Zero Waste Strategy 2012 - 2022

Clackmannanshire Council - Environmental Report

Clackmannanshire Council

www.clacksweb.org.uk

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1.0 Non-Technical Summary

What is this document?

This document provides a non-technical summary of the results of the Strategic Environmental Assessment (SEA) of Clackmannanshire Council's draft Zero Waste Strategy. This draft strategy is in the form of a Main Issues Paper (MIP).

The summary has been designed to help consultees, including residents of the Clackmannanshire Council area, and other interested stakeholders, to easily understand the findings of the assessment. The detailed results are presented in the full body of the Environment Report which follows this summary.

Background to the Clackmannanshire Council Zero Waste Strategy 2012 - 2022

The Clackmannanshire Council Zero Waste Strategy (CCZWS) will cover the entire Clackmannanshire Council area and will operate for a ten year period from 2012 to 2022. It is proposed that an interim review of the strategy's actions will occur in 2017, however the Strategy will not be fully reviewed and updated until 2022 unless there is a further change in national policy.

There is no legal requirement to produce this Strategy, however, one is now required due to the change in national waste policy brought about by the publication of the Scottish Government's Zero Waste Plan in June 2010.

The Council's existing Strategies are the Forth Valley Area Waste Plan (2003) and the Forth Valley Strategic Outline Case (2006). These plans addressed the strategic objective to reduce the amount of Municipal Solid Waste (MSW) going to landfill and, in particular, to achieve European Union Landfill Directive (1999/31/EC) targets to reduce Biodegradable Municipal Waste (BMW) material being placed in landfill. Municipal waste in this context is waste collected by the Council.

The Council successfully implemented the targets and actions within the Strategic Outline Case and the Area Waste Plan, and many of the policy principles within these plans are still relevant today. However the introduction of the Scottish Government's Zero Waste Plan in 2010, and its focus on all waste rather than just municipal waste, has confirmed the abandonment of the Area Waste Plan structure for future waste planning[1].

The CCZWS is intended to help the Council to discharge its duties in relation to the Zero Waste Plan, and the forthcoming Zero Waste Regulations and Waste Prevention Plan. It also contributes to the public body duties required by part 4 of the Climate Change (Scotland) Act 2009. "The duties state that a public body must, in exercising its functions, act in the way best calculated to contribute to the delivery of emissions reduction targets, in the way best calculated to help deliver any statutory climate change adaptation programme, and in a way that it considers is most sustainable".[2]

The Clackmannanshire Zero Waste Strategy 2012-2022 is therefore intended to update and supersede the existing Forth Valley Area Waste Plan (published in 2003) and the Forth Valley Strategic Outline Case (Published in 2006).

The aim of the strategy is to ensure the Council meets the relevant targets set out in the Zero Waste Plan and reduces the impact of waste management on the environment. The plan will identify policy objectives for waste, resource management and climate change, with the key Objectives and Actions to be agreed through the consultation process.

[1] Disbandment of Area Waste Groups – Letter from SEPA Director of Operations, April 2010

[2] *Public Bodies Climate Change Duties: Putting them into Practice*

In general the strategy aims to promote a clear understanding of, and commitment to, the principle of a Zero Waste Society so that all stakeholders and the public can contribute to the overall goal through their individual actions. It will also ensure the Council's commitment to Zero Waste is fully integrated into all of its strategies, plans and programmes.

What is SEA and how is it relevant to me?

An SEA is an assessment of the effects on the environment (including health and well-being) of a plan, programme or strategy (PPS). It is also an opportunity to avoid or mitigate adverse environmental effects and enhance environmental benefits.

The main focus of the SEA is to ensure that key environmental factors (e.g. biodiversity, climate, air quality, human population & health, soil, material assets, cultural heritage and water) are considered throughout development of the strategy. This ensures that the strategy is less likely to be detrimental to these factors.

The SEA process is also about making the planning process transparent, with the information used in the environmental assessment openly available to the public. The public have an opportunity to comment on the SEA process once the Environmental Report is published, along with comments on the Main Issues Paper.

The environmental assessment process carried out in producing this report follows the previous two SEA processes of Screening and Scoping. Through screening, it was identified that the Zero Waste Strategy required a full SEA and, during the scoping process, the options/alternatives and the methodology by which the environmental assessment would be completed were determined. Copies of the Screening and Scoping reports submitted are also available at www.clackmannanshire.gov.uk . Feedback from the Scottish Environment Protection Agency (SEPA), Scottish Natural Heritage (SNH) and Historic Scotland (HS) is shown in Appendix D of this Environment Report.

Purpose of the Environmental Report

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

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

Alternative Options Considered for the Strategy

It is a statutory requirement of an SEA to consider alternatives to achieve the desired outcomes of the Strategy. When determining options for the Zero Waste Strategy it was accepted that realistically the options available to the Council are limited due to the nature of the new waste framework set by the European Union and Scottish Government. National targets have already been set by the Zero Waste Plan, in line with the revised EU Waste Framework Directive, and the proposed Zero Waste Regulations will ensure that the mandatory separation of recyclates, the implementation of landfill bans and other measures contained in the Zero Waste Plan are appropriately implemented.

The preferred option for the Strategy is to achieve or exceed the targets set by the Zero Waste Plan in order to obtain the full environmental and economic benefits in the Council area. This option accepts that the Council will aim to influence activities relating to commercial and industrial waste, which it does not have complete control over, as well as those activities it does in relation to municipal waste. An alternative less ambitious option is to only address the targets aimed directly

at local authority waste management activities and to ensure basic compliance with the forthcoming Zero Waste Regulations. A final option is to do nothing, however this option was quickly discounted as unrealistic given the changes in legislation and policy.

These three options and the aims and objectives of each are set out below; with Option 3 being the *Preferred* option and Option 2 being the *Alternative* option.

Option1 - Status Quo/Do Nothing Option

- Recognised this would quickly be discounted as unrealistic due to the changes in legislation, regulation, and policy at a national and European level. This leaves the next two options to be explored more thoroughly.

Option 2 – Do the Minimum (ZWP Obligated Targets)

- Focus on only achieving the *Household* waste targets from the Zero Waste Plan.
- Introduce a Food Waste Collection to ensure compliance with the Zero Waste Regulations.
- Continue existing waste collections and ensure compliance with the five separately collected recyclate materials in the revised Waste Framework Directive (rWFD) by 2013.
- Do not set any waste "arising" stabilisation/reduction targets and do not set targets on other functions of the Council.
- Use Residual Waste Treatment for the non-recyclable waste stream prior to any landfilling of waste.

Option 3 – Optimise (ZWP Targets "Plus")

- Focus on *All* waste targets in the Zero Waste Plan where possible, including those where the Council has influence but not control.
- Introduce a Food Waste Collection and adjust the frequency of all waste & recycling collections to optimise the capture of food waste and other recyclates and thereby reduce the overall costs.
- Introduce a new Customer Charter to help maximise the recyclate capture from existing collections and minimise contamination, thereby optimising the quality of recyclate material collected.
- Set a waste "arising" stabilisation/reduction target for collected waste from households and set similar targets on other Council functions.
- Boost local economic/environmental value and activity (including 3rd Sector and Community Involvement) through a proactive approach to economic development support and grant funding for zero waste projects.
- Use Residual Waste Treatment for the non-recyclable waste stream prior to any landfilling of waste after the non-recyclable waste has been minimised.

Likely Significant Environmental Effects of the CCZWS and Proposed Mitigation

Waste management, with the exception of waste prevention i.e. avoiding waste in the first place, will always have some form of environmental impact. This is the case whether the waste is in the form of recyclates reprocessed into a new product, compostable waste processed into compost, or waste that is put through a residual waste treatment process and disposed of to landfill. The waste has been produced, therefore something needs to be done with it. The decision as to how the waste will be dealt with is dependent on many factors in addition to environmental impacts including:

- The type of material and its quality
- The tonnages involved
- The opportunities for reuse, recycling or composting

- Collection methods used
- The technology, services and infrastructure available
- The costs involved
- Recycling and other targets
- Legal and regulatory obligations

The assessment carried out on the two options suggests the Strategy may have a combination of both positive and negative significant impacts. Overall, the majority of impacts are positive for the *Preferred* Option, with efforts towards reducing waste to landfill, and utilising resources to their full potential i.e. returning raw materials for use in our economy. The impacts of the *Alternative* Option are a mix of both positive and negative.

The assessment of impacts was undertaken by Council officers with assistance from an external environmental consultant. Conclusions from the assessment of the two options are detailed in the Environmental Report Section 4 and following the assessment Option 3 remained the *Preferred* Option. This was because the overall impact of this option was more positive for the environment than Option 2.

There were a range of impacts that were uncertain for both options; due in part to the high level policy nature of the strategy, the uncertainty as to whether an impact will occur within or outwith the Council area, and the fact that many of the aims and objectives are targeted on activities where the Council has influence but does not have actual control. In addition some mitigation measures were proposed for inclusion in the final Strategy in order to avoid or reduce some impacts anticipated.

Overall the implementation of the CCZWS has the potential to have significant environmental effects on biodiversity, population and human health, air, water, soil, climatic factors, material assets and landscape. The Strategy is not anticipated to have the potential to significantly impact on cultural heritage.

The assessment of environmental effects of the Strategy is presented in full in Section 4 of the Environmental Report. The assessment concludes that the implementation of the Strategy through the *Preferred* Option is not predicted to have many significant adverse environmental effects. Overall the *Preferred* Option is predicted to have generally significant positive environmental effects, particularly in relation to biodiversity, soil, material assets and climatic factors. However it is also noted that there are a range of impacts that are uncertain.

Monitoring and Adoption

Following adoption of the final strategy, the effects on the environment will need to be monitored. This will ensure that any unforeseen negative environmental impacts are identified and appropriate action taken. It will also help to identify whether positive environmental benefits are being maximised as far as possible. Clackmannanshire Council will determine a suitable monitoring framework. Section 5 of the Environmental Report sets out the suggested monitoring framework.

Next Steps and the Consultation Process

In accordance with Section 15 (3) of the Environmental Assessment (Scotland) Act, Clackmannanshire Council have agreed a 6 week statutory consultation period for statutory responses (Scottish Ministers/ Historic Scotland (HS)/ the Scottish Environmental Protection Agency (SEPA) and Scottish Natural Heritage). The public consultation period will also run for a period of 6 weeks.

Responses received to the Environmental Report will be analysed alongside consultation responses to Main Issues Paper. If necessary, changes will be made to the Strategy before a finalised version is presented to Council committee for adoption. Once adoption has taken place,

an SEA Post Adoption Statement will be issued and environmental monitoring will be agreed and implemented.
If you would like to provide comments on this Environment Report please use the relevant contact details below and respond by Friday the 6th July 2012. An accompanying response form can be found on the Council's webpage for the consultation.

Email to: wasteservices@clacks.gov.uk
Telephone: 0500 545 540
By post to: Zero Waste Strategy Consultation, Waste Services, Kilncraigs, Greenside Street, Alloa, FK10 1EB

2.0 Introduction

As part of the preparation of the Zero Waste Strategy, Clackmannanshire Council is carrying out a Strategic Environmental Assessment (SEA). SEA is a systematic method for considering the likely environmental effects of certain Plans, Programmes or Strategies (PPS). SEA aims to:

- integrate environmental factors into PPS preparation and decision-making;
- improve PPS and enhance environmental protection;
- increase public participation in decision making; and
- facilitate openness and transparency of decision-making.

The SEA is required by the Environmental Assessment (Scotland) Act 2005. The key SEA stages are:

Screening - determining whether the PPS is likely to have significant environmental effects and whether an SEA is required.

Scoping - deciding on the scope and level of detail of the Environmental Report, and the consultation period for the report – this is done in consultation with Scottish Natural Heritage, The Scottish Ministers (as Historic Scotland) and the Scottish Environment Protection Agency.

Environmental Report - publishing an Environmental Report on the PPS and its environmental effects, and consulting on that report.

Adoption - providing information on: the adopted PPS; how consultation comments have been taken into account; and methods for monitoring the significant environmental effects of the implementation of the PPS

Monitoring - monitoring significant environmental effects in such a manner so as to also enable the Responsible Authority (Clackmannanshire Council) to identify any unforeseen adverse effects at an early stage and undertake appropriate remedial action.

The purpose of this Environmental Report is to:

- provide information on the Zero Waste Strategy
- identify, describe and evaluate the likely significant effects of the Zero Waste Strategy and its reasonable alternatives;
- provide an early and effective opportunity for the Consultation Authorities and the public to offer views on any aspect of this Environmental Report.

2.1 The Key Facts

The key facts relating to the Zero Waste Strategy are set out in Table 1 below.

Table 1 - Key facts relating to the Zero Waste Strategy

Name of Responsible Authority	Clackmannanshire Council
Title of Plan, Programme or Strategy	Clackmannanshire Council Zero Waste Strategy (note this is titled "Waste Management Plan" in the Screening Report)
What prompted the PPS	The publication of the Zero Waste Plan for Scotland
Subject	Waste and Resource Management
Period covered and frequency of updates	2012 -2022 with an interim review after 5 years
Area covered by the strategy	Clackmannanshire Council area – see Appendix C for a map
Purpose and/or objectives of the strategy	The aim of the strategy is to ensure the Council meets the relevant targets set out in the Scottish Zero Waste Plan and reduces the impact of waste management on the environment.
Contact Point	Graeme Cunningham, Environment Manager, gcunningham@clacks.gov.uk 01259 452 548

2.2 SEA Activities to date

The activities and actions that have taken place up until this point are detailed in Table 2 below.

Table 2 - SEA Activities to date

SEA Action/Activity	**When carried out**
Screening to determine whether the PPS is likely to have significant environmental effects	October 2011
Scoping, the consultation periods and the level of detail to be included in the Environment Report	March 2012
Outline and objectives of the PPS	As per the Screening Report
Relationship with other PPS and environmental objectives	As per the Scoping Report
Environmental baseline established	As per the Scoping Report
Environmental problems identified	As per the Scoping Report
Assessment of future of area without the PPS	As per the Scoping Report
Alternatives considered	Three alternatives were considered at the Scoping Report stage. One of these, the Status Quo/Do Nothing option was considered unfeasible and therefore excluded.

SEA Action/Activity	**When carried out**
Environmental assessment methods established	As per the Scoping Report, although the format `has been adjusted in the Environmental Report.
Selection of PPS alternatives to be included in the environmental assessment	During Screening, Scoping and Environmental Report stages of the SEA.
Identification of environmental problems that may persist after implementation and measures envisaged to prevent, reduce and offset any significant adverse effects	Scoping and Environment Report stages
Monitoring methods proposed	As per the Scoping Report and Environmental Report
Consultation timescales: • Timescale for Consultation Authorities • Timescale for public	Consultation period for the Zero Waste Strategy and this accompanying Environment Report will run for six weeks until the 6th July 2012
Notification/publicity action	Local media public notices were placed for - Statutory Notice for the Screening Determination The consultation for this Environmental Report is advertised on www.clacks.gov.uk

3.0 Context for the Zero Waste Strategy

3.1 Outline and Objectives of the Strategy

The Clackmannanshire Council Zero Waste Strategy (CCZWS) will cover the entire Clackmannanshire Council area and will operate for a ten year period from 2012 to 2022. It is proposed that an interim review of the strategy's actions will occur in 2017, however the Strategy will not be fully reviewed and updated until 2022 unless there is a further change in national policy.

A Consultative Draft in the form of a Main Issues Paper will be accompanied by this Environmental Report.

3.1.1 Background and Legal requirement for the Strategy

There is no legal requirement to produce this Strategy, however, one is now required due to the change in national waste policy brought about by the publication of the Scottish Government's Zero Waste Plan in June 2010.

The Council's existing Strategies are the Forth Valley Area Waste Plan (2003) and the Forth Valley Strategic Outline Case (2006). These plans addressed the strategic objective to reduce the amount of Municipal Solid Waste (MSW) going to landfill and, in particular, to achieve European Union Landfill Directive (1999/31/EC) targets to reduce Biodegradable Municipal Waste (BMW) material being placed in landfill.

The Forth Valley Area Waste Plan (AWP) was aligned to the National Waste Plan (2003) and was one of 11 such plans focusing on MSW. The Area Waste Plan (AWP) was focused on implementing the Best Practicable Environmental Option (BPEO), with a range of recycling and waste prevention measures to reduce waste production and the amount of waste going to landfill. The BPEO was supported by the (then) Scottish Executive through funding from the Strategic Waste Fund (SWF). The Council successfully implemented the targets and actions, and many of the policy principles within this plan are still relevant today. However the introduction of the Scottish Government's Zero Waste Plan in 2010, and its focus on all waste rather than just Municipal Waste, has confirmed the abandonment of the Area Waste Plan structure for future waste planning[3].

The Forth Valley Strategic Outline Case (SOC) detailed how the Councils intended to meet the long term EU Landfill Directive Targets up to 2020 and also formed the key element of the Council's partially successful bid in 2006 to the (then) Scottish Executive SWF for a second tranche of funding.

The CCZWS is intended to help the Council to discharge its duties in relation to the Zero Waste Plan, and the forthcoming Zero Waste Regulations and Waste Prevention Plan. It also contributes to the public body duties required by part 4 of the Climate Change (Scotland) Act 2009. "The duties state that a public body must, in exercising its functions, act in the way best calculated to contribute to the delivery of emissions reduction targets, in the way best calculated to help deliver any statutory climate change adaptation programme, and in a way that it considers is most sustainable".[4]

3.1.2 Strategy purpose, subject and proposed objectives

The Clackmannanshire Zero Waste Strategy 2012-2022 is intended to update and supersede the existing Forth Valley Area Waste Plan (published in 2003) and the Forth Valley Strategic Outline Case (Published in 2006).

[3] Disbandment of Area Waste Groups – Letter from SEPA Director of Operations, April 2010

[4] *Public Bodies Climate Change Duties: Putting them into Practice*

The aim of the strategy is to ensure the Council meets the relevant targets set out in the Zero Waste Plan and reduces the impact of waste management on the environment. The plan will identify policy objectives for waste, resource management and climate change, with the key Objectives and Actions to be agreed through the consultation process.

It general, it aims to promote a clear understanding of, and commitment to, the principle of a Zero Waste Society so that all stakeholders and the public can contribute to the overall goal through their individual actions. It will also ensure the Council's commitment to Zero Waste is fully integrated into all of its strategies, plans and programmes.

3.2 Relationship with other relevant Policies, Plans and Programmes

The strategy will help to deliver the Scottish Government's National Waste Management Plan, *Scotland's Zero Waste Plan*. The strategy aims to align itself with the Climate Change (Scotland) Act 2009 by supporting the delivery of the *Climate Change Delivery Plan* (2009).

The Clackmannanshire Zero Waste Strategy aims to influence policy and action throughout Clackmannanshire Council's operations, providing a clear line of sight from policy down to the delivery of service plans and a plethora of other strategies. In doing this, it will enable the Council to meet the targets set by the Zero Waste Plan and demonstrate a contribution to sustainable development. It will aim to influence corporate plans, programmes and strategies such as:

- Clackmannanshire Community Plan and Regeneration Outcome Agreement
- Clackmannanshire Council Single Outcome Agreement 2009-2012
- Clackmannanshire Council Corporate Plan
- Clackmannanshire Local Development Plan
- Clackmannanshire Sustainability and Climate Change Strategy
- Clackmannanshire Council Procurement Strategy
- Building Clackmannanshire Economic Development Framework 2008-18
- Various local Grant Funding Programmes

The Clackmannanshire Zero Waste Strategy will formally state Clackmannanshire Council's zero waste priorities and targets and there will be a public commitment to build these into all of its work. It is intended to inform and influence policy development and implementation across the Council's activities. The commitments made in the strategy will be reflected in the action plans relating to issues such as planning, economic development and procurement.

A fuller list of plans, programmes and strategies that provide a policy context for the CCZWS is provided in Appendix B.

3.3 Relevant aspects of the current state of the environment

3.3.1 General Overview of the Current Environment

The Clackmannanshire Council area has a rich, attractive and valuable natural & built heritage. With recent significant levels of investment, in accordance with the adopted Development Plan, in house building, new and improved transport infrastructure, shopping activity, and education and leisure infrastructure, Clackmannanshire is encouraged to now look to new challenges and aspirations that build on past success in a sustainable way for the key assets we have.

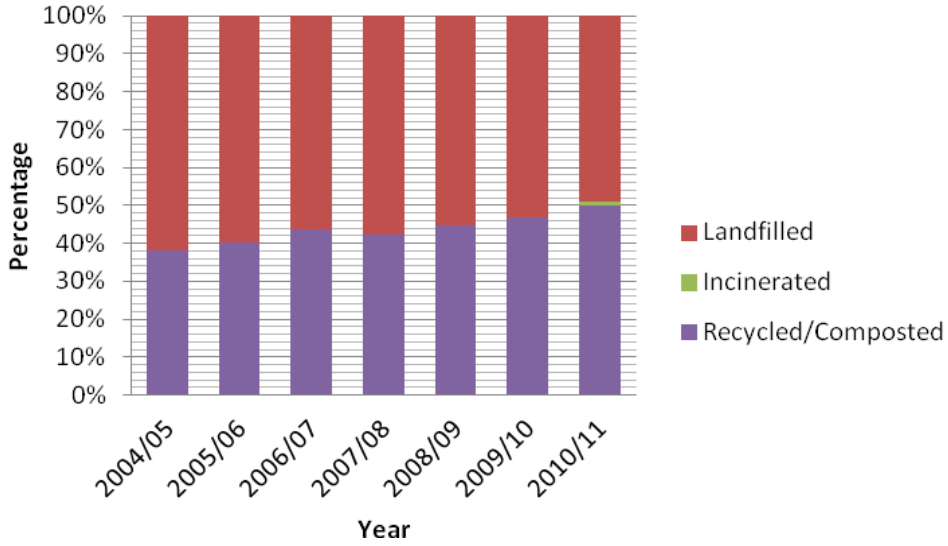
In that regard Clackmannanshire has small towns in close proximity to each other and are all within close reach of attractive countryside and landscape. The countryside is under increasing pressure for development and a key objective must be to ensure this asset of the area is protected as a key resource and enhanced with only suitable forms of development that can enhance the landscape value and economic viability with the right kind of rural activities. The challenge will be to protect the quality landscape setting of our urban areas while enabling a more sustainable rural economy.

Environmental issues and the environmental characteristics of the area in relation to the key environmental topics are contained within Appendix E. The key issues relating to waste management and a summary of environmental problems are set out below.

3.3.2 Waste Management

Clackmannanshire Council is currently one of the top performers for recycling/composting within Scotland's 32 local authorities with rates of 49.8 % for the period April 2010 – March 2011[5]. This compares to the Scottish local authority average of 38.2% for the same period. The long term trend in performance for the Council, also recorded by SEPA Data, is shown in Chart 1 below. The chart shows what method was used to manage the total waste collected by the Council i.e. composted/recycled, incinerated or landfilled.

Chart 1 - Clackmannanshire Council Performance for Waste Collected



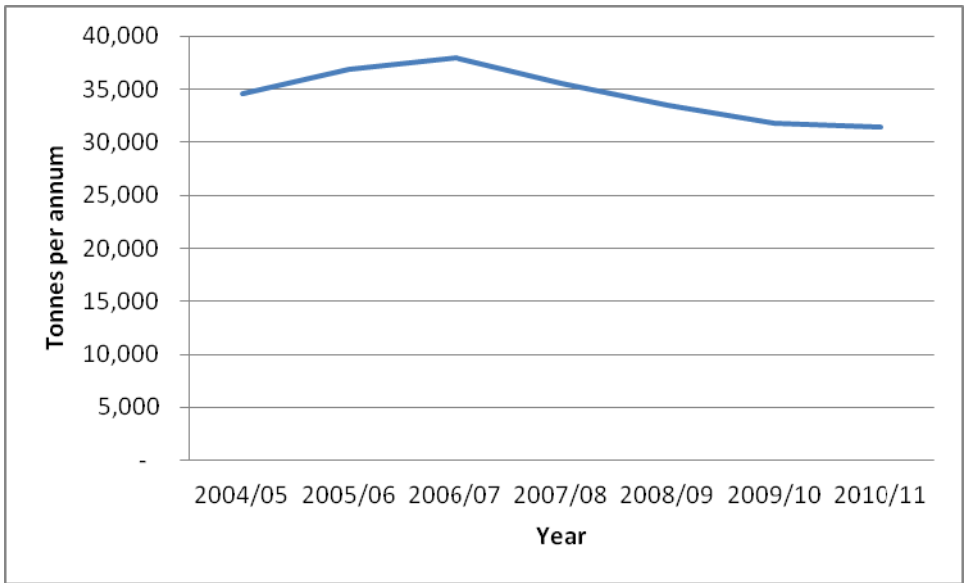
*Note this chart includes waste produced directly by the Councils' through their own functions and activities. The incinerated material in the graph represents the small element of non-recyclable waste recovered by the Council's MRF contractor from the comingled recyclates collected in Blue bins.

[5] SEPA Waste Data – Local Authority Collected Waste reporting
http://www.sepa.org.uk/waste/waste_data/waste_data_reports/lacw_reporting/lacmw_summary_reports.aspx

However this percentage could be a lot higher if the recyclate materials currently thrown away as non-recyclable waste (residual waste) in bins destined for landfill disposal were actually separated out. Residual waste analysis of household waste bins (green wheeled bins) destined for landfill has shown that nearly 50% of it is recyclable or compostable.

Chart 2 below shows the total waste arising that was collected by the Council in its area. During the time period shown in the chart the total waste arising peaked; during 2006/07 at 38,004 tonnes. Thereafter the total waste declined to 31,368 tonnes in 2010/11. This represents a reduction of nearly 18% and compares favourably to an average reduction of 8.6% for Scotland's local authorities as a whole during the same period (derived from SEPA annual reports for all 32 Councils[6]).

Chart 2 – Clackmannanshire Council Waste Arising



While the Council has successfully undertaken a range of waste prevention actions it is unclear whether the downward trend of waste arising shown in Chart 2 will continue. It is also unclear how much of the downward trend over the last five years is a result of the recent economic downturn, and how much is long term change due to the waste prevention actions taken by the Council and national bodies such as Zero Waste Scotland.

Perhaps the most significant drivers of the increase in the total waste arising are population and household growth. The most recent population projections, using 2008 General Registrar Office for Scotland (GROS) information, are that Clackmannanshire Council area will see a 24% increase from 50,480 to 62,577 during the period 2008-2033. This compares to a 7.3% increase in Scotland's population as a whole.

The type of waste & resource management infrastructure within the area is mixed in nature and limited due to the small size of the Council area; however there is evidence of an increasing predominance of reprocessing and sorting facilities. The majority of landfill and residual waste is currently transported out of the area to facilities in adjacent authorities.

The current infrastructure is provided for commercial and industrial use as well the Council's collected waste which we focus upon in this section. However the same issues apply in terms of a need for more modern recycling and reprocessing infrastructure in order to meet the Zero Waste Plan targets for all waste.

[6] SEPA Waste Data – Local Authority Collected Waste reporting
http://www.sepa.org.uk/waste/waste_data/waste_data_reports/lacw_reporting/lacmw_summary_reports.aspx

There is also an environmental legacy arising from a range of historic landfill sites. The most significant of these, the Black Devon landfill site, has undergone restoration and is now an asset to local biodiversity and wetland management around the Forth.

More information on current and required waste/resource management infrastructure is provided in Appendix E.

3.4 Gaps in Data

The accepted data gaps are noted as follows:

- Information on Commercial and Industrial Waste streams in the Council area not collected by the Council.
- A lack of data and consistent reporting on biodiversity, particularly wildlife, in the area.
- Lack of available data on soils.

3.5 Summary of Environmental Problems

Relevant environmental problems have been identified at the Scoping stage through discussion with Council officers and the statutory consultees and an analysis of the baseline data. The relevant environmental problems are summarised in Table 4 below. Please also note the identification of these in detail in Appendix E.

Table 4 - Relevant Environmental problems

Potential Problem	Supporting Data (where available)	Implications for the Strategy
A rising population and a rising number households will increase the total waste produced.	• Population and household forecast data from Scottish Government • SEPA Waste Data	The volume of waste produced and its subsequent recycling or treatment is central to reducing the local and global environmental impact of consumption and production. The strategy should provide flexibility to deal with population and household growth and aim to address the negative environmental impacts of this change through waste prevention measures as well as increased reuse and recycling.
Local air quality may be impacted from additional waste collection vehicles and the processes that treat waste.	• Air Quality measured by Environmental Health monitoring • Emissions from the Council's vehicle fleet	There are rising levels of air pollution from traffic in the Council area, which need to be taken account of with regard to air emissions. The use of lower emission vehicles over time and more efficient collection processes/frequencies should help address this issue. The need for residual treatment processes (including landfill disposal) for waste should be minimised by maximising recycling and waste prevention. Also the strategy should recognise potential trans-boundary effects should waste be treated outside the Council area.

Potential Problem	Supporting Data (where available)	Implications for the Strategy
Material assets – waste and resource management Infrastructure	• SEPA information on licensed waste management sites	Future infrastructure needs will be focused primarily on reuse, reprocessing, recycling, composting and only a limited amount of infrastructure will be required for residual treatment and landfill. Current infrastructure is still focused on landfill disposal (in adjacent Council areas) and so the strategy needs to recognise this and encourage the development of the correct balance of resource management infrastructure for the future.
Climate Change – landfilling of waste is a major contributor to greenhouse gases which causes climate change.	• Clackmannanshire Council Carbon Footprint Estimates	Given the significant contribution to climate change from methane escaping from landfill sites (even with gas capture systems in place) and the loss of potential raw materials for manufacturing into landfill sites, the priority must be to prevent landfilling. However the strategy must also recognise that, in line with the EU Waste Hierarchy, waste prevention and high value recycling offer the biggest benefits in terms of greenhouse gas emissions.
Contaminated land and soil. Derelict and vacant land sites in the Council area have been increasing in the last decade.	• Waste Management Licensing • Contaminated Land statistics	The Contaminated Land monitoring regime plays an important role in cleaning up historically contaminated soils, but it is not designed to prevent new contamination. There are a range of other measures specifically aimed at achieving this, most significantly Pollution Prevention and Control (PPC) and Waste Management Licensing, which are regulated by SEPA. The impacts of waste management activities, if not controlled correctly may impact upon the quality of soils. However the composting of food and green waste can also produce material that helps with the improvement of contaminated sites. While this Strategy is not site specific, it should address the risks to soils in policy terms.

3.6 Summary of likely future changes to environment without the strategy

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

In the absence of the CCZWS there would be no strategic approach to the zero waste issue. Key Council documents might fail to take important zero waste measures into account altogether, or may take their guidance from the existing out of date Area Waste Plan. This would fail to reflect the new legal duties on the Council arising from Scotland's Zero Waste Plan and associated Zero Waste Regulations, for example the requirement to collect food waste and a range of recyclates separately from householders and businesses.

Without a CCZWS there would be no strategic direction to ensure the best practicable environmental option was implemented and therefore negative environmental impacts may not be avoided and positive benefits would remain realised.

Some environmental characteristics may not be greatly affected by the policies and proposals of the CCZWS, however, in many cases, the absence of an up-to-date strategy may exacerbate these problems. The detail of likely future changes to each environmental topic area without the implementation of the CCZWS are summarised within Appendix E.

3.7 SEA Objectives

A range of SEA objectives have been determined from the work to compile the Scoping Report, when considering environmental problems, and also from the input from the Statutory consultees at the Scoping Stage. A full list of these objectives is shown in Table 5 below. The objectives and questions listed have been used in the Assessment Matrix process in the next section.

Note that Cultural Heritage has been excluded as an assessment objective as it was concluded at the scoping stage that the strategy would not have a significant impact on this topic.

Table 5 – SEA Objectives and Assessment Questions

Topic	SEA Objective	SEA Question	Proposed Indicator
Biodiversity	• Ensure the maintenance or (where possible) enhancement of biodiversity, and avoid damage to designated wildlife sites and protected species from waste management activities.	• Is the option likely to cause unavoidable impacts on biodiversity? • Does the option impact on designated sites and protected species? • Does the option offer opportunities for habitat creation or species development?	• Reported condition of locally and nationally important wildlife sites. • Achievement of Local Biodiversity Action Plan targets.
Population and Human Health	• To protect the health of residents from detrimental effects of waste and resource management activities, e.g. noise, traffic impacts, dust, littering, odour and particulates. • To protect community safety and wellbeing from waste related anti social behaviour such as littering and flytipping.	• Does the option increase levels of noise, odour, dust, particulates, or traffic? • Will the option, when added to other potential health factors cumulatively impact on human health? • Does the option adversely impact on litter and fly tipping?	• Years of healthy life expectancy / infant mortality rate. • Litter (LEAMS) and flytipping statistics (SEPA & Council).
Soil	• To ensure that soil protection is taken into account with regard to waste management activities and as far as possible prevent the contamination of land.	• Does the option encourage the reduction of soil contamination? • Does the option protect soil quality and quantity (including carbon rich and rare soils)? • Does the option provide more compost material to assist soil enhancement?	• Contaminated land statistics • Annual tonnage of PAS100/110 grade organic material reprocessed from organic waste.
Water	• To prevent deterioration, and enhance the ecological status of the water environment, and avoid any adverse affects of waste management activities.	• Does the option impact on the levels of contamination in surface or groundwater? • Does the option impact on the quality or quantity of water courses and wetlands?	• Surface Water Quality - SEPA • Ground Water Quality – SEPA • Ecological Status - SEPA
Air	• Keep air pollution below Local Air Quality Management thresholds. • Minimise the adverse impacts of waste management facilities on air quality. • Minimise the amount of vehicle related emission associated with waste management activities.	• Will the option potentially lead to Local Air Quality Management thresholds to be breached? • Does the option minimise the air quality impact of waste management facilities and processes? • Does the option impact on vehicle emissions?	• Air pollution levels measured by Environmental Health • GHG emissions from Council's vehicle fleet

Topic	SEA Objective	SEA Question	Proposed Indicator
Material Assets	• To minimise the total waste arising through waste prevention, producer responsibility, reuse, and deposit & return schemes • To collect and/or treat waste materials at the nearest and most appropriate locations. • To support the development of reprocessing and sorting facilities in the area.	• Does the option encourage waste reduction and reuse in the Council area? • Does the option encourage the efficient use of existing and local waste management facilities? • Does the option encourage greater use of recycling and reprocessing capacity and adequate levels of waste treatment?	• Total Waste Arising (SEPA WDF Data) • Waste Composition Data (periodic studies) • Recycling/Composting and Recovery rates (SEPA WDF data) • ZWP Appendix B Waste Infrastructure Capacity needs (SEPA)
Climatic Factors	• Reduce greenhouse gas emissions from waste management activities.	• Does the option reduce emissions from landfill sites? • Does the option reduce the emissions from transport and operational activities related to waste and resource management? • Does the option ensure materials with a high carbon metric value are prioritised?	• GHG emissions from Council activities • Recycling rate measured by Carbon Metric • Total Waste Arising and Waste Landfilled
Landscape	• Ensure that new development does not exceed the capacity of the landscape to accommodate it and does not cause adverse visual impacts.	• Does the option protect and enhance the distinctive character of the landscape? • Does the option avoid adverse impacts?	• To be determined.

4 Assessment Method Summary

4.1 Alternative Options Considered

When determining options for the Zero Waste Strategy it was accepted that realistically the options available to the Council are limited due to the nature of the new waste framework set by the European Union and Scottish government. National targets have already been set by the Zero Waste Plan, in line with the revised EU Waste Framework Directive, and the proposed Zero Waste Regulations will ensure that the mandatory separation of recyclates, the implementation of landfill bans and other measures are appropriately implemented.

With an understanding of this framework, a workshop session, facilitated by an external environmental consultant, was held with the Waste Managers from both Falkirk and Clackmannanshire Councils. Zero Waste Scotland also provided input into this workshop. From this session three initial options were identified based on the acceptance of targets and future aims and objectives.

The preferred option for the strategy is to achieve or exceed the targets set by the Zero Waste Plan in order to obtain the full environmental and economic benefits in the Council area. This option accepts that the Council will aim to influence activities that it does not have complete control over, as well as those activities it does. An alternative less ambitious option is to only address the targets aimed directly at local authority waste management activities and to ensure basic compliance with the forthcoming Zero Waste Regulations. A final option is to do nothing, however this option was quickly discounted as unrealistic.

These three options and the aims and objectives of each are set out below; with Option 3 being the *Preferred* option and Option 2 the *Alternative* option.

<u>Option1 - Status Quo/Do Nothing Option</u>

- Recognised this would quickly be discounted as unrealistic due to the changes in legislation, regulation, and policy at a national and European level. This leaves the next two options to be explored more thoroughly.

<u>Option 2 – Do the Minimum (ZWP Obligated Targets)</u>

- Focus on only achieving the *Household* waste targets from the Zero Waste Plan.
- Introduce a Food Waste Collection to ensure compliance with the Zero Waste Regulations.
- Continue existing waste collections and ensure compliance with the five separately collected recyclate materials in the revised Waste Framework Directive (rWFD) by 2013.
- Do not set any waste “arising” stabilisation/reduction targets and do not set targets on other functions of the Council.
- Use Residual Waste Treatment for the non-recyclable waste stream prior to any landfilling of waste.

<u>Option 3 – Optimise (ZWP Targets “Plus”)</u>

- Focus on *All* waste targets in the Zero Waste Plan where possible, including those where the Council has influence but not control.

- Introduce a Food Waste Collection and adjust the frequency of all waste & recycling collections to optimise the capture of food waste and other recyclates and thereby reduce the overall costs.
- Introduce a new Customer Charter to help maximise the recyclate capture from existing collections and minimise contamination, thereby optimising the quality of recyclate material collected.
- Set a waste "arising" stabilisation/reduction target for collected waste from households and set similar targets on other Council functions.
- Boost local economic/environmental value and activity (including 3rd Sector and Community Involvement) through a proactive approach to economic development support and grant funding for zero waste projects.
- Use Residual Waste Treatment for the non-recyclable waste stream prior to any landfilling of waste after the non-recyclable waste has been minimised.

4.2 Assessment Methods

A set of draft SEA objectives has been formulated for each environmental topic area. These were derived from the Scoping Report environmental baseline work shown in Appendix E. These objectives are summarised in Section 3, including adjustments to accommodate responses on the Scoping Report from the Statutory Consultees.

The proposed approach to assessment will be to ask specific questions of the strategy's aims and objectives, and by default its vision, using the key components of the *preferred* and *alternative* options. These specific questions are set out within Section 3. The assessment will then consider how each will be likely to perform and how they can be altered to enhance performance.

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 option is selected as a preferred option.

An assessment matrix is presented below to detail what effect the vision, aims and objectives will have on each environmental topic. The aim of this assessment process is to inform the selection of preferred options to enhance environmental performance.

The monitoring of the environmental performance of the CCZWS will take place through the monitoring of proposed environmental indicators, also indicated in Section 3.

The draft strategy's vision, aims and objectives will identify a variety of main issues which must be prioritised to reflect legal obligations (including the waste hierarchy, and climate change public duties), best value and the concerns of those living and working in the Clackmannanshire Council area. These Main Issues are presented in a Main Issue Paper which will be the main consultation document alongside this Environmental Report. The Main Issues have been identified as:

1 Climate Change
2 Waste Prevention
3 Leadership and Engagement on waste and resource use
4 Optimising Services for the Future (Waste Collections and Other Services)
5 Maximising the Economic Benefit from Zero Waste

6 Waste and Resource Management Infrastructure
7 Management of non-recyclable waste

Each of the proposed objectives for the CCZWS will be assessed according to the following matrix. Some of the assessments are relatively self explanatory, for example, reducing pollution will reflect positively on all of the environmental factors. Further justification is provided as required for each of the proposed objectives. The assessment has been grouped by environmental factor/topic and excludes Cultural Heritage as a factor as, in line with the Scoping Report determination, Cultural Heritage was considered unlikely to be impacted significantly by the CCZWS.

In assessing the impacts it should be noted that due to the small size of the Clackmannanshire Council area, and the limited nature of the current waste infrastructure, many of the impacts associated with the disposal or treatment of waste may actually fall upon adjacent Council areas which have the necessary infrastructure. However at this strategic level of assessment no attempt has been made to try and quantify this effect.

In the matrix below where a factor has been assessed the SEA Questions from Section 3 have been used.

Key to impact symbols used in the Matrix

-- Significantly Negative	- Negative	? Unknown	+ Positive	++ Significantly Positive
		←→ Neutral or insignificant effects which are either potentially positive and/or negative		

L= Long Term Effects	M= Medium Term Effects	S= Short Term Effects	Syn. = Synergistic Effects	C= Cumulative Effects

Assessment Matrix 1

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
Preferred Option - Optimise (ZWP Targets "Plus")										
Focus on "All Waste" targets in ZWP. This includes addressing the industrial construction & demolition waste targets.	+ L	?	+ L	+ L	?	++ L	++ L	+ L	Biodiversity: In the long term biodiversity should benefit from reductions in landfill waste and residual waste treatment arising from increased recycling levels going beyond municipal waste. In addition reduced extraction of virgin materials for new construction materials along with increased compost production from food waste should benefit biodiversity. Population and Human Health: It is unclear whether levels of noise, odour, dust, particulates and traffic will rise or fall. The impact on issues such as flytipping and littering is also unclear. Soil: Reductions in landfill waste and residual waste treatment arising from increased recycling levels should reduce the risk of soil contamination. In addition reduced extraction of virgin materials for new construction materials along with increased compost production should assist soil quality and quantity. Water: Reductions in landfill and residual waste treatment arising from increased recycling levels should reduce the risk of impacts on water courses, wetlands and groundwater. Air: Reductions in landfill and residual waste treatment arising from increased recycling levels should reduce odours, and a range of emissions to air. However there may also be increased dust levels and increased vehicle emissions arising from the increased levels of construction & demolition waste recycling. Overall the impact is unclear. Climatic Factors: The long term impact on climate change will be positive due to the reduction in methane emissions from landfill and the	None.

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									greater reuse and recycling of valuable raw materials. Procurement of more recycled content in future contracts for materials will also assist here. Material Assets: There will be greater use of local recycling facilities and encouragement for reuse of construction & demolition material onsite, as well as greater levels of reprocessing. Landscape: Long term reduction in the levels of mineral extraction through greater levels of construction materials being reused and recycled may help protect existing landscapes.	
Introduce Food Waste Collections and adjust frequency of all collections to optimise capture and reduce costs.	+ ML	← →	+ ML	← →	+ ML	++ ML	++ ML	← →	Biodiversity: Food waste will be diverted from landfill and turned into a valuable fertilizer/compost assisting biodiversity and habitat creation. Population and Human Health: With adjusted frequency of collections in this option there should be no increases in the level of traffic or associated impacts as result of the food waste collection. Overall the impact here is likely to be neutral. Soil: More compost and fertilizer production to PAS 100/110 standards will provide material to improve soil quality and quantity. The reduced landfilling of food waste will lessen the risk of soil contamination from landfill sites. The compost /fertilizer could also potentially help offset peat extraction for horticultural use. Water: The reduced landfilling of food waste will lessen the long term risk of water courses, ground water and wetlands being contaminated from landfill sites. However there are also risks from the “run off” from composting and food waste reprocessing sites if these are not well managed. Overall impact may be neutral. Air: With adjusted frequency of collections there should be no significant increases in the level of emission from traffic as result of the food waste collection. Greater levels of recycling and composting/anaerobic	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									digestion should generate better air quality outcomes by reducing the point source emissions from landfill and/or residual treatment of food waste material. Climatic Factors: The increased levels of food waste treatment and recycling will reduce methane emissions from landfill sites and help prioritise the collection of a material important for Scotland's Carbon Metric (i.e. materials with most significant embedded carbon value). Material Assets: Greater levels of In-Vessel composting (suitable for food waste treatment) or Anaerobic Digestion (AD) of food waste will help support the development of reprocessing facilities locally. Landscape: The impact here is likely to be neutral however the greater levels of food waste collection are likely to help reduce the need for new or extended landfill sites in the long term.	
Introduce a new Customer Charter and maximise the performance of existing collections and the quality of materials. One focus of this will be to reduce recyclates and food waste in non-recyclable waste collections which end up in residual treatment or	+ L	← →	+ L	← →	+ L	++ L	++ L	← →	Biodiversity: More food waste will be diverted from landfill/residual treatment and turned into a valuable fertilizer/compost assisting biodiversity and habitat creation. Population and Human Health: The long term effects here are likely to be insignificant or neutral with improved efficiency of waste collection and improved quality of recyclates this should lead over the long term to less landfill/residual waste treatment and more reprocessing of material with a corresponding benefit in overall air emissions. There could be a small short term increase in flytipping incidents during introduction as a consequence of some householders /businesses failing to comply with the more rigorous approach however this is not known with any certainty at this stage and the impact is likely to be insignificant and so a neutral impact has been recorded. Soil: More high quality compost production to assist with soil enhancement and less risk of soil contamination from landfilled food waste or residual treatment process emissions.	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
landfill.									Water: The reduced landfilling of food and other waste will lessen the long term risk of water courses, ground water and wetlands being contaminated from landfill sites. However there are also risks from the "run off" from composting and food waste reprocessing sites if these are not well managed. Overall effect is neutral. Air: The long term effects here are likely to be slightly positive with improved efficiency of waste collection and improved quality of recyclates this should lead over the long term to less landfill/residual waste treatment and more reprocessing of material with a corresponding benefit in overall emissions. Climatic Factors: The increased levels of recycling and food waste capture will reduce methane or carbon dioxide emissions from landfill/residual treatment sites and help prioritise the collection of material in line with Scotland's Carbon Metric. In addition less virgin extraction of raw materials will be required as a result. Material Assets: Greater levels of recycling and less recyclates being lost to landfill or residual treatment processes will help support recycling and reprocessing facilities locally. Landscape: The impact here is likely to be neutral however the greater levels of recycling are likely to reduce the need for new or extended landfill sites in the long term.	
Set waste arising stabilisation /reduction targets and set targets on other parts of the Council's functions.	← →	?	← →	← →	+ L	++ ML	++ ML	← →	Biodiversity: Overall in the long term waste growth could be halted or reversed due to reduction or stabilisation targets. However no significant effect anticipated. Population and Human Health: The long term effects here are likely to be slightly positive with less waste generated over the long term resulting in reduce waste collection impacts such as noise and traffic. However this may not be a significant impact.	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									Soil: Expected to be neutral although overall risks to soil should reduce if the target set is a reduction in waste rather than stabilisation. Water: Expected to be neutral although overall risks to water should reduce if the target set is a reduction in waste rather than stabilisation. Air: The long term effects here are likely to be slightly positive with improved efficiency of waste collection and less emissions from processes due to less waste being generated than is forecast with current growth factors. Climatic Factors: The prevention of waste is the best option for reducing Greenhouse Gas Emissions and so a positive impact arises from stabilisation or reduction targets. Material Assets: Greater levels of waste reduction and reuse in the area as a result of the targets. Landscape: Expected to be neutral	
Boost local economic value and activity from zero waste (including 3rd Sector and Community Involvement). and address SEPA's indication of regional infrastructure capacity required via Appendix B of	← →	?	+ L	?	?	?	++ L	← →	Biodiversity: Expected to be neutral although additional compost produced locally may benefit biodiversity more. Zero waste community projects may be linked to the enhancement of local nature reserves and green spaces. The upgrading of existing recycling centres may impact on Biodiversity at Firth of Forth Special Protection Area (SPA) in the short term due to construction disturbance, although this may not be a significant impact based on previous experience. Overall significant impacts are unclear. Population and Human Health: Unclear whether impacts such as noise, traffic, or air emissions would increase or decrease or be subject to any significant change. Soil: In the long term more high quality compost could be produced	Adopt with mitigation measures: • Phasing or timing of any upgrading /expansion works so that its possible effects on the SPA can be adequately managed over time; • Requiring appropriate buffer zones to be put in place.

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
the ZWP.									locally benefiting soil quality and quantity, given the issues of transport associated with this type of material for longer distances. Water: Impacts unknown at this stage as they depend on what type of manufacturing processes and technologies are developed. Air: Impacts unknown at this stage as they depend on what type of manufacturing processes and technologies are developed. Climatic Factors: Unknown at this stage, however there is the potential that with increased local recycling and reprocessing/manufacturing infrastructure, developed in line with the self sufficiency and proximity principles, that local climatic emissions will increase and emissions outside the area will decline correspondingly as a result. Material Assets: A positive and significant impact as the focus is on developing local recycling and reprocessing infrastructure. Landscape: Impacts expected to be neutral or insignificant as any new investments/developments will be focused on existing industrial areas.	Note that a screening or policy criteria application exercise will be applied to industrial sites within the Local Development Plan to exclude sites that are unsuitable for future infrastructure due to adverse environmental impact. This will include an assessment of impacts on protected Habitats.
Minimise non – recyclable waste and use Residual Waste Treatment for this non-recyclable waste stream prior to any landfilling of waste.	**?**	**?**	**?**	**?**	**?**	**++ ML**	**+ ML**	← →	Biodiversity: Unknown at this stage as depends upon the residual waste treatments used and its location. Population and Human Health: Unknown at this stage as depends upon the residual waste treatments used and its location. Soil: Unknown at this stage as depends upon the residual waste treatment used and it location. Note that lower grade compost production from some processes could provide material to improve soil quality on contaminated land sites. Water: Unknown at this stage as depends upon the residual waste treatments used and its location.	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									Air: Unknown at this stage as depends upon the residual waste treatments used and its location. Climatic Factors: The use of residual waste treatment for non- recycled waste will reduce methane emissions from landfill sites, which is a major contributor to climate change emissions. Extraction of potential recyclates will also reduce climatic impacts. Material Assets: Use of residual treatment processes may support local infrastructure, although this is not as beneficial as recycling and reprocessing infrastructure. Landscape: The impact here is likely to be neutral however the greater levels of residual waste treatment are likely to reduce the need for new or extended landfill sites in the long term.	
Potential Cumulative Effect	**+ L**	**?**	**+ L**	**← →**	**+? L**	**++ L**	**++ L**	**← →**	Biodiversity: Generally positive or neutral however also one unknown impact at this stage which depends upon the residual waste treatments used and their location. Population and Human Health: Unknown at this stage as depends upon a variety of factors that are uncertain. Soil: Generally anticipated to be positive with one unknown factor at this stage which depends upon the residual waste treatments used and their location. Water: Generally anticipated to be neutral although a couple of unknown factors at this stage particularly the residual waste treatments used in the future and their location. Air: Generally anticipated to be positive however with a couple of unknown impacts at this stage, particularly the residual waste treatments used and their location.	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									Climatic Factors: Generally anticipated to be very positive. Only one unknown in relation to impact of the self sufficiency and proximity principles, however overall global emissions should not be adversely affected. Material Assets: Generally anticipated to be very positive. Landscape: Generally anticipated to be neutral or no significant impact.	

Assessment Matrix 2

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
Alternative Option – Do the Minimum (ZWP Obligated Targets)										
Focus on only achieving the *Household* waste targets from the Zero Waste Plan.	← →	← →	+ L	+ L	+ L	+ L	+ L	← →	Biodiversity: In the long term biodiversity impacts are likely to be neutral. Population and Human Health: Expected to be neutral. Soil: Reductions in landfill waste and residual waste treatment arising from increased household recycling levels should reduce the risk of future soil contamination although not as much as in the preferred option. Increased levels of compost production can be expected but not to the same extent as the preferred option. Water: Reductions in landfill and residual waste treatment arising from increased household recycling levels should reduce the risk of impacts on water courses, wetland and groundwater, although not as significantly as in the preferred option. Air: Reductions in landfill and residual waste treatment arising from increased household recycling levels should reduce odours, and a range of potential emissions to air. Climatic Factors: The long term impact on climate change will be positive due to the reduction in methane emissions from landfill and the greater reuse and recycling of valuable raw materials. Material Assets: There will be greater use of local recycling facilities and encouragement for reuse as well as greater levels of reprocessing. Landscape: Expected to be neutral.	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
Introduce Food Waste Collection.	+ ML	- SM	+ ML	← →	- SM	+ ML	++ ML	← →	Biodiversity: Food waste will be diverted from landfill and turned into a valuable fertilizer/compost assisting biodiversity and habitat creation. Population and Human Health: There may be a small increase in the level of traffic and associated impacts as result of the additional food waste collections. Soil: More compost and fertilizer production to PAS 100/110 standards will provide material to improve soil quality and quantity. The reduced landfilling of food waste will lessen the risk of soil contamination from landfill sites. The compost /fertilizer could also help offset peat extraction. Water: The reduced landfilling of food waste will lessen the long term risk of water courses, ground water and wetlands being contaminated from landfill sites. However there are also risks from the “run off” from composting and food waste reprocessing sites if these are not well managed. Overall impact may be neutral. Air: With additional collections there could be a small increase in the level of emissions from collection vehicles as result of the food waste collection compared to the preferred option. Climatic Factors: The increased levels of food waste treatment and recycling will reduce methane emissions from landfill sites, however additional vehicle emissions will offset this benefit to some extent compared to the preferred option. Material Assets: Greater levels of In-Vessel composting (suitable for food waste treatment) or Anaerobic Digestion (AD) of food waste will help support the development of reprocessing facilities locally. Landscape: The impact here is neutral however the greater levels of food waste collection may help to reduce the need for new or extended	The additional emissions from extra recycling collections could be mitigated in the long term by the use of lower emission vehicles.

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									landfill sites in the long term.	
Continue existing collections and comply with five separate collected materials in the revised Waste Framework Directive (rWFD) by 2013.	← →	← →	← →	← →	← →	+ L	← →	← →	Biodiversity: Expected to be neutral or no impact. Population and Human Health: Expected to be neutral or no impact. Soil: Expected to be neutral or no impact. Water: Expected to be neutral or no impact. Air: Expected to be neutral or no impact. Climatic Factors: The prioritisation of the collection of material in line with Scotland's Carbon Metric and the EU five mandatory materials should improve the climactic benefit of collections over time. Material Assets: Expected to be neutral or little impact as exiting collections continue. Landscape: Expected to be neutral or no impact.	None
No waste arising stabilisation /reduction targets and no targets on other parts of Council.	← →	- L	← →	← →	- L	- - L	- L	← →	Biodiversity: Overall in the long term waste growth continues as forecast however no significant effect expected so neutral impact. Population and Human Health: The long term effects here are likely to be slightly negative, with more waste generated over the long term resulting in increased waste collection impacts such as noise and traffic. Soil: Expected to be neutral overall although the risk to soils could increase marginally with increasing waste volumes. Water: Expected to be neutral overall although the risk to water resources could increase marginally with increasing waste volumes. Air: The long term effects here are likely to be slightly negative with more	Some lessening of impacts over time can be expected as a result of improved regulation and technology at waste management facilities and tighter environmental standards. The additional emissions from extra recycling collections could be mitigated in the long term by the use of lower

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									emissions from waste treatment processes as more waste is generated. Climatic Factors: The prevention of waste is the best option for reducing greenhouse gas emissions and so there is a positive impact from stabilisation or reduction targets and a negative impact from allowing waste growth to continue. Material Assets: There is a negative impact on levels of waste reduction as a result of the lack of targets. Landscape: Expected to be neutral in the long term.	emission vehicles.
Leave economic development opportunities from zero waste to market forces and only improve Council recycling infrastructure.	← →	?	+ L	?	?	?	+ L	← →	Biodiversity: Expected to be neutral although additional compost produced locally may benefit biodiversity, and zero waste projects may be linked to enhancement of local nature reserves and green spaces. The upgrading of existing recycling centres may impact on Biodiversity at Firth of Forth Special Protection Area (SPA) in the short term due to disturbance, although this may not be a significant impact based on previous experience. Population and Human Health: Unclear whether impacts such as noise, traffic, or air emissions would increase or decrease or be subject to any significant change. Soil: In the long term more high quality compost could be produced locally benefiting soil quality and quantity, given the issues of transport associated with this type of material for longer distances. Water: Impacts unknown at this stage as they depend on what type of processes and technologies are developed in the area. Air: Impacts unknown at this stage as they depend on what type of manufacturing processes and technologies are developed. The lack of a strategic approach to encouraging reprocessing and recycling facilities may encourage greater levels of residual treatment technologies that	Adopt with mitigation measures: • Phasing or timing of any upgrading/expansion works so that its possible effects on the SPA can be adequately managed over time; • Requiring appropriate buffer zones to be put in place. Continuation of existing planning policies would steer new developments to industrial areas.

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									may impact negatively on air quality but this cannot be determined at this stage. Climatic Factors: Unknown at this stage, however there is the potential that with increased residual treatment infrastructure that local climatic emissions may increase more than with recycling/reprocessing infrastructure as in the preferred option. Material Assets: Difficult to predict but likely to be a positive impact as the focus is on developing the Council's local recycling and reprocessing infrastructure, however limited in nature due to not involving other operators. Landscape: Impacts expected to be neutral or insignificant as any new investments/developments will be focused on exiting industrial areas.	
Use Residual Waste Treatment for the non-recyclable waste stream prior to any landfilling of waste. Note these will involve larger volumes than in the preferred option	?	?	?	?	?	+ ML	+ ML	← →	Biodiversity: Unknown at this stage as depends upon the residual waste treatments used and its location. Population and Human Health: Unknown at this stage as depends upon the residual waste treatments used and its location. Soil: Unknown at this stage as depends upon the residual waste treatment used and its location. Note that lower grade compost production from some residual waste processes could provide material to improve soil quality on contaminated land sites. Water: Unknown at this stage as depends upon the residual waste treatment used and its location. Air: Unknown at this stage as depends upon the residual waste treatment used and its location. Climatic Factors: The use of residual waste treatment for non- recycled waste will reduce methane emissions from landfill sites, which is a major	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									contributor to climate change emissions. Extraction of potential recyclates will also reduce climatic emissions. However impact will be less than in preferred option. Material Assets: Use of residual treatment processes will support local infrastructure, although not as beneficial as recycling and reprocessing processes. Landscape: The impact here is likely to be neutral however the greater levels of residual waste treatment are likely to reduce the need for new or extended landfill sites in the long term.	
Potential Cumulative Effect	← →	- L	+ L	?	- L	- L	← →	← →	Biodiversity: Generally neutral, however also one unknown impact at this stage which depends upon the residual waste treatments used and their location. Population and Human Health: A lot of uncertainty at this stage as depends upon a variety of factors that are unclear however some negative impact anticipated. Soil: Generally positive with one unknown factor at this stage which depends upon the residual waste treatments used and their location. Water: A lot of uncertainty at this stage as depends upon a variety of factors that are unclear. Air: Generally anticipated to be negative overall, however with a couple of unknown impacts at this stage, particularly the residual waste treatments used and their location. There is an anticipated positive impact from recycling more household waste. Climatic Factors: Generally anticipated to be slightly negative overall due to the potential of waste growth, despite positive measures elsewhere. Unknown factor in relation to the impact of the self sufficiency and proximity principles, however overall global emissions should not be	None

Aims and Objectives	Biodiversity Flora & Fauna	Population & Human Health	Soil	Water	Air	Climatic Factors	Material Assets	Landscape	Comments (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation
									adversely affected. Material Assets: Generally anticipated to be positive and negative in this option so a neutral effect anticipated overall. Landscape: Generally anticipated to be neutral or no significant impact.	

4.3 Outcome of Assessment

Overall the assessment indicates that the *Preferred* option is anticipated to be better for the environment than the *Alternative* Option and so the Zero Waste Plan targets "Plus" approach to the Strategy is favourable. This view is based on the anticipated cumulative impact of each option.

There were a range of impacts that were uncertain for both options; due in part to the high level policy nature of the strategy, the uncertainty as to whether an impact will occur within or outwith the Council area, and the fact that many of the aims and objectives are targeted on activities where the Council has influence but does not have actual control. However an assessment of anticipated cumulative impact for each option has been made. In addition some mitigation measures were proposed for inclusion in the final Strategy in order to avoid or reduce some impacts anticipated.

Overall the implementation of the CCZWS has the potential to have significant environmental effects on biodiversity, population and human health, air, water, soil, climatic factors, material assets and landscape. The Strategy is not anticipated to have the potential to significantly impact on cultural heritage.

The assessment concludes that the implementation of the Strategy through the *Preferred* Option is not predicted to have many significant adverse environmental effects. Overall the *Preferred* Option is predicted to have generally significant positive environmental effects, particularly in relation to biodiversity, soil, material assets and climatic factors. However it is also noted that there are a range of impacts that are uncertain..

4.4 Mitigation of significant adverse effects

The CCZWS is unlikely to have many significant, long term, negative environmental impacts because its whole aim is to address the negative environmental and economic impacts of waste production and disposal. However some mitigation measures were proposed for inclusion in the final Strategy in order to avoid or reduce some impacts anticipated. These are highlighted in Matrix 1 above and are as follows.

- Phasing or timing of any upgrading /expansion works at Forthbank Recycling Centre so that its possible effects on the Firth of Forth Special Protection Area (SPA) can be adequately managed over time;
- Requiring appropriate buffer zones to be put in place for the SPA;
- Applying a screening or policy criteria application exercise to industrial sites within the Local Development Plan to exclude sites that are unsuitable for future infrastructure due to adverse environmental impact. This will also include an assessment of impacts on protected Habitats.

The first two of these will be implemented at the time of any future upgrades by the Council and the third point will be implemented as an action in the Local Development Process during 2012 -2013, again by the Council.

4.5 Habitat Regulation Appraisal

Scottish Natural Heritage (SNH) commented at the Scoping stage for the SEA that a Habitat Regulation Appraisal (HRA) should be applied in parallel to the SEA. This is in relation to two aspects that could have potentially significant effects on the Firth of Forth Special Protection Area (SPA) and Teith Special Area of Conservation (SAC): the potential for future Energy from Waste (EfW) facilities being developed by the private sector; and the potential upgrading or expansion of existing Council controlled recycling facilities (Forth Bank Recycling Centre) adjacent to the SPA.

After consulting the SNH Guidance on Habitats Regulations Appraisal of Plans 2010 and receiving further advice from SNH an appropriate appraisal record is shown in Appendix F. In conclusion, because the Main Issues Paper (MIP) for the Strategy does not suggest an EfW plant in the Council area nor does it encourage EfW, and there is uncertainty on the potential for any proposals from developers to come forward, the HRA at this stage cannot reasonably predict the effects on Natura sites in a meaningful way. In addition, although the Strategy will generally recognise that EfW proposals may come forward, appraisals of potential significant effects arising from any EfW proposals on Natura sites will be considered through a screening process (to accommodate SEPA's regional infrastructure capacities policy), as well as through project level EIAs. These should be considered at the next most appropriate planning stage, in this case proposed to be a screening, or policy criteria, exercise applied to potential sites for waste/resource management related infrastructure in the finalisation of Council's Local Development Plan.

The potential impacts of any possible upgrading or expansion of existing recycling facilities adjacent to the Forth are expected to be short term in nature and insignificant. These can also be mitigated against. These facilities have in the past undergone upgrading and expansion and the favoured mitigation measures for a further potential upgrade/expansion are as follows:

- Phasing or timing of any upgrading/expansion works so that its possible effects can be adequately managed over time;
- Requiring appropriate buffer zones to be put in place.

5. Monitoring

Progress on delivery of the strategy will take place through annual report updates to the appropriate Council Committee as well as regular updates on specific issues within the strategy. In addition to this, progress on delivery of climate change related issues will be reported through the Council's annual report on progress on the Scottish Climate Change Declaration and progress on land use planning related issue will be reported though the Local Development Plan monitoring framework.

The key performance indicators detailed below will assist with the monitoring of progress. This list may change over time reflecting changes to the monitoring for Council's Single Outcome Agreement and also other changes such as new indicators arising from the implementation of the Waste Data Strategy for Scotland.

Topic	Proposed Indicator
Biodiversity, flora & fauna	• Reported condition of locally and nationally important wildlife sites. • Achievement of Local Biodiversity Action Plan targets.
Population & human health	• Years of healthy life expectancy / infant mortality rate. • Litter (LEAMS) and flytipping statistics (SEPA & Council).
Soil	• Contaminated land statistics • Annual tonnage of PAS100/110 grade organic material reprocessed from organic waste.
Water	• Surface Water Quality - SEPA • Ground Water Quality – SEPA • Ecological Status - SEPA
Air	• Air pollution levels measured by Environmental Health • GHG emissions from Council's vehicle fleet

Material Assets	• Total Waste Arising (as per SEPA WasteDataFlow) • Waste Composition Data (periodic studies) • Recycling/Composting and Recovery rates (SEPA data) • ZWP Appendix B Waste Infrastructure Capacity needs (SEPA)
Climatic Factors	• GHG emissions from Council activities • Recycling rate measured by the Scottish Governments Carbon Metric • Total Waste Arising and Waste Landfilled
Landscape	• Local Development Plan indicators – to be determined.

6. Next Steps

It is proposed that consultation will be undertaken on the Environmental Report and the CCZWS Main Issues Paper (MIP) at the same time. The form of this consultation will be:

- Circulating copies of the MIP and Environmental Report to key agencies and stakeholders, and asking them to comment on the documents and answer the specific consultation questions on each Issue.
- The MIP and Environmental Report will also be made available for comment on the Clackmannanshire Council website, at public buildings and advertised locally.

The consultation will last for 6 weeks. A summary record of the outcomes, including comments from SNH, SEPA and Historic Scotland, as well as other stakeholders and members of the public will be documented in a Table (see example below). This will be included in the committee report finalising the strategy.

Consultation Response Table		
Consultee/Respondent	Comments/Key Points Raised	Clackmannanshire Council's Response *(details of how comment incorporated/ reason for excluding comment / further explanation)*

In addition to the assessment findings, the Environmental Report contains some proposed mitigation measures and a monitoring scheme. Proposed indicators have been included in this report and this will be incorporated into the monitoring scheme.

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

If you would like to provide comments on this Environment Report please use the relevant contact details below and respond by Friday the 6th July 2012. An accompanying response form can be found on the Council's webpage for the consultation.

Email to: wasteservices@clacks.gov.uk
Telephone: 0500 545 540
By post to: Zero Waste Strategy Consultation, Waste Services, Kilncraigs, Greenside Street, Alloa, FK10 1EB

Appendix A - Draft framework for the Zero Waste Strategy 2012-20

Zero Waste Strategy 2012 – 2020 – Main issues Paper
1. Foreword & Vision
2. Introduction
3. Executive Summary
4. Background to the Strategy • The Existing Waste Management Plans • Performance to Date • Waste Composition • Scope of the new Strategy
5. Key Drivers • The European Context • The National Context • The Local Context • Financial Drivers • The tools available to the Council
6. The Main Issues to be addressed by the Strategy • Climate Change • Waste Prevention • Leadership and Engagement on waste and resource use • Optimising Services for the Future (Waste Collections and Other Services) • Maximising the Economic Benefit from Zero Waste • Waste and Resource Management Infrastructure • Management of non-recyclable waste
7. The Next Steps • Process for finalisation • How to comment on the plan • Reference to SEA Environmental Report
8. Glossary
9. Appendices For example summary of forecasts for recycling rates

Appendix B - Policy context for the Strategy

SEA Topic	Summary of Environmental Objectives	Legislation, Plan, Programme or Strategy
Biodiversity, Flora and Fauna	Biodiversity policies from international to local levels aim in particular to conserve habitats, species and ecosystems. Halting the decline of key species is important, and where possible remedial action and enhancement should be implemented in degraded areas. Policies also note the importance of an ecosystem approach – a holistic, landscape approach to biodiversity conservation that goes beyond the traditional emphasis on protecting individual sites.	• Council Directive 79/409/EEC on the conservation of wild birds Council 92/43/EEC the conservation of natural habitats and of wild fauna and flora • Wildlife and Countryside Act 1981 • Conservation (Natural habitats &c.) Amendment (Scotland) Regulations 2007 • Nature Conservation (Scotland) Act 2007 • UK Biodiversity Action Plan • Scotland's Biodiversity – It's In Your Hands. • Clackmannanshire Local Biodiversity Action Plan
Population and Human Health	Policy outlines the need to seek to improve health and quality of life.	• Improving Health in Scotland – the Challenge • Building Clackmannanshire Economic Development Framework 2008-18 • Forth Valley Joint Health Improvement Plan • Animal By Products (Scotland) Regulations
Soil	Policies on soil seek to protect resources from a range of impacts, including soil sealing by development, increased susceptibility to erosion and soil pollution.	• Scottish Soil Framework (2009) • Contaminated Land (Scotland) Regulations
Water	Water related policies aim to protect water resources, and achieve an improvement in their ecological condition where appropriate. River Basin Management Plans, which were prepared under the Water Framework Directive and WEWS Act set specific objectives for the protection and improvement of water resources within each river basin.	• Water Framework Directive 2000/60/EC • Water Environment and Water Services (Scotland) Act 2003 (WEWS) Act • Scotland River Basin Management Plan (2009) • Flood Risk Management (Scotland) Act 2009

SEA Topic	Summary of Environmental Objectives	Legislation, Plan, Programme or Strategy
Air	Air quality targets have been set at the European and UK levels. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland sets objectives for Particulate Matter (PM), oxides of nitrogen (NOx), sulphur dioxide (SO_2) and ozone (O_3) amongst others. Good progress is being made towards meeting them.	• 2008/50/EC Directive on ambient air quality and cleaner air for Europe • The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007) • AQMA requirements where designated
Climatic factors	Policies focus on the need to cut greenhouse gas emissions. National targets are for an 80% reduction by 2050 making a contribution to climate change abatement targets set at the UK, EU and international levels. Energy policy highlights the importance of energy efficiency, and the need to achieve a shift from fossil fuels to renewable sources of energy. The importance of adequate, planned adaptation to future climates is noted in order to increase the resilience of communities, and natural and economic systems. In addition, policy recognises the importance of increasing public engagement and awareness through co-ordinated awareness programmes.	• UK Climate Change Act 2008 • Climate Change (Scotland) Act 2009 • Climate Change Delivery Plan (2009) • Climate Change Adaptation Framework (2009) • UK Low Carbon Transition Plan (2009) • Conserve and Save: Consultation on the Energy Efficiency Action Plan (2009) • Low Carbon Economic Strategy (Scotland), November 2010 • Draft Report on Proposals and Policies (Scotland), November 2010 • Public Engagement Strategy (Scotland), December 2010 • Energy Efficiency Action Plan (Scotland), October 2010 • Public Bodies Climate Change Duties: Putting Them into Practice (Scotland), Dec 2010 • Climate Change Declaration
Cultural heritage	Historic environment policies aim to identify and protect historic buildings and sites from inappropriate development and damage. Policies extend beyond specific designated sites to reflect the value of wider townscapes, the setting of monuments and historic buildings, and wider cultural landscapes.	• Scottish Historic Environment Policy (SHEP) 2009 • Scottish Planning Policy (SPP) • Managing Change in the Historic Environment Guidance Notes (consultation drafts) • Local Development Plan

SEA Topic	Summary of Environmental Objectives	Legislation, Plan, Programme or Strategy
Landscape	Landscape policies aim to not only safeguard protected areas, but to recognise and conserve wider landscapes. These may not be formally designated but make an important contribution to the quality of environment.	• Council of Europe, European Landscape Convention (2000) • SNH Landscape Policy Framework • SNH Wildness in Scotland's countryside • SNH Natural Heritage Futures • SNH National Scenic Areas Programme
Material assets (Waste and Resources)	The Zero Waste Plan sets out the policy and ambitious targets in this area. The aim is to move to a zero waste society with greater waste prevention in the first place, more reuse and recycling of wasted resources and limited waste going to landfill and/or waste treatment. A further focus is on capturing quality recyclates to return to the Scottish economy and reduce virgin extraction of new materials for manufacture. New infrastructure focused on recycling, composting and reprocessing will be required to meet the targets and achieve the vision of a zero waste society.	• Scottish Planning Policy • The Zero Waste Plan for Scotland • Environmental Act 1995 • Environmental Protection Act 1990 • Revised Waste Framework Directive 2008/98/EC • Landfill Directive (1999/31/EC) • Various Waste Management Regulations

Appendix C – Map of the Clackmannanshire Council Area

Appendix D – Scoping Report Consultation Reponses

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

Graeme Cunningham
Clackmannanshire Council
Environment Manager
Waste Services
Kilncraigs
Greenside Street
ALLOA
FK10 1EB

15 March 2012
Our ref: CNS/SEA/00640
Your ref: SEA00640

Dear Mr Cunningham

Environmental Assessment (Scotland) Act 2005
Clackmannanshire Council Zero Waste Strategy 2012 - 2022 – SEA Scoping Report

I refer to your consultation on the above SEA Scoping Report, received by us via the Scottish Government SEA Gateway on 29 February 2012. In our role as a Consultation Authority, in accordance with Section 15(2) of the Environmental Assessment (Scotland) Act 2005, we have reviewed the above Scoping Report. Our comments on the scope and level of detail to be included in the Environmental Report and on the duration of the proposed consultation period are set out below. More detailed comments are provided in the annex to this letter.

Scope of assessment and level of detail

Subject to the specific comments set out below and in the annex to this letter, we are content with the scope and level of detail proposed for the Environmental Report.

Please note that we have suggested that you consider providing:

- Information to support any conclusions about the overall impact of the Strategy on air omissions.
- Strategic level Habitat Regulations Appraisal (HRA) for the Firth of Forth Special Protection Area (SPA) in relation to the possible need to expand the Forthbank Recycling Centre; and
- Strategic level HRA for the Firth of Forth SPA and River Teith Special Area of Conservation (SAC) in relation to the Strategy possibly encouraging development of new Energy from Waste (EfW) facilities on the Forth.

Scottish Natural Heritage, Lothian's Area Office, Silvan House, 3rd Floor East, 231 Corstorphine Road, Edinburgh, EH12 7AT
Tel 0131 316 2600 Fax 0131 316 2690 email: forename.surname@snh.gov.uk www.snh.gov.uk

We are very happy to discuss the possible requirement for, and scope of, any HRA.

Consultation period for the environmental report

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

Concluding remarks

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

Yours sincerely

[By email]

Zoe Kemp
Operations Manager, Forth
zoe.kemp@snh.gov.uk

cc. sea.gateway@scotland.gsi.gov.uk
sea.gateway@snh.gov.uk
sea.gateway@sepa.org.uk
HSSEA.gateway@scotland.gsi.gov.uk.

Annex to letter

General approach

We are content with the general approach outlined in the Scoping Report.

Setting the context

We understand that the Strategy is intended to help your Council discharge its duties in relation to the Scottish Government's Zero Waste Plan (2010), and the forthcoming Zero Waste Regulations and Waste Prevention Plan. It will update and supersede the existing Forth Valley Area Waste Plan (published in 2003) and the Forth Valley Strategic Outline Case (published in 2006).

The overall aim of the Strategy is to reduce the impacts of waste management on the environment. We note that the focus is on all waste rather than just municipal waste.

The Strategy will identify policy objectives for waste, resource management and climate change, with the key objectives and actions to be agreed through a consultation process. It will aim to ensure that the Council's commitment to zero waste is fully integrated into all of its strategies, plans and programmes.

Significant issues

The Scoping Report indicates that the implementation of the Strategy has the potential for significant environmental effects but that these should mostly be positive. The Report indicates that these positive impacts include:

- A reduction in the overall air emissions due to the move away from landfill and residual waste treatment. The Strategy will aim to minimise the use of residual waste treatment facilities such as Energy from Waste (EfW) (*that have potentia to cause air pollution impacts*).
- Less waste going to landfill, which gives potential for beneficial projects related to restoration of waste management sites (*and presumably also gives less need for new areas to become landfill sites*).
- Reduced risk of water quality impacts arising from landfill sites – i.e. through a reduced risk of any contamination and leachate impacts.

These positive impacts are partially linked to the setting of higher recycling targets through the Strategy.

It would be helpful to have enough reasoning within the Environmental Report to support any conclusions about the overall impact on omissions. In relation to this we note that the Scoping Report highlights that it is difficult to predict whether the Strategy will encourage generation of new waste treatment infrastructure by the private sector, but that such private sector proposals might focus on residual waste treatment such as EfW processing. We suggest that this could be taken into account, as far as is possible, when considering conclusions about overall air quality impacts.

The Scoping Report highlights that this is not a site specific strategy and therefore landscape impacts are considered as generally being outside its control. However the Report also notes that there may be potential impacts on the landscape (*and visual amenity*) at certain sites where there is existing waste management

infrastructure. The Report indicates that generally these issues will be addressed through the Local Development Plan. The Strategy will provide a high level strategic direction regarding the continued future use of the Council's current waste management facilities, including Forthbank Recycling Centre, and indicates that this facility may be expanded to accommodate greater levels of recycling expected.

We accept that site specific impacts may be difficult to quantify, and therefore meaningfully assess at this stage. However you may consider that some strategic level appraisal is appropriate, for example in relation to landscape and visual impacts arising from expansion of the Forthbank Recycling Centre.

This proposal could possibly impact the Firth of Forth Special Protection Area (SPA). We advise that it will need to be determined whether the proposals for further expansion at Forthbank Recycling Centre are likely to have significant effects on the qualifying interests of the Firth of Forth SPA e.g. the internationally important wintering bird populations.

If it is concluded that there is a likely significant effect on the SPA, a Habitats Regulation Appraisal (HRA) in relation to expansion of this facility would be required. Information on this site can be found on our SiteLink website: http://gateway.snh.gov.uk/sitelink/index.jsp. The status of this site means that the requirements of either the Conservation (Natural Habitats, &c.) Regulations 1994 as amended, (the "Habitats Regulations") apply, or (for reserved matters), the Conservation of Habitats and Species Regulations 2010 as amended apply. See http://www.snh.gov.uk/docs/A423286.pdf for a summary of the legislative requirements.

Furthermore, we advise that you also consider the need for strategic level HRA related to any likelihood that the Strategy will encourage development of 'Energy from Waste' facilities close to the Forth. Such EfW facilities could impact for the Firth of Forth SPA and River Teith Special Area of Conservation (SAC) through, for example: (a) any associated thermal pollution (possibly affecting the migratory fish of the SAC, and intertidal invertebrate communities supporting bird populations of the SPA); or (b) increased air omissions (potentially affecting invertebrate communities supporting SPA bird populations).

Having said this, we recognise that the Scoping Report appears to suggest that the private sector demand, and therefore land-use requirements, for this is hard to predict. We would recommend this issue is addressed in combination with the emerging Local Development Plan and through land allocations within that policy framework.

We realise that it may not be easy to judge what might be appropriate in relation to the requirement for (and scope of) such strategic level HRA. We are very happy to discuss this and provide further advice.

If the HRA is undertaken in parallel with SEA, it is important that the findings of both appraisals are separately and clearly documented and that the record of the HRA uses the correct terminology, applying them appropriately. In practice, it is easier to set out the HRA in a separate record, and where appropriate provide a cross-reference to it in the Environmental Report.

Scottish Environment Protection Agency

Our ref: PCS118981/SB
SG ref: SEA00640/sco

If telephoning ask for:
Sofia Billett

Graeme Cunningham
Clackmannanshire Council
Environment Manager
Waste Services
Kilncraigs
Greenside Street
Alloa
FK10 1EB

By email only to: sea.gateway@scotland.gsi.gov.uk

13 March 2012

Dear Mr Cunningham

Environmental Assessment (Scotland) Act 2005
Clackmannanshire Council Zero Waste Strategy 2012 - 2022 - Scoping consultation

Thank you for your Scoping consultation submitted under the above Act in respect of the Clackmannanshire Council Zero Waste Strategy 2012 - 2022. This was received by SEPA via the Scottish Government SEA Gateway on 29 February 2012.

As required under Section 15(2) of the Act, we have considered the document submitted and comment as follows in respect of the scope and level of detail to be included in the Environmental Report. Generally, the scoping report provides clear and relevant information on the proposed scope and level of detail of the assessment and covers most of the aspects that we would wish to see addressed at this stage. Subject to the comments below, we are generally content with the scope and level of detail proposed for the Environmental Report. The Scottish SEA Toolkit (available for download at: www.scotland.gov.uk/Publications/2006/09/13104943/0) provides guidance to Responsible Authorities about the type of information that is expected to be provided at each SEA stage. We have used the toolkit to inform our detailed scoping response which is attached as Appendix 1.

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

Should you wish to discuss this scoping consultation, please do not hesitate to contact me on 0131 2737333 or via our SEA Gateway at sea.gateway@sepa.org.uk

Yours sincerely

Dr Sofia Billett
Senior Planning Officer (SEA)
Planning Service – Edinburgh

Edinburgh Office
Clearwater House, Heriot Watt Research Park
Avenue North, Riccarton, Edinburgh EH14 4AP
tel 0131 449 7296 fax 0131 449 7277
www.sepa.org.uk

Appendix 1: Comments on the Scoping consultation

General comments

1. Generally, the scoping report provides clear and relevant information on the proposed scope and level of detail of the assessment and covers most of the aspects that we would wish to see addressed at this stage. Subject to the comments below, we are generally content with the scope and level of detail proposed for the Environmental Report.

2. We provide some further detailed comments below in relation to baseline data that we hope you find helpful. For ease of reference our response follows the same structure of the scoping report.

3. In undertaking the environmental assessment you may also wish to refer to the SEA guidance on how to take account of air, water and soil available at www.seaguidance.org.uk and the guidance on how to take account of climate change in SEA available at www.scotland.gov.uk/Publications/2010/03/18102927/0.

4. As the environmental assessment is undertaken to inform the preparation of the Strategy, we would be pleased to assist in any way we can. Please do not hesitate to contact me to informally discuss any aspects of this response or, as you take the assessment forward, to discuss assessment findings.

Detailed comments

1. Context

5. We found the information provided in these sections useful in relation to the background to the Clackmannanshire Council Zero Waste Strategy. We note that the purpose of the Strategy is to update the Forth Valley Area Waste Plan, now superseded by the Zero Waste Plan. We welcome the preparation of the Clackmannanshire Zero Waste Strategy and its use in ensuring the Council's commitment to Zero Waste is fully integrated into all strategies, plans and programmes prepared by the Council. We also note the reference to the forthcoming Zero Waste Regulations which will have implications for the Council regarding the management of waste.

6. We note and welcome that the Strategy aims to support the delivery of the Council's public body duties required under the Climate Change (Scotland) Act 2009. The Strategy will identify policy objectives for waste, resource management and climate change with the key objectives to be agreed through the consultation process.

7. The relationship with other relevant Plans and Programmes is described in Section 1.1.4, with a full list of plans, programmes and strategies and a summary of their environmental objectives provided in Appendix C. We consider that generally the relevant PPS for the SEA topics within our remit have been considered in the scoping report. In addition you may wish to consider the Flood Risk Management (Scotland) Act 2009, which requires a more integrated and sustainable approach to flood risk management and prescribes a new responsibility for the Scottish Ministers, SEPA, Scottish Water and local authorities to exercise their flood risk related functions with a view to reducing overall flood risk.

8. As a minor correction to the terminology used, the water related policies listed in Appendix C aim to protect and improve the water environment and this includes all rivers, lochs, estuaries, coastal waters, artificial waters (such as canals and reservoirs) and groundwater. It also includes all the wetlands that depend on surface waters or groundwater for their water needs. You may also wish to consider this terminology in Table 2.

9. Section 1.2 provides a general overview of the environment and information relating to collection rates and methods of waste management within the Clackmannanshire Council area. You may also find useful to include information relating to the existing waste management facilities within Clackmannanshire Council's area such as location, type of facility and capacity. This could be included in the baseline section. If waste is transported outwith the boundary, then this section could also include information relating to where the waste is transported to and how it is treated.

10. The SEA could be used to provide important background information which will inform the assessment in a meaningful way and support the evaluation of how different options are likely to affect the waste management baseline and deliver targets. This background information could contribute to supporting decisions in the development of the strategy, such as planning for new facilities, for example as justification for requiring additional waste management facilities in the development plan. It could also be useful to support the

integration of the Zero Waste concept into other plans, programmes and strategies and may also be usefully used to support decisions at development management level.

11. Information relating to the existing waste management facilities in Clackmannanshire Council's area can be found in the SEPA Landfill sites and capacity information and the Waste Sites and Capacity Report for Scotland, with this information provided on a map basis in the SEPA Waste Infrastructure Maps. These reports and maps can be found on SEPA's website (www.sepa.org.uk/waste/waste_data/waste_site_information.aspx).

12. As a minor point, please note that BPEO relates to the Best Practicable Environmental Option rather than Best Practical Environmental Option (this is relevant for sections 1.1.2, 1.3 and 2.1).

13. We note that the assessment will make use of SEA objectives to ask specific questions of the Strategy's vision, aims and objectives to consider the likely environmental effects. We support the use of SEA objectives as assessment tools as they allow a systematic, rigorous and consistent framework with which to assess environmental effects. We provide detailed comments on these within each SEA topic.

14. We note that an assessment matrix (Table 1) will be used to report on the environmental effects of the Vision, aims and objectives and includes a comments column to describe how the assessment conclusions have been reached for each environmental topic and we welcome this. We would recommend that enough information and justification is provided in the Environmental Report to allow the Consultation Authorities to understand how the results of the assessment were reached.

15. Please note that the assessment should include the consideration of potential cumulative and synergistic effects and the potential short, medium, long-term, temporary or permanent nature of the effects and the potential for significant environmental effects should be clearly identified in the assessment matrix. We welcome the commitment to use the assessment process to inform the selection of the preferred options and enhance the environmental performance of the Strategy.

16. We note that mitigation measures will be suggested in order to address potential negative environmental effects and that mitigation may extend to recommending that an alternative is not selected as a preferred option and we support this approach. We consider that one of the most important ways to mitigate significant environmental effects identified through the assessment is to make changes to the plan itself so that significant effects are avoided. We also welcome the link between the assessment findings and the proposed changes to the plan or proposed mitigation measures as shown in the sample summary matrix.

17. We welcome the early consideration to a monitoring approach particularly the consideration of adequate monitoring indicators linked to the SEA objectives (Appendix B). We provide detailed comments on indicators within each SEA topic.

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

18. We note that it is considered that the Strategy has the potential to have significant environmental effects on the SEA topics within our remit and this is supported by appropriate justification. We are therefore content with the scoped of the assessment.

19. We welcome the detailed consideration of baseline issues and the likely future changes without the implementation of the plan. We are general content with the level of baseline detail provided. In addition to the issues identified, we provide some further comments below that we hope you find helpful.

Population and Human Health

20. We note the consideration of baseline data on air and Air Quality Management objectives within the SEA topic for "air". You may also wish to highlight the interrelationship between air quality and human health and the potential negative effects on human health from poor air quality (air quality objectives that are exceeded in the Air Quality Management Areas were introduced to protect human health). This poor air quality is likely to particularly affect vulnerable populations or populations with specific health problems.

Water

21. We welcome the detailed consideration of the pressures and impacts on the water environment and the acknowledgement of flooding issues within the Strategy area. In relation to the SEA objective, you may wish to align your draft SEA objective with the Water Framework Directive objective: to prevent deterioration and

enhance the ecological status of the water environment, and avoid any adverse effects of waste management activities. As stated above the term "water environment" includes more than just water courses.

22. Please note that the new Water Framework Directive (WFD) and River Basin Management Planning (RBMP) classification systems monitor the overall classification of ecological status of the water environment and this classification is made up of several different tiers which include the consideration of chemical, biological and hydromorphological parameters, and not just water quality. Therefore you may wish to extend the proposed indicators to monitor the ecological status of the water environment.

Material Assets- waste

23. We note that a table has been prepared with "Examples of Existing Resource Management Infrastructure within the Council's area" (Table 9). We would recommend that as part of environmental assessment process you consider all resource management infrastructure within the area, rather than just examples. This information can be found in the SEPA Landfill sites and capacity information and the Waste Sites and Capacity Report for Scotland. A complete list of all resource management infrastructure and the current methods of managing waste in the Clackmannanshire Council would enable the environmental impact of using/extending these facilities to be fully assessed.

24. It is not clear if the section on existing environmental issues- waste and resource management infrastructure refers to the existing environmental issues relating to Council collected waste only, or if all waste has been considered. The Zero Waste Plan requires local authorities to plan for the management of all waste and therefore, the SEA the Council's Zero Waste Strategy should assess the impacts of all waste.

25. Please note that the regional waste capacity requirements set out in the Zero Waste Plan, Annex B table 1 and 2, are for all wastes, not just Council collected waste. Therefore the estimated high level infrastructure need for Council's collected waste should be extended to high level infrastructure need for all waste. Planning only for municipal/Council collected waste does not deliver the aims of the Zero Waste Plan as this requires local authorities to plan for all waste types.

26. Please note that the delivery of more capacity than that identified as required in order to achieve the Zero Waste Plan targets should not be seen as an "over capacity". The Zero Waste Plan Annex B paragraph 4.5 states that "…these allocated capacities should not be treated as a limit…" and therefore should not be considered to be a barrier to additional facilities being built. The forthcoming Zero Waste Regulations will control the materials that can be disposed of at landfill and through energy from waste plants, through a series of bans and restrictions. These will ensure that the reuse and recycling of materials, along with the reduction of waste in the first place, will not be negatively affected by the planning, development or installation of waste management facilities.

Climatic Factors

27. We note that careful consideration has been given to the need to reduce emissions and ensure the Strategy contributes to climate change mitigation and we welcome this. You may also wish to consider the impact that the projected climate change itself could have on the Strategy (i.e. ensuring waste facilities are resilient to extreme weather events or are located away from areas more susceptible to the effects of climate change such areas prone to flooding or coastal areas, prone to coastal erosion or sea level rise). These may affect biological and industrial processes and damage critical infrastructure. You could consider an assessment question such as: will the option be affected by projected climate change?

28. You may also find it helpful to refer to the guidance on how to take account of climate change referred to above.

Summary of the proposed level of detail of assessment

29. We welcome the clear description of the aspects of the Strategy that will be subject to environmental assessment. We understand that the assessment will cover all aspects of the Strategy that are likely to have significant environmental effects including the Vision, Policy Objectives and Actions arising from the Main Issues and Policy Objectives, as well as reasonable alternatives.

30. We note that Actions will be delivered through a variety of other means including through other policy, plans and strategies and action plans, which may themselves be subject to SEA.

31. As you undertake the assessment, there may be effects that will be uncertain at strategic level as they will depend on implementation. You may wish to highlight this uncertainty and refer to the lower level plans that will be better placed to consider potential environmental effects in more detail.

3. Alternatives & Mitigation

32. We note the early consideration of potential alternative options for the strategy and we note that the preferred option is to achieve or exceed he targets set by the Zero Waste Plan.

33. It may also be possible to consider reasonable alternatives in relation to the Main Issues and resulting Policy objectives or actions to be contained in the Strategy and how these are worded. If any such reasonable alternatives are identified they should be assessed as part of the SEA process.

34. We note that mitigation measures will be proposed to address any significant environmental effects identified. As stated above, we support the approach to mitigation proposed in the scoping report. We would also welcome the consideration of opportunities for improvements within the assessment findings through enhancement actions.

35. The Environmental Report should clearly identify any changes made to the Strategy as a result of the environmental assessment and/or recommendations for changes. It would be useful for the Environmental Report to clearly set out how any detailed mitigation measures proposed are going to be delivered through the implementation of the plan, i.e. you may wish to describe some of the mechanisms that will ensure that the mitigation measures proposed in the SEA are implemented.

36. We consider that mitigation is a crucial part of SEA in that it offers an opportunity to not only address potential adverse effects of a plan, but also to make a plan even more positive than it already may be (enhancement measures). It would be extremely helpful to set out all mitigation measures proposed in a way that clearly identified: (1) the measures required, (2) when they would be required and (3) who will be required to implement them.

4. Next Steps

37. We note that the time period proposed for consultation on the Environmental Report and the Clackmannanshire Council Zero Waste Strategy Main Issues Paper is 6 weeks and we are content with this consultation period.

38. We welcome proposals to provide a summary record of the scoping outcomes, including the comments from the Consultation Authorities.

HISTORIC SCOTLAND ALBA AOSMHOR

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Our ref: AMN/23/183 AS
Our case ID: 201107277

15 March 2012

Dear Mr Cunningham

Environmental Assessment (Scotland) Act 2005
Clackmannanshire Council – Zero Waste Strategy
Scoping Report

Thank you for consulting Historic Scotland on the scoping report for the environmental assessment of Clackmannanshire Council's Zero Waste Strategy. This was received by the Scottish Government's SEA Gateway on 29 February 2012. I have reviewed the scoping report on behalf of Historic Scotland in its role as a Consultation Authority under the above Act. This letter contains the views of Historic Scotland on the scope and level of detail of the information to be included in the Environmental Report. Please note that our view is based on our main area of interest for the historic environment.

It is my understanding that the Zero Waste Strategy will identify policy objectives for waste, resource management and climate change, in order to help deliver the Scottish Government's National Waste Management Plan, *Scotland's Zero Waste Plan*. Clackmannanshire Council's Zero Waste Strategy will be a high level strategy identifying main issues and policy objectives, and a series of actions arising from these. I note that you have scoped cultural heritage out of the environmental assessment because the strategy is not site specific, and so you do not expect significant impacts on the historic environment. On the basis of this and other information contained within the scoping report, I agree that significant effects are unlikely, and am content that the historic environment is scoped out.

None of the information in this letter should be construed as constituting a legal interpretation of the requirements of the SEA Act. It is intended rather as helpful advice, as part of Historic Scotland's commitment to capacity building in SEA. If you wish to discuss this response, please do not hesitate to contact me on the above details.

Yours sincerely

Andrew Stevenson
Senior Heritage Management Officer (SEA)
Historic Scotland

www.historic-scotland.gov.uk

SNH Comment (as per headings in SNH response)	Response
Scope of Assessment and level of detail	Noted
Consultation period	Noted
Concluding Remarks	Noted
General Approach	Noted
Setting the context	Noted
Significant Issues	Where possible at this strategic level an assessment of the likely air impacts has been provided with explanations. As recommended a Habitats Regulation Appraisal (HRA) has been provided as Appendix F, which includes mitigation measures for any expansion of the Forthbank Recycling Centre. In addition to this a more detailed analysis of waste infrastructure impacts is proposed as part of a policy criteria or screening process developed in the Local Development Plan, in order to address the Zero Waste Plans Appendix B requirements. This may be subject to a further HRA and any development proposals coming forward in the future will also be subject to project level Environmental Impact Assessment (EIA).

SEPA Comment (as numbered in SEPA response)	Response
Detailed Comments	
5	Noted.
6	Noted.
7	The Flood Risk Management (Scotland) Act 2009 has been added to the list of relevant plans and programmes
8	Altered definition of the water environment incorporated into Appendix E.
9	Extra information on the existing waste management facilities has been added and an indication of infrastructure provided in the Appendix G map.
10	Noted
11	Noted.
12	Noted – change to BPEO terminology made.
13	Noted
14	Noted
15	Noted and the assessment matrix format has been altered to encompass a wider range of impacts and their explanation.
16	Noted
17	Noted
18	Noted
19	Noted
20	Addition of comments to note interrelationship between air quality and human health added to Appendix E.
21	Noted and SEA objective has been aligned to Water Framework Objective in the Main body of the Environment Report and in Appendix E.

22	Noted – Ecological status included within monitoring framework.
23	Noted and additional information and a web link has been provided in Appendix E.
24	Noted and additional information and explanation added to clarify.
25	Noted and reference to ZWP Appendix B waste infrastructure estimates have been included.
26	Noted but the reference here in the Scoping report is to the real potential for overcapacity in residual waste treatment facilities in the long term, such as Energy from Waste Plants (EfWs) in an essentially commercial market place. The proposed planning and Zero Waste Regulation controls will not control the risk of overcapacity being developed in relation to future targets. Such overcapacity in this type of facility could hinder further achievement of recycling targets or require the import of refuse derived fuel from other countries to meet annual capacity needs. This phenomenon is currently being experienced in countries with well developed EfW infrastructure, for example in the Netherlands. This reference has been reworded to be more clearly defined in the Environmental Report within Appendix E.
27	Noted and accepted that consideration needs to be given to climate change impacts on infrastructure, such as the increased risk of flooding. However it is considered better to include this as a risk assessment in the final strategy document, or in the actions proposed for site selection in the Local Development Plan, as there is little site based information included as this stage in the process to make a determination upon.
28	Noted.
29	Noted
30	Noted
31	Noted and where relevant more detailed following plans have been referenced to with respect to resolving uncertainty.
32	Noted
33	Noted and the Zero Waste Plan and forthcoming Zero Waste Regulations, in conjunction with the revised Waste Framework Directive set a framework with limited room for alternative options. The most realistic alternative scenario option has been included in the assessment.
34	Noted
35	Noted and the mitigation measures proposed are going to be implemented via an Action within the final strategy document and/or the suitable site screening/policy criteria process developed in the Local Development Plan. In practice any mitigation measures will be discussed with the SNH area Officer in advance of any development.
36	This information is summarised in the Assessment in Section 4.
37	Noted
38	Noted

HS Comment	**Response**
Scoping Out of Cultural Heritage	Response Noted

Appendix E - Relevant Aspects of the Current State of the Environment

Relevant Aspects of the Current State of the Environment

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

1 Biodiversity, Flora and Fauna

Existing Environmental Characteristics

Clackmannanshire has a diverse range of valued habitats and species with a series of designated sites. Clackmannanshire contains 9 SSSIs and includes a number of protected areas, including the internationally protected Firth of Forth SPA, Ramsar and SSSI. Approximately 249 hectares of Clackmannanshire are within the Firth of Forth Special Protection Area (SPA) and Ramsar Site. The area was designated primarily for the protection of migratory bird species visiting the Forth Estuary.

Clackmannanshire's woodland accounts for 2446 ha or 16.2% of the total land area of the county, which is a significant proportion in comparison with national averages. Plantation conifer woodlands of pine, mixed spruce and larch account for 36% of the total wooded area. The remaining 1564 ha consists of a range of broadleaved woodland types. Broadleaved woods cover 9.6% of the total land area, which is much higher than the Scottish average of 4.5% and therefore represents an important habitat for the district. The majority of the broadleaved woods (1,091ha or 69.8%) consist of recent broadleaved or mixed plantations. Of the remaining semi-natural woodland resource, only 197ha (12.6%) are long established woodlands, with a tiny proportion (38ha or 2.4%) of ancient woodlands.

There are important fisheries on the Devon for brown trout and salmon, which is protected under Annex II of the EC Species and Habitats Directive. The three British species of lamprey are also covered by the latter piece of legislation, and all are known from the Forth catchment.

Important habitats also include lowland raised bog which is a nationally scarce resource.

Existing Environmental Issues

The main implications of future development in the wider geographical area relate to impacts on the water environment of the Firth of Forth, and habitat connectivity through the woodlands to the east of the area.

The decline of biodiversity and associated habitats is a key issue for Clackmannanshire, particularly through development pressure, land management practices and intensification of farming. Significant habitat losses have occurred in relation to native woodlands, species rich grassland and hedgerows. There is a need to increase awareness and understanding of these natural heritage interests.

There is a need to improve the natural heritage of farmed land to improve biodiversity, increase landscape diversity and expand the protection and enhancement of designated areas, and important habitats including protection of ancient woodland.

Likely Future Changes Without the Implementation of the Plan

The CCZWS supports the protection of valued habitats, species and designated sites of biodiversity value through action to reduce climate change emissions and virgin material extraction;

however, it does not directly protect them or directly deliver actions that contribute to biodiversity which will be led through the Biodiversity Action Plan and Local Development Plan.

The Strategy will provide high level strategic direction regarding the continued future use of the Council's current waste management facilities, including Forthbank Recycling Centre. At this stage it is considered that this may include the further expansion of the current Recycling Centre facility on the site to accommodate greater levels of recycling expected as the 70% Zero Waste Plan target for recycling is achieved.

SEA Objectives and Assessment Questions

Table 1: Biodiversity, Flora and Fauna – SEA Objectives and Proposed Indicators.

SEA Objective	SEA Question	Proposed Indicator
• Ensure the maintenance or (where possible) enhancement of biodiversity, and avoid damage to designated wildlife sites and protected species from waste management activities.	• Is the option likely to cause unavoidable impacts on biodiversity? • Does the option impact on designated sites and protected species? • Does the option offer opportunities for habitat creation or species development?	• Reported condition of locally and nationally important wildlife sites. • Achievement of Local Biodiversity Action Plan targets.

2 Population and Human Health

Existing Environmental Characteristics

Clackmannanshire is 15,809ha in area, with population density over four times higher than the Scottish average (308 persons per square km for Clackmannanshire: 66 persons per sq km for Scotland). The main employment area in Clackmannanshire is in services such as public administration, Education, Health and other services, with this sector covering approximately 43% of jobs, significantly higher than the national figures (36%). Other major sources of employment are in the areas of retail, wholesale and hotels, manufacturing, finance and business, construction and transport. Clackmannanshire has significantly lower figures than the national average for jobs in finance and business, and in energy and water, but is above in the areas of manufacturing and construction.

Health trends and life expectancy are typically in line with the rest of Scotland. However in relation to deprivation, Clackmannanshire Community Health Partnership has a significantly worse (higher) than average percentage of people living in the 15% 'most deprived' areas of Scotland. This is reflected in the education, employment & prosperity indicators, with the area rating significantly worse than the Scotland average on a number of these.

Existing Environmental Issues

Clackmannanshire has slightly lower levels of employment than the Scotland average. There is a higher than average percentage of adults claiming incapacity benefit or severe disability allowance. Although there is no divergence from the Scotland average for all indicators in the ill health and injury domain, expected years of life in good health are significantly worse than the Scotland averages for men and women.

Actions to promote access to employment, health improvement and urban renewal are required to address these issues.

Likely Future Changes Without the Implementation of the Plan

The Zero Waste Strategy supports a healthy population through the sustainable management of waste materials and developing the opportunities for further employment from the high value use of such materials. The strategy focuses on the achievement of higher rates of recycling and material reprocessing which will help to reduce the emissions from landfill and other residual treatment processes. However, it does not directly protect the population or directly deliver actions that contribute to population and health.

SEA Objectives and Assessment Questions

Table 2: Population and Human Health – SEA Objectives and Assessment Questions

SEA Objective	SEA Question	Proposed Indicator
• To protect the health of residents from detrimental effects of waste and resource management activities, e.g. noise, traffic impacts, dust, littering, odour and particulates.	• Does the option increase levels of noise, odour, dust, particulates, or traffic? • Will the option, when added to other potential health factors cumulatively impact on human health?	• Years of healthy life expectancy / infant mortality rate.
• To protect community safety and wellbeing from waste related anti social behaviour such as littering and flytipping.	• Does the option adversely impact on litter and fly tipping?	• Litter (LEAMS) and flytipping statistics (SEPA & Council).

3 Soil

Existing Environmental Characteristics

Clackmannanshire holds approximately 1% of the total vacant and derelict land by area, as a percentage of total vacant/derelict land recorded in Scotland. The low lying agricultural landscapes of Clackmannanshire are productive farmland, and the high population density of the area puts pressure on the available land resource.

Existing Environmental Issues

The total area of vacant and derelict land in Clackmannanshire has increased between 2002 and 2007, and at 45ha comprises 0.28% of the land area, which is above the Scottish average of 0.10%. The overall aim should be to seek to ensure a balance in the use of vacant and derelict land in the site options identified for future development.

Other problems include Scotland-wide issues of erosion, and climate change affecting the organic content of soils.

Likely Future Changes without the Implementation of the Plan

The CCZWS supports the improvement and restoration of soil conditions across the Council area through the composting of organic waste to provide a valuable soil conditioner. However, the Strategy does not directly influence soil management; strategies such as Clackmannanshire Council's Contaminated Land Inspection Strategy and the Local Development Plan will have a more prominent role in this area.

SEA Objectives and Assessment Questions

Table 3: Soil – Draft SEA Objectives and Assessment Questions

Draft SEA Objectives	Draft Assessment Questions	Proposed Indicator
• To ensure that soil protection is taken into account with regard to waste management activities and as far as possible prevent the contamination of land.	• Does the option encourage the reduction of soil contamination? • Does the option protect soil quality and quantity (including carbon rich and rare soils)? • Does the option provide more compost material to assist soil enhancement?	• Contaminated land statistics • Annual tonnage of PAS100/110 grade organic material reprocessed from organic waste.

4 Water

Existing Environmental Characteristics

Clackmannanshire is relatively poorly served by open water, with Gartmorn Dam the single largest area of open water. Clackmannanshire Council manages Gartmorn Dam as part of the Gartmorn Dam Country Park. The River Devon and the River Black Devon are the principle rivers in the area. The River Devon rises in the Ochil Hills to the north of the area and flows east to west. The catchment comprises a mountainous upper catchment and a lower floodplain. The River Black Devon flows from east to west through the northern edge of Clackmannan. It rises as a series of small tributaries in low lying hills to the east and outwith the Council area.

Water quality within Clackmannanshire, based on 2007 data from SEPA identifies generally good water quality within rivers to the north and west of Clackmannan with moderate quality on the River Black Devon to the east around Forestmill and south of Clackmannan. The water quality in the Forth Estuary is classified as unsatisfactory from Alloa to east of Stirling, however the Forth Estuary is not expected to achieve class A because of its inherently turbid nature and the large number of industrial and domestic discharges it receives.

SEPA indicative flood map for Scotland identifies areas at potential risk of flooding from rivers and the sea. This does not take into account all flood defences which may be in place, however it provides an indication of areas at risk. Low lying areas adjacent to the River Forth are potentially at risk from flooding along the estuary. There is also flood risk associated with the course of the River Devon, the River Black Devon, and the outflow from Gartmorn Dam.

Existing Environmental Issues

Clackmannanshire has a limited quantity of open water but includes the main river catchments of the River Devon, River Black Devon and River Forth. Water quality is good in the River Devon and moderate in the River Black Devon. The Estuarine water quality is unsatisfactory in the upper reaches of the Forth. This reflects the industrial and domestic discharges to the river.

There is potential flood risk associated with the River Devon, River Black Devon and River Forth. There is a need to allow freshwater systems to function naturally wherever possible. Further protection and enhancement of water quality is required and avoidance of flood risk areas and areas which would contribute to increased flood risk in new development.

Likely Future Changes without the Implementation of the Plan

The CCZWS will not directly impact on water quality or flood related issues. However waste management activities may cause runoff from various types of site and also landfill site leachate has the potential to adversely impact water quality. There is also the potential for beneficial projects related to waste management sites, for example the wetland and managed retreat project formed from the former Black Devon landfill site restoration and capping process.

SEA Objectives and Assessment Questions

Table 4: Water – Draft SEA Objectives and Assessment Questions

Draft SEA Objectives	Draft Assessment Questions	Proposed Indicators
• To prevent deterioration, and enhance the ecological status of the water environment, and avoid any adverse affects of waste management activities.	• Does the option impact on the levels of contamination in surface or groundwater? • Does the option impact on the quality or quantity of water courses and wetlands?	• Surface Water Quality - SEPA • Ground Water Quality – SEPA • Ecological Status - SEPA

5 Air

Existing Environmental Characteristics

The main source of air pollution in Clackmannanshire is traffic. In Clackmannanshire there is only industrial activity within Alloa with the majority of the county being rural in nature. There are currently no declared Air Quality Management Areas in Clackmannanshire. Trends in road traffic show an overall increasing quantity of vehicles on the road, within Clackmannanshire. Roads which experienced the greatest change (>5%) in traffic counts between 2006 and 2007 include the A907 at Blackgrange, at Fairfield on the B908 north of Alloa, the B9140 at Muirside north of Tullibody and the Tullibody bypass. The reopening of the passenger railway between Stirling and Alloa in June 2008 has increased the opportunities for sustainable travel within Clackmannanshire which may be beneficial in reducing road traffic..

Existing Environmental Issues

Nitrogen dioxide emissions are currently below the concentrations identified as air quality objectives for Scotland by 2010. However levels at some monitoring locations are closer to the air quality objective levels and the implications of increased traffic on these roads should be carefully considered in any assessment.

PM10s are emitted through combustion, and road traffic is a contributor to this. Monitoring within Clackmannanshire has identified that PM10 levels may exceed air quality objectives for Scotland. Sustainable transport will be a key issue for the Local Development Plan.

Air quality objectives are designed to set limits to protect human health and so are linked to the previous topic on Population and Human Health.

Likely Future Changes without the Implementation of the Plan

While the CCZWS promotes the general reduction of pollutants, and supports air quality improvements thorough resource efficiency, its direct influence on the subject is generally limited. Air quality issues are generally dealt with through Air Quality Reports for specific geographical areas, through Environmental Health monitoring.

One area where the CCZWS may have a direct impact is through promotion of recycling, composting and waste prevention as a priority over the treatment of non – recyclable (residual) waste. It is therefore likely to support the development of organic reprocessing technologies such as Windrow & In-Vessel (IVC) composting, and Anaerobic Digestion (AD). It will also support the reprocessing of recycled material via high quality Material Recovery Facilities (MRFs) and other reprocessing technologies. It will aim to minimise the use of residual waste treatment facilities such as EfW, MBT and also Landfill sites in line with the Zero Waste Plan targets. The overall effect of this is likely to reduce the overall emissions to air.

An increase in recycling collections may have the potential to increase vehicle movements, however the proposed approach in the CCZWS is to optimise collections reducing the risk of further increases in vehicles movements.

Without the Strategy there is an increased risk of higher levels of landfill and the development of an overcapacity of residual waste treatment facilities which could potentially damage air quality further.

SEA Objectives and Assessment Questions

Table 5: Air – Draft SEA Objectives and Assessment Questions

Draft SEA Objectives	Draft Assessment Questions	Proposed Indicator
• Keep air pollution below Local Air Quality Management thresholds. • Minimise the adverse impacts of waste management facilities on air quality. • Minimise the amount of vehicle related emission associated with waste management activities.	• Will the option potentially lead to Local Air Quality Management thresholds to be breached? • Does the option minimise the air quality impact of waste management facilities and processes? • Does the option impact on vehicle emissions?	• Air pollution levels measured by Environmental Health • GHG emissions from Council's vehicle fleet

6 Material Assets

Waste and Resource Management Infrastructure

Significant progress has been made in recent years with regard to waste management in Clackmannanshire and the Council has consistently been one of the top performing in this area.
.
The Council has a range of its own recycling infrastructure, such as the Forthbank Recycling Centre and also a partnership with Stirling Council at their Waste Transfer and Composting site at Polmaise in Stirling. There are also a range of private sector facilities within the Council's area and also in other adjacent Council areas. Examples of facilities located within the Council's boundaries or shared with other local authorities are shown in Table 6 below. A more comprehensive summary of waste facility information of this type can be found on SEPA's website under the Waste Data section (www.sepa.org.uk/waste/waste_data/waste_site_information.aspx). Appendix G shows a map of facilities from SEPA's information.

Table 6 – Examples of Existing Resource Management Infrastructure within the Council's area or shared with other local authorities

Facility Type	Examples	Level of importance
Reprocessing Facilities	o Stirling & Clackmannanshire Council – Windrow Composting Site, Polmaise, Stirling.* o Plastics Reprocessing, Avanti Scotland, Alva. o Glass Remelt, United Glass (OI Manufacturing), Alloa.	o Local o Regional & National o National & UK
High Quality Recycling Sort	o Aluminium cans bulk collection point, ACE, Alloa. o Plastics, Oran Environmental Solutions, Kilbagie & Grangemouth.	o National o Regional
Recycling Collection & Transfer	o Forthbank Recycling Centre, Alloa. o Polmaise Transfer Station, Stirling.*	o Local o Local

* This is site is located in Stirling Council area but is a shared site.

The move to a Zero Waste Society proposed in the strategy will require a range of infrastructure and facilities appropriate to the task. However the current infrastructure, regionally, and across Scotland is generally focused on landfill disposal and on levels of recycling & composting lower than we can expect from achieving the Zero Waste targets. As more and more recyclate material is returned to use within the economy there will be a greater need for the expansion of reprocessing facilities, high quality recyclate sorting & bulking facilities, and non-recyclable waste treatment facilities. There will be a corresponding reduction in the need for landfill sites.

Existing Environmental Issues

The Scottish Government have begun to quantify the change required with some early forecasts of the changing need for resource management facilities provided by SEPA in Appendix B to the Zero Waste Plan.[7] These forecasts are currently based on the old Area Waste Plan boundaries (Falkirk. Clackmannanshire and Stirling Council areas) and all waste, and are likely to be updated periodically. The Appendix B information does not include reprocessing capacities, only landfill, residual waste treatment and recyclate sorting facilities.

Estimated high level infrastructure need for the Council's collected waste in 2025, based on current levels of total waste arising, are:

- 70% Recycling/Composting - 21,958tpa
- 30% Non-recyclable Waste Treatment - 9,410tpa
- 5% landfill of residual material (after Treatment) –1,568tpa.

There is currently a 10 year landfill supply and also a 200,000 tpa MBT facility under construction in the adjacent Falkirk Council area. It therefore appears that the Council's future infrastructure requirements for Landfill and Non-recyclable Waste Treatment may already be met in an adjacent Council area based on these estimates. The necessary infrastructure for recycling and reprocessing is less certain and therefore the Council's priorities must be focused on securing sufficient facilities for these higher value processes.

[7] Obtainable via the SG website http://www.scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/wastestrategy/annexb/table

There are no landfill sites within the area licensed to accept non-inert waste. A new facility has planning permission at Muirpark, Tullibody which will provide sufficient inert capacity to serve the area for a number of years, however in the longer term the expectation is that the vast majority of inert material will be reprocessed for new uses in line with the national targets.

However a key concern for the future is the new infrastructure generated by the private sector. There is a risk that this may focus primarily upon non-recyclable (residual) waste treatment, such as Energy from Waste (EfW), rather than on the higher value recycling processes that will be required to meet the Council's Zero Waste obligations.

Likely Future Changes without the Implementation of the Plan

The CCZWS will aim to ensure greater use of recycled material in developments and develop the right mixture of waste management facilities. At a high level the Strategy should raise awareness amongst decision makers of the infrastructure needed and steer & encourage investment primarily in reprocessing, high quality sorting, and recycling/composting infrastructure; this will help to inform the Local Development Plan This should also include encouraging businesses to take back material they have a Producer Responsibility for.

Overall the Strategy will seek to minimise need for infrastructure through supporting action on waste prevention, Producer Responsibility, Reuse, and Deposit and Return Schemes. A key aim will also be to continue the Self Sufficiency & Proximity Principles from the previous waste plans and so achieve the targets firstly with internal Council services & resources and then seek to use other external providers, located nearby, for assistance where required.

Overall, without the Strategy, the infrastructure around waste and resource management is more likely to develop overcapacity in the disposal and residual waste treatment areas of the Waste Hierarchy with correspondingly greater environmental impacts.

The higher value of materials treated through recycling and reprocessing facilities will ensure greater economic benefit to communities and a key focus for the future will be too capture that economic benefit for the Council area. However this change in infrastructure may also increase local GHG emissions as reprocessing and production emissions are counted locally rather than being ignored as when they occurred somewhere outside the Council area.

SEA Objectives and Assessment Questions

Table 7: Material Assets – Draft SEA Objectives and Assessment Questions

Draft SEA Objectives	Draft Assessment Questions	Proposed Indicator
• To minimise the total waste arising through waste prevention, producer responsibility, reuse, and deposit & return schemes • To collect and/or treat waste materials at the nearest and most appropriate locations. • To support the development of reprocessing and sorting facilities in the area.	• Does the option encourage waste reduction and reuse in the Council area? • Does the option encourage the efficient use of existing and local waste management facilities? • Does the option encourage greater use of recycling and reprocessing capacity and adequate levels of waste treatment?	• Total Waste Arising (SEPA WDF Data) • Waste Composition Data (periodic studies) • Recycling/Composting and Recovery rates (SEPA WDF data) • ZWP Appendix B Waste Infrastructure Capacity needs (SEPA)

7 Climatic Factors

Existing Environmental Characteristics

Predicted climate change impacts indicate an increasing trend in maximum and minimum temperatures, a decrease in the length of winter cold spells and occurrence of air and ground frost,

an upward trend in the days of heavy rain each year and in the average rainfall intensity. This has implications for identifying and mitigating future flood risk.

The Local Climate Impacts Profile for Clackmannanshire was undertaken in conjunction with the Scottish Climate Change Impacts Partnership in 2009. The key research findings are that between 2000 and 2009, Clackmannanshire experienced 38 extreme weather events with heavy rainfall/flooding being the most significant event type (55%). While the number of events varies by year, the research showed that there has been a clear upward trend over the past decade. The findings of this study will inform the development of a Climate Change Adaptation Framework, which will focus on how the area's resilience to weather-related events can be improved.

Existing Environmental Issues

Climate change could have many different impacts on the environment including water resources, flooding, biodiversity, population and health and wellbeing. Detailed information on the impacts of climate change is not currently available for Clackmannanshire, however issues such as flooding and landslips are likely to result.

The installation of renewable energy technologies across the Council area so far is limited. Regeneration of brownfield sites does not always make best use of existing buildings, with the preferred approach of demolition followed by new build. This can have the effect of increasing the imbedded use of carbon dioxide and other GHGs in the construction process.

Likely Future Changes without the Implementation of the Plan

One of the Strategy's roles is to address the climate change impacts of waste and resource use across the Council area. It will achieve this through a range of means including:

- Ensure that Zero Waste Plan targets are adopted into new policy and where required services take action to meet the targets for waste prevention, higher recycling and reduced levels of non recycled waste; for example designing out waste in construction projects.
- Using the Scottish Governments Carbon Metric to focus on the collection and reprocessing of materials with the highest embedded carbon value.
- Reducing the amount of BMW going to landfill yet further through introducing food waste collections.

If the Strategy were not implemented, Council operations would be more likely to fail to take greenhouse gas emissions into consideration and therefore generate higher levels of GHGs further contributing to the impacts of climate change.

SEA Objectives and Assessment Questions

Table 8: Climatic Factors – Draft SEA Objectives and Assessment Questions

Draft SEA Objectives	Draft Assessment Questions	Proposed Indicator
• Reduce greenhouse gas emissions from waste management activities.	• Does the option reduce emissions from landfill sites? • Does the option reduce the emissions from transport and operational activities related to waste and resource management? • Does the option ensure materials with a high carbon metric value are prioritised?	• GHG emissions from Council activities • Recycling rate measured by Carbon Metric • Total Waste Arising and Waste Landfilled

8 Cultural Heritage

Existing Environmental Characteristics

Clackmannanshire has a rich cultural history, with visible signs across the county. There are 17 Scheduled Ancient Monuments within Clackmannanshire, which include a tombstone, a cairn, Castle Campbell and Clackmannan Stone, amongst others. There is one Historic Garden and a Designed Landscape at Castle Campbell, 301 listed buildings and seven conservation areas.

Existing Environmental Issues

Clackmannanshire has a rich cultural heritage with a number of Scheduled Monuments, listed buildings and conservation areas. In addition non designated sites contribute to the wider cultural heritage resource. These resources contribute positively to the landscape and townscape of the area and provide visible connections to the industrial heritage of the area.

The Local Development Plan should support the protection and enhancement of the cultural heritage resource through consideration of the locations and impacts of development on specific resources and the wider historic environment.

Likely Future Changes without the Implementation of the Plan

The CCZWS is likely to have little or no impact on cultural heritage. This will be led primarily through the Council's Local Development Plan. Consequently no SEA objectives or assessment questions are proposed.

9 Landscape

Existing Environmental Characteristics

Clackmannanshire is broadly characterised as rural in terms of landscape and settlement pattern, but with the bulk of the population, employment and development activity concentrated in a small number of the larger urban communities in the Core Area. Agriculture is the most extensive land use within the area and is very diverse, reflecting the area's varied topography, climate and soils. Forestry is the other major land use. There are two designated AGLVs within Clackmannanshire which include the Ochil Hills to the north and The Forest to the east.

Clackmannanshire is distinguished by the contrast between the high ground of the Ochil Hills and the flat carselands of the Devon and Forth Valleys. The principal areas of Green Belt in Clackmannanshire are between Alloa and Clackmannan, Tullibody and along the Hillfoots

Existing Environmental Issues

Meandering watercourses, hedgerows and field trees, policy influences and the importance of views to the Ochil Hills are landscape features which are threatened by settlement expansion, transport and infrastructure. Two AGLV extend across the area.

Clackmannanshire has a high level of developed land and there is a need to safeguard and enhance the settings of its towns and villages.

Likely Future Changes Without the Implementation of the Plan

The CCZWS is unlikely to directly affect landscape issues. The strategy will, however, at a high level consider the role of renewable energy technologies on existing waste management sites and so there may be a potential indirect impact at individual sites.

SEA Objectives and Assessment Questions

Table 9: Landscape – Draft SEA Objectives and Assessment Questions

Draft SEA Objectives	Draft Assessment Questions	Proposed Indicator
• Ensure that new development does not exceed the capacity of the landscape to accommodate it and does not cause adverse visual impacts.	• Does the option protect and enhance the distinctive character of the landscape? • Does the option avoid adverse impacts?	• To be determined.

APPENDIX F – Habitats Regulation Appraisal Record

This appendix provides a Habitats Regulations Appraisal (HRA) Record for the Clackmannanshire Council Zero Waste Strategy. The basis for an appraisal, as suggested by the SEA Scoping response from SNH (see Appendix D), is the potential expansion of Clackmannanshire Council's Forthbank Recycling Centre in the future and the potential for the private sector to propose Energy from Waste (EfW) facilities located on or around the Firth of Forth SPA in the future, or affecting the River Teith SAC Natura site. Both of these issues are appraised as follows:

Energy from Waste (EfW) facilities – screened out
The Main Issues Paper (MIP) for the Strategy does not suggest an EfW plant in the Council area nor does it encourage EfW. In fact the focus of attracting resource management infrastructure development to the Council area in the MIP, and subsequent Strategy (subject of course to consultation responses received), is based on recycling and reprocessing opportunities in line with the Zero Waste ethos. These potential developments would be located in existing industrial areas however neither the MIP nor the Strategy will contain any site specific information. It is therefore felt to be not appropriate to undertake a screening exercise based on the Zero Waste Strategy or the MIP.

However the MIP is proposing as an Action flowing from the Zero Waste Strategy that a more extensive screening process, or a set of policy criteria, is developed for the Local Development Plan (LDP) so that it can better accommodate SEPA's regional infrastructure capacities contained in Appendix B (of the Scottish Zero Waste Plan). This screening process, or set of policy criteria, would be used to pre-screen LDP industrial sites based on their potential use for resource management infrastructure and any given potential treatment/reprocessing technology, including the potential for EfW. The starting point for a list of sites for the screening/policy criteria would be existing industrial areas and existing waste management sites. This process appears to be a better fit for an HRA since a range of factors will require to be considered at this juncture. In addition to this process any development proposals coming forward in the future would also be subject to an Environmental Impact Assessment (EIA) at a project level, where an HRA should also be considered.

Upgrading/Expansion of Recycling Centres indicated in MIP – mitigation measures
The impact of any expansion of the current Recycling Centre Operations at Forthbank and also Kinneil Kerse (Falkirk Council) are likely to be insignificant in nature. The Zero Waste Plan target is for 70% recycling by 2025 and both Council's, for their collected waste, are currently recycling around 50%. The existing sites are coping with 50% and have the option to adjust the timing and frequency of recyclate collections to manage greater volumes. However what is likely to happen is that the range of materials they collect may expand i.e. as new technology provides the opportunity to recycle more waste streams there may be a need for new collection containers and the construction of additional concrete hard standing to accommodate these. There is also a possibility that there will be some kind of reuse collection and pre-sorting added. If this is developed in the future it is likely to take the form of a building at the site entrances, again requiring additional hard standing areas. Neither of these changes are expected to expand the footprint of the sites significantly over the coming years and any impacts are likely to be short term construction impacts.

Therefore it is proposed that these impacts are addressed by appropriate mitigation measures such as:

- Phasing or timing of any upgrading/expansion works so that its possible effects can be adequately managed over time;
- Requiring appropriate buffer zones to be put in place.

APPENDIX G – SEPA's map of licensed waste management facilities