury from major hazard pipelines;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- have an adverse impact on the setting of the Antonine Wall Wold Heritage Site; and
- have significant adverse impacts on the landscape.

3. Enhancement/Mitigation: Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development proposals at the Bridgend Road, Church Road 2, Standburn West and Whitecross (049, 052, 060 & 076) sites should be accompanied by protected species surveys and appropriate mitigation employed;
- Development at the Whitecross (076) site should retain areas of ancient and semi natural woodland and provide appropriately sized habitat buffers;
- Sensitive land uses should be excluded from major hazard pipeline consultation zones on the Whitecross (076) site;
- Development at the Slamannan Road 2, Standburn West, Stein's Brickworks and Whitecross (054, 060, 075 & 076) sites should investigate and remediate historic contamination;
- Development proposals at the Bridgend Road, Slamannan Road 2, Avonbridge Road, Stein's Brickworks, Whitecross and Main Street (049, 054, 058, 075, 076 & 205) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Development at the Stein's Brickworks (075) site should be undertaken sensitively to avoid adversely impacting on the setting of the Antonine Wall WHS;
- Development at the Whitecross (076) site should retain existing woodland and hedgerows; and provide a comprehensive landscape framework to integrate the new development into its surroundings; and
- Development of the Church Road 2 (052) site should incorporate screen planting along the northern boundary of the site;

4. Alternatives Considered: The first alternative is for the retention of all existing sites

The second alternative is to extend the Whitecross Strategic Growth Area, through the allocation of additional land to the south of the B825 (site 157) as part of the masterplanned new settlement.

5. Environmental Effects of Alternatives:

In addition to the significant environmental effects of the preferred option, development of the first alternative could:

- increase potential adverse impacts on legally protected species
- have a likely significant effect on the Slamannan Plateau SPA
- sever the connectivity of significant habitat networks
- further increase the population exposed to risk of injury from major hazard pipelines;
- increase the loss of prime quality agricultural land;
- further increase the population at risk of flooding;
- breach the capacity of the Slamannan waste water treatment works;
- significantly affect the village character of Limerigg; and
- increase the magnitude of cumulative significant adverse impacts on the landscape.

In addition to the significant environmental effects of the preferred option, development of the second alternative could:

- increase potential adverse impacts on legally protected species
- increase the loss of prime quality agricultural land;
- have an adverse impact on the Linlithgow Bridge Inventory Battlefield Site; and
- increase the magnitude of cumulative significant adverse impacts on the landscape.

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Denny and Dunipace

1. Preferred Option: Focus on delivering the existing Denny South East Strategic Growth Area (sites 12, 13, 14, 67), and committed settlement expansions at Carrongrove Mill (site 15) and Rosebank, Dunipace (site 17).

2. Predicted Environmental Effect: Development of these sites could:

- increase the population of the Denny and Dunipace area by between 5.5% and 21.7%;
- connect up significant isolated broadleaved woodland habitat networks;
- improve townscape quality by regenerating significant amounts of vacant/derelict land;
- significantly improve the capacity of the local road network
- sever a significant broadleaved woodland habitat corridor;
- adversely impact on legally protected species;
- adversely impact on Carron Glen SSSI;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- breach the capacity of the local road network; and
- breach the capacity of the local waste water treatment works.

3. Enhancement/Mitigation: Approved masterplans for the development of the Mydub 1 and Carrongrove Mill (013 & 015) sites already act to ensure some of the significant positive effects and mitigate some of the significant negative effects above. Additional measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development at the Mydub 2 and Rosebank (014 & 017) sites should incorporate new broadleaved woodland planting connecting fragmented habitat networks;
- Development at the Former Denny High School and Carrongrove Mill (012 & 015) sites should retain and protect existing broadleaved woodland habitat;
- Development proposals at the Mydub 2, Carrongrove Mill, Stirling Street, Rosebank and Broad Street (014-017 & 067) sites should be accompanied by protected species surveys and appropriate mitigation employed;
- Development at the Carrongrove Mill (105) site should be undertaken sensitively to avoid adversely impacting on the Carron Glen SSSI;
- Development proposals at the Denny High School, Mydub 2, Carrongrove Mill, Rosebank and Broad Street (012,014,015,017 & 067) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Development at the Former Denny High School, Mydub 2, Carrongrove Mill, Stirling Street and Broad Street (12, 14 - 17 & 67) sites should provide proportionate financial contributions towards the construction of the Denny Eastern Access Road; and
- Denny waste water treatment works should be expanded to accommodate increased foul water flows from the cumulative scale of development proposed in this option.

4. Alternatives Considered: The first alternative is to promote an extension to the existing site at Rosebank, Dunipace(site 116).

The second alternative is to identify a new Strategic Growth Area at Dunipace

incorporating Bankend Farm (site 164).

The third alternative is to promote minor settlement extension at Head of Muir, involving green belt release (site 115).

5. Environmental Effects of Alternatives: Development of the first alternative could:

- adversely impact on legally protected species;
- increase the population exposed to risk of injury from major hazard pipelines;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- further breach the capacity of the local road network; and
- further breach the capacity of the local waste water treatment works.

Development of the second alternative could:

- adversely impact on legally protected species;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- further breach the capacity of the local road network; and
- further breach the capacity of the local waste water treatment works.

Development of the third alternative could:

- adversely impact on legally protected species;
- result in the loss of prime quality agricultural land;
- further breach the capacity of the local road network; and
- further breach the capacity of the local waste water treatment works.

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Falkirk

1. Preferred Option: Promote a new Strategic Growth Area at the Falkirk Gateway (site 80), with residential use introduced as part of the mix of uses, together with a moderate greenfield expansion at Hallglen (Woodend Farm) (sites 123, 160). Additionally there would be a focus on increased residential use at development opportunities in the Town Centre (sites 70, 71) and other brownfield infill sites (sites 122, 167, 168, 169, 186).

2. Predicted Environmental Effect: Development of these sites could:

- increase the population of Falkirk by between 7.3% and 10.8%;

- enable the creation of a significant new green corridor between Victoria Park and the Helix;
- cumulatively contribute towards a significant improvement in the quality of existing open space;
- enable the removal of a current hazardous substances consent and its associated consultation zones;
- remove significant amounts of existing contamination;
- improve townscape quality by regenerating significant amounts of vacant/derelict land;
- adversely impact on legally protected species;
- adversely impact on the quality and connectivity of a significant part of the green network;
- result in the loss of prime quality agricultural land;
- increase the population at risk of flooding;
- increase the population exposed to reduced air quality associated with the Falkirk Town Centre AQMA;
- adversely impact the Callendar Park inventory designed landscape;
- have an adverse impact on the Forth and Clyde Canal Scheduled Ancient Monument and its setting;
- have an adverse impact on the setting of the Antonine Wall Wold Heritage Site and Scheduled Ancient Monument; and
- cause adverse landscape/visual impacts in an area of medium to high sensitivity;

3. Enhancement/Mitigation: Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development proposals at the Portdownie, Falkirk Gateway, Carron Road, Woodend Farm 1 & 2, Victoria Buildings, Firs Park, Glen Village Bowling Club (068, 080, 122,123, 160, 167-169) sites should be accompanied by protected species surveys and appropriate mitigation employed;
- Development at the Grangemouth Road and Falkirk Gateway (025 & 080) sites should include the creation of a new green corridor connecting the Helix to Victoria Park;
- Development of the Etna Road 1 & 2 Cauldhame Farm 2, Blinkbonny Road, Carrick Place and Grangemouth Road, Falkirk East End Opportunity Area, Bank Street, Williamson Street, Carron Road, Woodend Farm 1 & 2, Victoria Buildings and Firs Park (019, 020, 022-025, 071-073, 122,123, 160, 167,168) sites should provide financial contributions towards the improvement of off-site open space;
- Development proposals at the Etna Road 2, Cauldhame Farm 1 & 2, Portdownie and Falkirk Gateway (020-022, 068 & 080) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Development proposals at the Portdownie and Williamson Street (068 & 073) sites should be accompanied by cultural heritage assessments

which assess the impact of the development of these sites on the outstanding universal value of the Antonine Wall WHS;

- Development of the Gowan Avenue, Etna Road 1 & 2, Portdownie and Falkirk Gateway (018 – 020, 068 & 080) sites should be undertaken sensitively to avoid adversely impacting on the site and setting of the Forth and Clyde Canal SAM;
- Development of the Woodend Farm 2 (160) site should be undertaken sensitively to avoid adverse impacts on the setting of the Callendar Park Inventory Designed Landscape;
- Development of the Cauldhame Farm 2 (022) site should be informed by a rigorous landscape assessment and be designed within a comprehensive planting structure to ensure fit with the landscape, particularly on the escarpment top and on slopes;
- Development of the Portdownie (068) site should incorporate planting/greenspace within the development, particularly along the waterfront;
- Development at the Woodend Farm 1 & 2 (123 & 160) sites should: retain existing internal and boundary trees where appropriate; avoid major changes in natural landform; retain boundary hedgerows; retain core path access / Forestry Commission maintenance / extraction access through site; create a broad open space area with tree planting at the road frontage; ensure overall housing development density remains low with buffer area between mature tree cover of Callendar Woods and dwellings; and maximise views out from site southwards.

4. Alternatives Considered: The first alternative is to identify a new South Falkirk Strategic Growth Area involving greenfield expansion at Glen Farm (site 121).

The second alternative is to promote minor settlement extension at Slamannan Road (site 120), involving greenfield expansion adjacent to the Union Canal.

5. Environmental Effects of Alternatives: Development of the first alternative could:

- adversely impact on legally protected species; and
- increase the population at risk of flooding.

Development of the second alternative could:

- adversely impact on legally protected species;
- increase the population at risk of flooding;
- have an adverse impact on the setting of the Union Canal SAM

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Grangemouth

1. Preferred Option: The preferred option is consolidation, with development limited to infill and redevelopment opportunities which may arise within the urban area (sites 074 & 170).
2. Predicted Environmental Effect: Development of these sites could:
 - help to slow the rate of population loss in Grangemouth
 - adversely impact on legally protected species;
 - increase the population exposed to risk of injury from major hazards;
 - increase the population at risk of flooding;
 - increase the population exposed to reduced air quality associated with the Grangemouth AQMA; and
 - have an adverse impact on the setting of the category A listed Dundas Church;
3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:
 - Development proposals at the Abbots Road (170) site should be accompanied by protected species surveys and appropriate mitigation employed;
 - The number of new houses within the Grangemouth Town Centre (074) site should be restricted to avoid unacceptably increasing the population exposed to risk of injury from major hazards;
 - Development proposals at both sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development; and
 - Development at the Grangemouth Town Centre (074) site should be undertaken sensitively to avoid adversely impacting on the category A listed Dundas Church.
4. Alternatives Considered: None Considered

Larbert and Stenhousemuir

1. Preferred Option: Focus on delivering the existing North Larbert Strategic Growth Area (site 26), including some additional housing within on the Hill of Kinnaird business park site (site 94).
2. Predicted Environmental Effect: Development of these sites could:
 - increase the population of the Larbert and Stenhousemuir area by between 6.8% and 8.1%;
 - adversely impact on legally protected species;
 - increase the population exposed to risk of injury from major hazards;
 - result in the loss of prime quality agricultural land;

- increase the population at risk of flooding;
- have an adverse impact on the setting of the category A listed Larbert Old Church
- have an adverse impact on the setting of the James Bruce Monument SAM

3. Enhancement/Mitigation: Approved masterplans/ planning permissions are in place for the Hill of Kinnaird, Lorne Road and Larbert House/Stables (026-028) sites which already act to ensure some of the significant positive effects and mitigate some of the significant negative effects above. Additional measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development proposals at the Pretoria Road (062) site should be accompanied by protected species surveys and appropriate mitigation employed; and
- Development at the Pretoria Road (062) site should be undertaken sensitively to avoid adversely impacting on the setting of the Category A listed Larbert Old Church, Churchyard with James Bruce Monument and the James Bruce Monument Scheduled Ancient Monument.

4. Alternatives Considered: The first alternative is to allow Residential use within the Glenberrie business site (site 92).

The second alternative is to identify a new Larbert West Strategic Growth Area, involving sites within the former RSNH estate (sites 132, 133).

The third alternative is to identify a new East Stenhousemuir Strategic Growth Area, involving green belt release at Bensfield (site 131), or Roughlands (site 130).

The fourth alternative is to identify a new Kinnaird Strategic Growth Area, involving large scale green belt release to the east of Kinnaird Village (site 134).

The fifth alternative is to identify a new Carronshore Strategic Growth Area, involving large scale green belt release at Bensfield/Kirkton Farm up to the M9 (sites 129, 127).

5. Environmental Effects of Alternatives: Development of the first alternative could:

- increase the loss of prime quality agricultural land;
- further increase the population at risk of flooding;

Development of the second alternative could:

- adversely impact on legally protected species;
- increase the loss of prime quality agricultural land;

- further increase the population at risk of flooding;
- have adverse landscape and visual impacts in an area of high sensitivity to landscape change;

Development of the third alternative could:

- reducing surface water flooding of properties adjacent to Roughlands Farm;
- adversely impact on legally protected species;
- increase the loss of prime quality agricultural land;
- adversely affect the landscape setting of Stenhousemuir and Carronshore.

Development of the fourth alternative could:

- adversely impact on legally protected species;
- result in the loss of ancient and semi natural woodland;
- increase the loss of prime quality agricultural land;
- further increase the population at risk of flooding; and
- adversely affect the landscape setting of Stenhousemuir.

Development of the fifth alternative could:

- adversely impact on legally protected species;
- adversely impact on the quality and connectivity of a significant part of the green network;
- increase the loss of prime quality agricultural land;
- further increase the population at risk of flooding;
- have a significant detrimental effect on the local road network;
- adversely affect the landscape setting of Stenhousemuir and Carronshore.

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Rural North

1. Preferred Option: The preferred option is to promote an extension to Skinflats at Newton Avenue South (site 165), but to resist further development in the other Rural North villages.

2. Predicted Environmental Effect: Development of these sites could:

- increase the population of the Rural North area by between 12.3% and 23.6%;
- adversely impact on legally protected species;

- result in the loss of potential supporting habitat to the Firth of Forth SPA;
- increase the population at risk of flooding;
- breach the capacity of the Airth and Torwood waste water treatment works;
- adversely impact on the setting of Airth Castle and Airth Old Church category A listed buildings and Airth Old Church SAM; and
- adversely impact on the setting of the Pineapple Inventory Designed Landscape

3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:

- Development proposals the Castle View and Newton Avenue South (039 & 165) sites should be accompanied by protected species surveys and appropriate mitigation employed;
- Carry out further survey work at the Glebe and Newton Avenue South (042 & 165) sites to determine whether or not the land acts as supporting habitat to the Firth of Forth SPA and if it does then carry out an appropriate assessment which demonstrates that the site can be developed without adversely affecting the integrity of the Firth of Forth SPA;
- Development proposals at Castle View, Graham Terrace, Airth Castle South, The Glebe, Former Torwood School and Newton Avenue South (039-043 & 165) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Torwood and Airth Waste Water Treatment Works should be expanded;
- Development of the Airth Castle South (041) site should be undertaken sensitively to avoid an adverse impact on the setting of Airth Castle and Airth Old Church category A listed buildings and Airth Old Church SAM; and
- Development of the Glebe (042) site should incorporate planting to the north and west of the site.

4. Alternatives Considered: The first alternative is to identify a new Airth Strategic Growth Area, involving major greenfield release to the west of the village at Airth Mains Farm (site 148), or to the east at Eastfield Farm (site 151).

The second alternative is to promote moderate settlement expansion at Airth, involving small allocations at the Glebe to the north (site 149) or Eastfield to the south (150).

The third alternative is to promote moderate village extension to the east of Letham (site 155).

The fourth alternative is to promote moderate village extension to Torwood, involving greenfield release either at Castle Crescent (site 154), or Blairs Farm (site 152).

The fifth alternative is to promote an alternative site for Skinflats growth at Newton Avenue (site 153).

5. Environmental Effects of Alternatives: Development of the first alternative could:

- adversely impact on legally protected species;
- result in the loss of potential supporting habitat to the Firth of Forth SPA;
- further increase the population at risk of flooding;
- further breach the capacity of the Airth waste water treatment works;
- adversely impact on the setting of the Pineapple Inventory Designed Landscape; and
- have adverse landscape and visual impacts in an area of high sensitivity.

Development of the second alternative could:

- adversely impact on legally protected species;
- result in the loss of potential supporting habitat to the Firth of Forth SPA;
- further increase the population at risk of flooding;
- further breach the capacity of the Airth waste water treatment works;
- have an adverse impact on the setting of the category A listed Airth Castle.

Development of the third alternative could:

- adversely impact on legally protected species;
- further increase the population at risk of flooding;
- further breach the capacity of the Airth waste water treatment works;
- breach the capacity of Letham pumping station;
- significantly impact in the character and setting of Letham Conservation Area; and
- have adverse landscape and visual impacts in an area of high sensitivity.

Development of the fourth alternative could:

- result in the loss of ancient and semi natural woodland;
- result in the loss of prime quality agricultural land;
- further increase the population at risk of flooding;
- further breach the capacity of the Torwood waste water treatment works;

- have adverse landscape and visual impacts in an area of high sensitivity.

Development of the fifth alternative could:

- adversely impact on legally protected species; and
- result in the loss of potential supporting habitat to the Firth of Forth SPA.

6. Reason for selecting the preferred option: The preferred option was selected as it best balances its contribution towards meeting the housing growth target and its potential positive environmental effects with the range of negative environmental effects it would be likely to cause.

Windfall Sites

1. Preferred Option: Include an allowance of 50 homes per year for windfall sites which come forward outwith the plan process.

2. Predicted Environmental Effect: The environmental effects of the development of windfall sites cannot be meaningfully predicted as they can occur anywhere within the urban area.

3. Enhancement/Mitigation: None proposed.

4. Alternatives Considered: No windfall allowance would be made, with output from such sites contributing extra flexibility to the supply.

5. Environmental Effects of Alternatives: Without an allowance of 40 homes, additional sites to accommodate 400 units would need to be identified over the first 10 year period of the plan to meet the housing land requirement. The environmental effects of developing alternative options for sustainable community growth have been set out under the assessment of Main Issue 5 above. Which of the alternative options for sustainable community growth would be chosen to make up the 400 home shortfall cannot meaningfully be predicted at this stage so environmental effects are unknown.

6. Reason for selecting the preferred option: The preferred option was selected the negative environmental effects caused by the alternatives were considered to outweigh the positive contribution they could make towards meeting the overall housing growth target.

Effective Housing Land Supply

1. Preferred Option: Continue to include an 'alternative sites' policy to deal with any future shortfalls in the effective housing land supply, but revise the criteria to give a clearer indication of where proposals would meet the presumption in favour of sustainable development.

2. **Predicted Environmental Effect:** Despite the proposed clarification of criteria outlining the circumstances where proposals would meet the presumption in favour of sustainable development, we still cannot meaningfully predict where sustainable development proposals will come forward and therefore cannot predict what their environmental effects will be (other than that they will not be significantly negative)
3. **Enhancement/Mitigation:** None proposed
4. **Alternatives Considered:** The policy could be retained with the current wording.
5. **Environmental Effects of Alternatives:** The environmental effects of any sustainable development proposal which may come forward in the event of a shortfall in the housing land supply are extremely hard to predict, however it could be argued that, by definition, no “sustainable” development proposal would be likely to have significant negative effects on the environment.
6. **Reason for selecting the preferred option:** The preferred option was selected in an effort to improve the clarity and transparency of decision making.

Main Issue 6 – Business Locations

Falkirk Investment Zone

1. **Preferred Option:** Amend the mix of uses proposed at the Falkirk Gateway and Falkirk Stadium sites (sites 80, 81) to focus on business, tourism, food and drink, and recreation, with an element of residential use. Proposals for large scale retail use would be deleted, with any retailing reduced to a local scale.
2. **Predicted Environmental Effect:** Development of these sites could:
 - enable the creation of a significant new green corridor between Victoria Park and the Helix;
 - adversely impact on legally protected species;
 - increase the population at risk of flooding; and
 - have an adverse impact on the Forth and Clyde Canal SAM and its setting.
3. **Enhancement/Mitigation:** Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:
 - Development at the Falkirk Gateway (080) site should include the creation of a new green corridor connecting the Helix to Victoria Park;

- Development proposals at the Falkirk Gateway and Falkirk Stadium (080 & 081) sites should be accompanied by protected species surveys and appropriate mitigation employed;
- Development proposals at the Falkirk Stadium and Falkirk Gateway (080-081) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development; and
- Development of the Falkirk Gateway (080) site should be undertaken sensitively to avoid adversely impacting on the site and setting of the Forth and Clyde Canal SAM.

4. Alternatives Considered: Residential use could be excluded from the proposed menu of uses.

5. Environmental Effects of Alternatives: Excluding residential use from the proposed menu of uses at the Falkirk Gateway site would be unlikely to change the environmental effects caused by the development of the site.

6. Reason for selecting the preferred option: The preferred option was selected as it better reflects the mix of uses envisaged by the preliminary development framework for the Falkirk Gateway site.

Grangemouth Investment Zone

1. Preferred Option: Reflect the detailed extent of the Ineos development opportunity on the proposals map, subject to progress with masterplanning; allocate additional land at the eastern end of Grangemouth Docks (sites 128, 162, 163) for port and energy related activities, including an opportunity for a power station with carbon capture and storage in accordance with NPF3; extend the current opportunity at Central Dock Road (sites 90, 190) to reflect the planning permission for the biomass energy plant; and extend the Earls Road core business area to include land at Wood Street, Dundas Street and Dalgrain Road.

2. Predicted Environmental Effect: Development of these sites could:

- remove significant amounts of existing contamination;
- enable the creation of significant low carbon energy generation capacity which significantly reduces greenhouse gas emissions;
- increase the disturbance of Firth of Forth/Forth Islands SPA, Firth of Forth and St Andrew's Bay pSPA, River Teith SAC species caused by additional shipping movements;
- cause disturbance of Firth of Forth/Forth Islands SPA, Firth of Forth and St Andrew's Bay pSPA, River Teith SAC species during construction and operation;
- result in the loss of potential supporting habitat to the Firth of Forth SPA;
- increase the population at risk of flooding;
- increase traffic and industrial related air pollution within an Air Quality Management Area; and

- significantly increase vehicular traffic on the strategic and local road network

3. Enhancement/Mitigation: Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development of the Earlsgate Park, South Bridge Street Grangemouth Docks 1, Wholeflats Business Park, Grangemouth Docks 2, Bo'ness Road North & South and Wholeflats Road (087, 089, 090, 128 & 200-202) sites should investigate and remediate historic contamination;
- Carry out further survey work at the South Bridge Street, Grangemouth Docks 1-4 (089, 090, 128, 162, 163) sites to determine whether or not the land acts as supporting habitat to the Firth of Forth SPA and if it does then carry out an appropriate assessment which demonstrates that the sites can be developed without adversely affecting the integrity of the Firth of Forth SPA;
- Development proposals at the Grangemouth Docks 2 - 4, Bo'ness Road North and South and Wholeflats Road (128, 162, 163 & 2-202) sites should be accompanied by an appropriate assessment which demonstrates that development can be carried out without causing an adverse impact on the integrity of the Firth of Forth SPA; the Forth Islands SPA; the Firth of Forth and St Andrews Bay pSPA and the River Teith SAC either alone or in combination with other plans and projects
- Development proposals at the Grangemouth Docks 1-5, Bo'ness Road North & South and Wholeflats Road (090, 128, 162, 163, 190 & 200-202) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Any new Power Stations in Grangemouth should ensure its feed stock is not delivered by road; and
- Significant improvements should be made to the strategic road network to accommodate cumulative traffic growth.

4. Alternatives Considered: No alternative sites for the CCS plant have been proposed or assessed, although it is possible that it could be accommodated within vacant land at Ineos.

5. Environmental Effects of Alternatives: The environmental effects of developing the vacant land at Ineos (sites 200-202) have been set out above. As this alternative does not de-allocate sites the eastern end of Grangemouth Docks (sites 128, 162 & 163), identical environmental effects are recorded.

6. Reason for selecting the preferred option: The preferred option was selected as it most closely reflects the proposed location for the Grangemouth Carbon Capture and Storage Thermal Power Station set out in NPF3.

Larbert Gateway

1. Preferred Option: Adopt a mixed use approach at Hill of Kinnaird business park (site 94), with housing and community uses permitted as well as business, whilst retaining Glenbervie exclusively for business.
2. Predicted Environmental Effect: Development of these sites could:
 - result in the loss of prime quality agricultural land; and
 - increase the population at risk of flooding.
3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:
 - Development proposals at Glenbervie and Glenbervie Business Park (092 & 093) should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development.
4. Alternatives Considered: The first alternative is to maintain Hill of Kinnaird business park exclusively for business use.

The second alternative is to adopt a mixed use approach, including residential, at Glenbervie (site 92).

5. Environmental Effects of Alternatives: Development of either alternative would have the same significant environmental effects as the preferred option.
6. Reason for selecting the preferred option: The preferred option was selected as the business park at Hill of Kinnaird is in a less favourable location than the Glenbervie site, and a mixed use approach to this site, accommodating some housing and community uses, as well a more limited element of business, is considered to be justified.

Eastern Gateway

1. Preferred Option: Focus the Eastern Gateway Strategic Business Location on Gilston and Whitecross. Drum South would no longer be a strategic business site, with its business component reduced and focused on provision of a local neighbourhood services.
2. Predicted Environmental Effect: Development of these sites could:
 - connecting up significant fragmented habitat networks;
 - improve townscape quality by regenerating significant amounts of vacant/derelict land;
 - remove significant amounts of existing contamination;
 - adversely impact on legally protected species;
 - result in the loss of ancient and semi natural woodland;
 - increase the population exposed to risk of injury from major hazards;
 - increase the population at risk of flooding;

- have an adverse impact on the Union Canal SAM and its setting; and
- have adverse landscape and visual impacts in an area of high sensitivity.

3. Enhancement/Mitigation: Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Development at the Gilston and A801 Union Canal Hub (095 & 203) sites incorporate a new broadleaved woodland corridor to connect up fragmented habitats;
- Development proposals at the Whitecross and Gilston (076 & 095) sites should be accompanied by protected species surveys and appropriate mitigation employed;
- Development at the Whitecross (076) site should retain areas of ancient and semi natural woodland and provide appropriately sized habitat buffers;
- Sensitive land uses should be excluded from major hazard pipeline zones on the Whitecross (076) site
- Development proposals at the Whitecross and Gilston (076 & 095) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development
- Development at the Whitecross and A801 Union Canal Hub (076 & 203) sites should be undertaken sensitively to avoid adversely impacting on the Union Canal SAM
- Development at the Whitecross (076) site should retain existing woodland and hedgerows; and provide a comprehensive landscape framework to integrate the new development into its surroundings

4. Alternatives Considered: A mixed use approach could be adopted for the Gilston site, introducing residential use and reducing the scale of business land.

5. Environmental Effects of Alternatives: Development of this alternative would have the same significant environmental effects as the preferred option.

6. Reason for selecting the preferred option: The preferred option was selected as the Gilston site is well located, adjacent to Junction 4 of the M9, there has been substantial recent investment in enabling road works on the A803 and the site's large size offers flexibility to accommodate a range of business uses. As such it still represents a good Strategic Business Location.

Main Issue 7 – Town Centres

Falkirk's Network of Centres

1. Preferred Option: Revise the policy on the network of centres, and relevant supporting policies, to emphasise the 'town centre first' principle; and remove the Falkirk Gateway from the current network of centres.

2. Predicted Environmental Effect: Emphasising the town centre first principle and removing the Falkirk Gateway from the current network of centres should help to sustain the vitality of existing town centres but no significant environmental effects are predicted.
3. Enhancement/Mitigation: None proposed
4. Alternatives Considered: Retain the Falkirk Gateway as a commercial centre in the network of centres.
5. Environmental Effects of Alternatives: Retaining the Falkirk Gateway as a commercial centre in the network of centres could undermine the vitality of existing town centres but no significant environmental effects are predicted.
6. Reason for selecting the preferred option: The preferred option was selected as a review of the Falkirk Gateway site in the wake of the economic downturn has meant that aspirations for the site have moved away from the large-scale retail proposals which previously underpinned the masterplan.

Falkirk Town Centre

1. Preferred Option: Promote the key opportunities of Grahamston and the East End, with an emphasis on residential, office, leisure, cultural and tourism uses. The East End site would be expanded to include Callendar Square where there are opportunities for restructuring and new uses; promote improved connections within and to the Town Centre; amend policies to increase flexibility on changes of use within the Town Centre, with a core area no longer identified; support the building of more homes in the Town Centre by relaxing developer contributions on residential development within the Town Centre boundary.
2. Predicted Environmental Effect: Implementing this option could:
 - increase the population exposed to reduced air quality associated with the Falkirk Town Centre AQMA.
3. Enhancement/Mitigation: None proposed.
4. Alternatives Considered: Exclude Central Retail Park from the defined boundary of the Town Centre.
5. Environmental Effects of Alternatives: The exclusion of Central Retail Park may marginally increase the vitality of the town centre but no further significant environmental effects are predicted.
6. Reason for selecting the preferred option: The preferred option was selected as excluding Central Retail Park from the town centre boundary would have little practical effect.

District and Local Centres

1. Preferred Option: Continue to promote mixed use opportunities in the district centres, but with enhanced food shopping no longer a particular focus; and identify the Carron Centre as an opportunity for redevelopment for mixed use, including retail, food and drink, community uses, and residential.

2. Predicted Environmental Effect: Implementing this option could:

- regenerate prominent vacant sites in Denny and Bo'ness Town Centres improving townscape value.
- adversely impact on legally protected species;
- increase the population exposed to risk of injury from major hazards;
- increase the population at risk of flooding;
- increase the population exposed to reduced air quality associated with the Grangemouth AQMA;
- breach the capacity of the local road network in Denny; and
- have an adverse impact on the setting of the category A listed Dundas Church;

3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:

- Development proposals at the Carron Road (122) site should be accompanied by protected species surveys and appropriate mitigation employed;
- The number of new houses within the Grangemouth Town Centre (074) site should be restricted to avoid unacceptably increasing the population exposed to risk of injury from major hazards;
- Development proposals at the Grangemouth Town Centre (074) site should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Development at the Church Walk (079) site should provide proportionate financial contributions towards the construction of the Denny Eastern Access Road; and
- Development at the Grangemouth Town Centre (074) site should be undertaken sensitively to avoid adversely impacting on the category A listed Dundas Church.

4. Alternatives Considered: Enhanced food shopping could be retained as a continuing aspiration in Bo'ness and Denny.

5. Environmental Effects of Alternatives: Retaining enhanced food shopping as an aspiration in Bo'ness and Denny could, with the correct market conditions act to further enhance the vitality of these district centres. However, there is a risk that retaining the aspiration for enhanced food shopping could prevent the redevelopment of district centre sites for other appropriate uses which would mean that the regeneration of vacant/ derelict sites and improvement of townscape quality may not occur.

6. Reason for selecting the preferred option: The preferred option was selected as there has been limited development interest in providing an enhanced food shopping offering in Denny and Bo'ness and removing the focus on enhanced food shopping could encourage development for other appropriate uses.

Main Issue 8 - Tourism

1. Preferred Option: Maintain the existing framework of themes and nodes as the basis for tourism development. Identify additional tourism opportunities at the Falkirk Wheel (Site 204), Wester Carmuir, Falkirk (Site 197) and Kinneil walled garden (Site 196).

2. Predicted Environmental Effect: Implementing this option could:

- have an adverse impact on the Forth and Clyde Canal Scheduled Ancient Monument;
- have an adverse impact on the Antonine Wall World Heritage Site and its setting; and
- have an adverse impact on the setting of the category A listed Kinneil House.

3. Enhancement/Mitigation: Measures to mitigate significant negative effects are described below:

- Development of the (196) site should be undertaken sensitively to avoid adverse impact on the setting of the category A listed Kinneil House;
- Development of the Kinneil Walled Garden, Wester Carmuir and Falkirk Wheel (196, 197 & 204) sites should be undertaken sensitively to avoid adverse impact on the Antonine Wall WHS and its setting; and
- Development of the Falkirk Wheel (204) site should be undertaken sensitively to avoid adverse impact on the Forth and Clyde Canal SAM and its setting

4. Alternatives Considered: Additional sites for tourism development were proposed through 'call for sites' submissions for the whisky distillery at Beancross, and at Airth, associated with the Pineapple. These could have been given allocations. However, the distillery is under construction and does not need an allocation. The proposal at Airth is linked to a larger housing proposal which is not a preferred option.

5. Environmental Effects of Alternatives: Development of this alternative could:

- adversely impact on legally protected species;
- increase the population at risk of flooding;
- have an adverse impact on the Antonine Wall World Heritage Site and its setting;

- have an adverse impact on the Pineapple Inventory Designed Landscape; and
- have adverse landscape and visual effects in an area of high sensitivity;

6. Reason for selecting the preferred option: The preferred option was selected as the distillery at Beancross is under construction and does not need an allocation; and the proposal at Airth is inseparable from a larger housing proposal which is not a preferred option.

Main Issue 9: Infrastructure

1. Preferred Option: The infrastructure projects listed in Figure 6.1 and shown in Figure 6.2 will be promoted in LDP2 to support the sustainable growth of the area; delivery of the infrastructure will be through the capital programmes of the Council and relevant infrastructure providers, the TIF programme, other external funding sources where available, and developer contributions; and the nature and level of developer contributions will be set out in policy and consolidated supplementary guidance, and will be related and proportionate to the impacts of individual developments on local infrastructure.

2. Predicted Environmental Effect: Implementing this option could:

- connect up significant habitat networks;
- significantly enhance recreational opportunity through the creation of new and improvement of existing path networks;
- prevent a large scale pollution leak in an extreme flooding event;
- reduce flood risk;
- restore natural coastal processes;
- increase the capacity of the road network;
- increase the capacity of the sewerage network;
- adversely impact on legally protected species;
- have a likely significant effect on the Firth of Forth/ Forth Islands SPA, the Firth of Forth and St Andrews Bay Complex pSPA and the River Teith SAC;
- alter coastal processes;
- impact on a major hazard pipeline;
- increase greenhouse gas emissions;
- have an adverse impact on the setting of the Antonine Wall WHS;
- have an adverse impact on the setting of the Forth and Clyde Canal SAM; and
- have adverse landscape and visual effects in an areas of high sensitivity;

3. Enhancement/Mitigation: Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- The Dalderse Waste Water treatment Works upgrade (16) should be accompanied by a project specific appropriate assessment which demonstrates that the scheme can be carried out without having an adverse effect on the River Teith SAC either alone or in combination with other plans and projects;
- The Grangemouth Flood prevention scheme (17) should be accompanied by a project specific appropriate assessment which demonstrates that the scheme can be carried out without having an adverse effect on the integrity of the Firth of Forth / Forth Islands SPA, The Firth of Forth and St Andrews Bay Complex pSPA and the River Teith SAC either alone or in combination with other plans and projects;
- The DEAR and all Cemetery Extension projects (6 & 24) should be accompanied by protected species surveys and appropriate mitigation employed;
- The DEAR project (6) should incorporate new broadleaved woodland planting to connect up fragmented parts of the broadleaved woodland habitat network;
- The Falkirk-Denny/Bonnybridge Path and Bo'ness to Grangemouth Path (11 & 12) proposals should avoid disturbing major hazard pipelines;
- The Grangemouth Flood prevention scheme (17) should be accompanied by detailed coastal geomorphological assessment to ensure that it does not adversely impact on existing coastal processes or the ecological status of the water environment;
- The M9J5 upgrade, A904/A993 junction improvement (1 & 7) projects and Bo'ness to Grangemouth Path and A904 Road Realignment and B9143 Inchyra Road Path (12 & 15) proposals should be carried out sensitively to avoid adversely impacting on the setting of the Antonine Wall WHS; and
- The A803 corridor improvement project (5) should be carried out sensitively to avoid adversely impacting of the Forth and Clyde Canal SAM and its setting.

4. Alternatives Considered: An alternative approach to developer contributions might involve a more global infrastructure levy on development, based on total infrastructure costs across the area or a particular settlement. It is recognised that funding and delivery mechanisms will be looked at nationally through the review of the planning system, and other options may emerge in time.

5. Environmental Effects of Alternatives: Promoting a comprehensive roof tax as opposed to seeking to collect developer contributions from sites contributing towards the need for infrastructure upgrading will have no environmental effect.

6. Reason for selecting the preferred option: The preferred option was selected as funding and delivery mechanisms will be looked at nationally through the review of the planning system and it was considered wise to let that process run its course.

Main Issue 10 –Energy

Low Carbon Energy Generation

1. Preferred Option: Introduce a policy on energy developments, incorporate the wind energy spatial framework into LDP2 (as currently expressed in SG14) and consolidate guidance on renewable technologies into a single supplementary guidance document; and allocate a site in Grangemouth Docks (sites 128, 162 and 163) for a power station with carbon capture and storage in accordance with NPF3.

2. Predicted Environmental Effect: Introducing a policy on energy developments, incorporating the wind energy spatial framework into LDP2 and consolidating guidance on renewable technologies into a single supplementary guidance document should help to mitigate any significant negative effects on the environment caused by future proposals for energy generation in the Council area.

Allocating sites for a power station with carbon capture and storage on sites 128,162 and 163 could:

- enable the creation of significant low carbon energy generation capacity which significantly reduces greenhouse gas emissions;
- increase the disturbance of Firth of Forth/Forth Islands SPA, Firth of Forth and St Andrew's Bay pSPA, River Teith SAC species caused by additional shipping movements;
- cause disturbance of Firth of Forth/Forth Islands SPA, Firth of Forth and St Andrew's Bay pSPA, River Teith SAC species during construction and operation;
- result in the loss of potential supporting habitat to the Firth of Forth SPA;
- increase the population at risk of flooding;
- increase traffic and industrial related air pollution within an Air Quality Management Area; and
- significantly increase vehicular traffic on the strategic and local road network

3. Enhancement/Mitigation: Measures to ensure the delivery of significant positive effects and mitigate significant negative effects are described below:

- Carry out further survey work at the Grangemouth Docks 2-4 (128, 162, 163) sites to determine whether or not the land acts as supporting habitat to the Firth of Forth SPA and if it does then carry out an appropriate assessment which demonstrates that the sites can be developed without adversely affecting the integrity of the Firth of Forth SPA;
- Development proposals at the Grangemouth Docks 2 - 4, (128, 162 &163) sites should be accompanied by an appropriate assessment which demonstrates that development can be carried out without

causing an adverse impact on the integrity of the Firth of Forth SPA; the Forth Islands SPA; the Firth of Forth and St Andrews Bay pSPA and the River Teith SAC either alone or in combination with other plans and projects;

- Development proposals at the Grangemouth Docks 2-4 (128, 162 & 163) sites should be accompanied by a flood risk assessment and areas at risk of flooding should be excluded from development;
- Any new Carbon Capture and Storage power station in Grangemouth should ensure its feed stock is not delivered by road;
- Significant improvements should be made to the strategic road network

4. Alternatives Considered: No alternative sites for the CCS plant have been proposed or assessed, although it is possible that it could be accommodated within vacant land at Ineos.

5. Environmental Effects of Alternatives: Relocating the CCS proposal to the Ineos sites from the sites in Grangemouth Docks would have no environmental effect as both the Grangemouth Docks and Ineos sites would still be developed in absence of the CCS proposal. Neutral effects are therefore recorded.

6. Reason for selecting the preferred option: The preferred option was selected as it most closely reflects the proposed location for the Grangemouth Carbon Capture and Storage Thermal Power Station set out in NPF3.

Heat Networks

1. Preferred Option: Strengthen the policy on heat networks and the incorporation of district heating into major new developments. Identify the network opportunities associated with the Grangemouth Energy Project within the spatial strategy.

2. Predicted Environmental Effect: Strengthening the policy on heat networks may encourage the development of new heat sources close to the proposed heat network opportunities in Grangemouth which could result in an increase in traffic and industrial related air pollution within an Air Quality Management Area.

Developing the pipework necessary to operate heat networks could have a range of environmental effects depending on the sensitivity of the environment where they are installed. At this stage the location of potential heat networks are too generalised to know with any accuracy where new pipework infrastructure will be laid, therefore the environmental effects of putting in this infrastructure cannot be meaningfully predicted at this stage.

3. Enhancement/Mitigation: Any new thermal heat sources constructed in Grangemouth should ensure their feed stock is not delivered by road;

4. Alternatives Considered: The potential networks within the Grangemouth Energy Project are effectively alternatives in terms of where

investment in infrastructure might be prioritised. However, it is too early to commit to any one option, pending the development of the relevant business cases.

5. Environmental Effects of Alternatives: The preferred option already encapsulates the alternatives.

6. Reason for selecting the preferred option: There was no selection to be made.

Section 72 Requirements: Low and Zero Carbon Generating Technology

1. Preferred Option: Within the policy on Low and Zero Carbon Generating Technologies, increase the proportion of the emissions reduction required by the policy to 12%, to reflect changes to Scottish Building Standards; and review the scope of exemptions and the definition of relevant technical and practical constraints within the policy and supporting supplementary guidance to address current implementation difficulties.

2. Predicted Environmental Effect: Implementation of this option could:

- increase capacity to generate energy from renewable sources; and
- have an adverse impact on townscape quality through installation of poorly designed LZCGT.

3. Enhancement/Mitigation: Potential negative effects on townscape value caused by new LZCGT can be mitigated through the application of urban design and placemaking policies within the LDP.

4. Alternatives Considered: The policy is required by legislation, so there is no alternative. However, the proportion of emissions reduction required through LZCGT could be increased by a greater amount.

5. Environmental Effects of Alternatives: This alternative would increase the magnitude of significant environmental effects caused by the preferred option.

6. Reason for selecting the preferred option: The preferred option was selected as the latest Scottish Government review of the operation of Section 72 was unable to find evidence of any benefits so we have chosen to make what we consider to be the least onerous reasonable rise in the proportion of emissions reductions to be met through the installation and operation of low and zero carbon generating technologies i.e. a 2% increase from LDP1.

Issue 11 – Onshore Gas, Minerals and Waste

Onshore Gas and Minerals

1. Preferred Option: Maintain the current policy on onshore gas and oil developments, embedded within the general mineral policies, pending the outcome of the Scottish Government review.
2. Predicted Environmental Effect: The current policy states that proposals for onshore oil and gas extraction will only be supported where there is not significant adverse impact on the environment or the local community. The effect of this policy is to guard against significant negative environmental effects
3. Enhancement/Mitigation: None proposed
4. Alternatives Considered: Promote a separate policy dealing with onshore oil and gas developments.
5. Environmental Effects of Alternatives: A separate policy may aid clarity in decision making but would have the same overall effect.
6. Reason for selecting the preferred option: The preferred option was selected as it is not considered appropriate to propose changes to the current policy or how it is presented in the plan in advance of the outcome of the present Scottish Government review.

Waste

1. Preferred Option: Remove the site safeguarding for additional landfill capacity at Avondale (site 97); maintain the existing general policy on the location of waste management facilities which supports their location on business and industry sites; and continue to identify operational waste management sites on the proposals map.
2. Predicted Environmental Effect: No significant environmental effects are predicted.
3. Enhancement/Mitigation: None proposed
4. Alternatives Considered: Maintain the safeguarded site at Avondale; identify specific sites for waste management facilities, rather than rely on the generic waste management policy.
5. Environmental Effects of Alternatives: Development of this alternative could:
 - have a likely significant effect on the Firth of Forth SPA;
 - increase exposure to nuisance odour;
 - result in the loss of prime quality agricultural land;
 - increase overall flood risk;
 - significantly increase the release of methane;
 - sterilise sand and gravel deposits; and
 - have a major adverse effect on landscape character.

6. Reason for selecting the preferred option: The preferred option was selected as existing landfill capacity is more than double the 10 year rolling requirement and landfill capacity requirements continue to decrease as recycling rates are maintained and biodegradable municipal waste is banned from landfill by 2021. Therefore safeguarding a site for landfill expansion at Avondale is no longer considered to be appropriate. There is also no evidence to suggest that there is a need to identify sites for specific waste management facilities rather than maintain our current approach of relying on a generic waste management policy.

6. PROPOSALS FOR MONITORING

6.1 Legislative Requirement

6.1.1 Monitoring of the environmental performance of the Plan during its life is a key requirement of SEA. The SEA Act schedule 3 para 9 requires 'a description of the measures envisaged concerning monitoring in accordance with section 19'. The monitoring measures proposed are based on the different environmental issues identified as potentially being subject to significant environmental effects from the Local Development Plan.

6.2 Monitoring Proposals

6.2.1 Appendix 3 sets out the details of the proposed monitoring, the rationale for the selection and the methods and measures of monitoring. Monitoring will be conducted by the Council, in their capacity as the Responsible Authority for this SEA.

6.2.2 There is already an established reporting procedure for monitoring the effects of the Development Plan including:

- The SEA Scoping Report for the LDP, published in November 2015 contained information on a range of environmental indicators;
- Technical report 1 of the Main Issues Report, published alongside the MIR in January 2017, is a monitoring statement which provides information on a range of environmental indicators;
- This Environmental Report, published alongside the MIR in January 2017, contains an Environmental Baseline Report at Appendix 1 contains information on a range of environmental indicators;
- The Revised Environmental Report, which will be published alongside the Proposed Plan in early 2018, will contain an updated Environmental Baseline Report with information on a range of environmental indicators; and
- The Development Plan Monitoring Report, which has been published periodically since 2006 and most recently in 2014, monitors suite of 44 indicators which relate to social, economic as well as environmental matters. The next Development Plan Monitoring Report is expected to be published in late 2017/ early 2018

6.2.3 Given the reporting procedure already in place, it is not considered necessary or appropriate to maintain a specific SEA Monitoring Register. Instead, a number of appropriate indicators will included within these documents to assess the achievement of SEA objectives for the Falkirk Council Local Development Plan.

6.2.4 SEA documents are already forwarded to the SEA Gateway as a matter of course the other monitoring documents will be made available on the Council website.

7.0 NEXT STEPS

7.1 Consultation

7.1.1 The Main Issues Report along with this Environmental Report has been made available to the public as well as the Consultation Authorities (SEPA, Scottish Natural Heritage and Historic Scotland) for comment, in accordance with the Environmental Assessment (Scotland) Act, 2005.

7.1.2 The consultation will run for a period of 12 weeks until 5th May 2017. Comments and responses to this Environmental Report will be considered following these consultation periods, so that any revisions can be made before a revised Environmental Report is submitted alongside the Proposed Plan.

7.2 Adoption of LDP

7.2.1 Following an examination in public of the Proposed Plan and any subsequent modifications made by Scottish Ministers, the Local Development Plan will be formally adopted by Falkirk Council.

7.3 SEA Post-Adoption Statement

7.3.1 Shortly after adoption, the SEA Post-adoption Statement will be produced. The Statement sets out how environmental considerations have been integrated into the Framework, how the findings of the Environmental Report have been taken into account, and how the consultation responses have been addressed.

7.3.2 The SEA Post-adoption Statement will confirm the framework for monitoring of the plan implementation and the responsibilities for monitoring.

