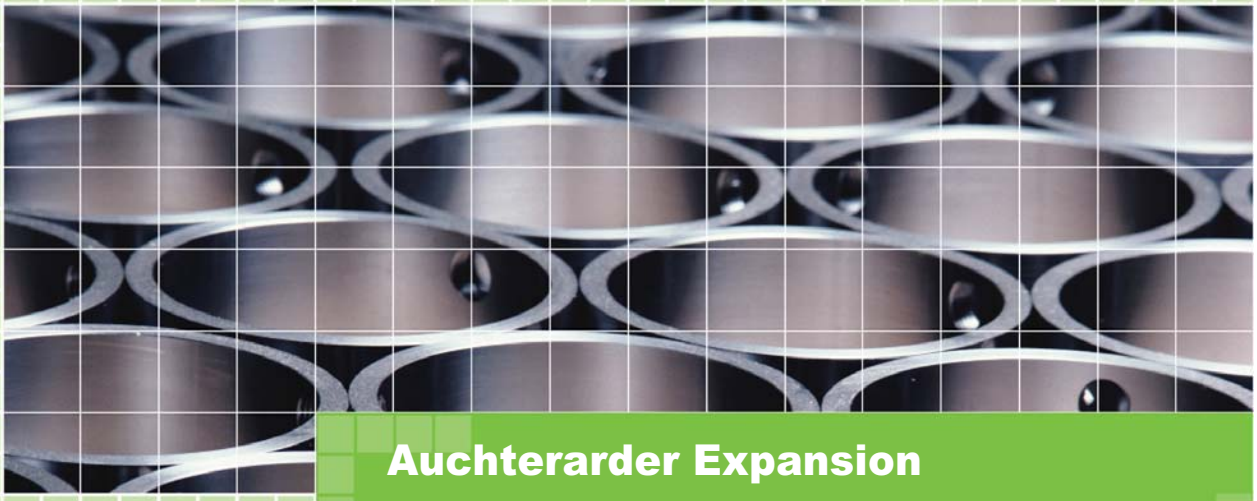

Auchterarder Expansion Development Framework: SEA Environmental Report

Perth and Kinross Council

August 2007

WSP

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Contents

Non-Technical Summary

Introduction

This document is the Non Technical Summary of the Environmental Report which has been prepared on behalf of Perth and Kinross Council following the Strategic Environmental Assessment (SEA) undertaken on the draft Auchterarder Development Framework.

The SEA falls under the requirements of the Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004 since the first formal preparatory act on the Development Framework was before February 2006 (after which date the Environmental Assessment (Scotland) Act 2005 applies).

Background to the Development Framework

The Strathearn Area Local Plan identifies land to the north of the town (at sites known as Kirkton and Castlemains) and land to the south of the town (known as Townhead) for residential, employment and associated development. It also identifies the need for a masterplan to be prepared for development of the sites, and in conjunction with Perth and Kinross Council (PKC) a consortium of housing developers (Muir Homes, King Homes and Richmond Homes) has prepared a Development Framework to meet this requirement. This document is the subject of the SEA process reported in this Environmental Report.

Approach to the SEA

A structured approach to the SEA was adopted based on all relevant best practice guidance including the recently published Scottish Executive SEA Toolkit and the draft guidance which preceded it. Whilst the assessment relates to sites that may be developed in the future, it is undertaken at a strategic level (that is, the environmental effects of adopting the Development Framework as a policy document, not the environmental effects of developing the sites themselves). The level of assessment is more local and site specific than is usually undertaken within SEA, but is not intended to remove the need to consider the potential environmental impacts of the developments at the time of planning permission. The results of the SEA are however useful in focusing any such future consideration on those environmental topics where there is a likelihood of significant environmental effects.

Based on a review of other relevant plans, policies and strategies, a review of the baseline environment in Auchterarder and feedback from the consultation process, a series of environmental objectives and sub-objectives were determined for each relevant environmental topic in the SEA. The high level objectives are presented in the table below.

Table 1 SEA Objectives

SEA Topic	SEA Objective
Air Quality & Noise	To minimise the effects which changes in noise and air quality may have on the community.
Soils and Geology	To ensure that the development does not impact adversely on soils and geology.
Aquatic Environment	To safeguard the quality and status of waterbodies, prevent an increase in the risk of flooding and use water responsibly.
Climate Change	To minimise direct and indirect emissions of carbon dioxide (CO_2) from the development and to protect new homes from the effects of climate change.
Landscape, Townscape & Visual Effects	To conserve landscape features, to strengthen and enhance landscape character and to minimise visual intrusion.
Biodiversity	To protect biodiversity and ensure no net loss in key habitats and species.

Cultural Heritage	To protect and where appropriate enhance the built heritage, the archaeological resource and the historic setting.
Population & Human Health	To create a healthy and safe living environment for Auchterarder.
Material Assets	To develop and operate the assets associated with the framework in a resource efficient manner.

A set of more detailed sub objectives was then defined by the SEA team for use in the appraisal. These objectives and sub-objectives were presented as part of a Scoping Report, which was submitted to the SEA Consultation Authorities in March 2007, and the finalised list of objectives was prepared taking account of comments made by the Authorities in their formal response to the Scoping Report.

A framework approach has been used to evaluate the environmental effects of the content of the Development Framework and this was evolved from the set of objectives and supporting appraisal criteria. The SEA framework was then used to appraise each of the three assumed phases of development as follows:

- Phase 1 – 2007 to 2011
- Phase 2 – 2012 to 2016
- Phase 3 – 2017 to 2021

The appraisal of each phase has been based on mainly a qualitative appraisal, drawing on the assessment team's knowledge of the likely effects of development of this nature and an understanding of the baseline environment. In particular, a number of assumptions were made in relation to the likely mitigation measures which would be employed during the developments including all best practice methods. The level of appraisal undertaken is a reflection of the strategic nature of the Development Framework in combination with the local level nature of the sites identified within it.

Findings of the Environmental Assessment

The findings of the SEA are summarised in this section for each phase of development, as well as for the predicted cumulative effects.

Phase 1

During construction, the main effects of the Development Framework are likely to arise from disruption due to construction activities and vehicles, particularly given that this will be the first phase of development and will therefore be most noticeable to existing residents. The assessment has predicted that there will be significant short term adverse visual effects of construction works for properties close to the new sites which have existing views across them as well as on the setting of various Scheduled Ancient Monuments (SAM) and listed buildings.

Once all of Phase 1 has been constructed, residents living in the houses are likely to use motorised transport for commuting to work, and therefore the associated traffic noise and air quality, as well as greenhouse gas emissions, are predicted to remain a minor negative impact. This is considered unlikely to be significant, although this may need to be tested in more detail at the planning stage. The change to the existing landscape and visual environment is also considered to represent a minor negative effect upon both landscape character and key local views. The loss of semi-improved grassland may have a minor adverse effect in relation to its biodiversity value, although this is considered to be limited and subject to more detailed species and habitat survey work at the appropriate stage.

Phase 2

The construction effects of Phase 2 will be similar to those arising as a result of Phase 1, in particular the disruption effects arising from construction work and traffic movements and the temporary negative effects on landscape character and key views. There is assumed to be a period of around 12 months between completion of Phase 1 and commencement of Phase 2.

Once completed, the increased provision of open space, paths for walking and play facilities in Auchterarder will represent a minor positive effect in relation to population and material assets. In Phase 2, there is predicted to be a slight negative indirect effect on the setting of Auchterarder Castle SAM, although no physical impacts on the SAM will result. A minor negative impact on roadside noise and local air pollution is also predicted due to the effects of increases in resident populations and their associated car travel.

Phase 3

Again, the construction effects of Phase 3 are related to disruption, noise and air quality, and the temporary landscape and visual effects. In this final phase, construction is moved closer to residential receptors which may therefore be subjected to a greater change, although all aspects will be limited to no more than the 24 month period of construction.

The operational effects of Phase 3 are effectively the operational effects of the Development Framework overall, as they take into account changes to the environmental baseline as a result of the earlier phases of development. In addition, this can be considered to represent an assessment of the cumulative effects of the different phases of development as each has been considered in relation to changes arising from the previous. There is the potential for significant adverse effects in relation to noise and air quality as well as landscape and visual effects, and further assessment and site specific mitigation is likely to be required for these topic areas. However, it is considered that the development overall will result in positive effects on population and material assets through the provision of new and upgraded community facilities, open space and sports pitches, new housing units including affordable housing, and land for employment use. In relation to climate change, it is considered likely that most people will continue to use their cars for travel outside of the town, and this will contribute to carbon emissions. There will be an increase in traffic related greenhouse gas emissions as a result of the development and therefore a minor negative impact is predicted to result in relation to climate change.

Cumulative Effects with Other Development Proposals

Of the other development proposals identified in the vicinity, only the proposal for new housing at Gleneagles West has the potential to result in cumulative effects if it is constructed concurrently with any of the phases of the Development Framework. These could include further increases in construction and operational traffic on local roads, and related noise and air quality effects on sensitive receptors. In addition, there may be an increased demand for community facilities provided through the Development Framework, such as open space, sports facilities and play areas. However, in comparison to the proposed housing densities in the Development Framework, this is a relatively small development and it is unlikely that any cumulative effects arising would be significant.

Mitigation and Monitoring

The findings of the SEA are based on assumptions made that certain minimum mitigation and best construction practices will be adopted and adhered to during the construction and operation of the developments. The key mitigation measures which have been assumed are specifically set out in the appraisal tables presented in Appendix E of the Environmental Report.

It is also important to note that the measures assumed for this SEA are at a strategic level commensurate with the details available on the development and the assessment adopted. In taking the developments forward and assessing them in more detail as appropriate during the planning process, further and more site specific mitigation will need to be developed and implemented. For example these measures might include additional surveys for habitats and species on site (and appropriate measures to safeguard any protected species) and targeted site investigations to assess the nature of any historic land uses which may have potential to have resulted in contamination.

It will be for those ultimately constructing the scheme to implement most of the measures identified, and the role of PKC as consenting authority to ensure they are provided for within any subsequent planning permission which may be granted.

The broad parameters for environmental monitoring are identified in the Environmental Report, along with a number of proposed indicators and suggested responsibility to monitor the environmental effects of adopting the Development Framework. It is only during implementation of the Development Framework, and the development control process, that the most significant environmental effects will be identified and this will determine the requirements for site specific monitoring of the developments.

Next Steps

This document has been prepared to support the draft Development Framework which was published for consultation in July 2007. The Environmental Report will be issued to the SEA Consultation Authorities for comment. The responses provided by the Consultation Authorities will then be taken into account in finalising the Development Framework.

Comments on the Environmental Report may be addressed to:

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1 Introduction

1.1 BACKGROUND

The requirement for housing and associated infrastructure development in Auchterarder is set out within the statutory Development Plan - the Perth & Kinross Structure Plan 2003 and the Strathearn Area Local Plan 2001. The Local Plan identifies land to the north of the town (at sites known as Kirkton and Castlemains) and land to the south of the town (Townhead site) for residential, employment and associated development to provide a land use framework in order to promote the necessary confidence to allow investment in infrastructure by both the public and private sectors. Following the local plan inquiry in 1999, the Reporter recommended the development of approximately 800 housing units in Auchterarder across three key development sites at Kirkton, Castlemains and Townhead.

The Strathearn Area Local Plan identifies the requirement for a masterplan to be prepared for development of the sites, and in conjunction with PKC a consortium of housing developers (Muir Homes, King Homes and Richmond Homes) has prepared a document entitled the Auchterarder Expansion – Townhead and North East Development Framework (the Development Framework) which is proposed for adoption as supplementary planning guidance (SPG) to the Local Plan. A draft of the masterplan was prepared in December 2005 and has been included on the Council's website for public consultation (see Section 1.5 on consultation). Although the masterplan and the Development Framework are essentially synonymous, PKC has adopted the term 'Development Framework' as the title for the plan.

This report has been prepared by WSP Environmental Ltd (WSPE) under commission and direction from PKC as the Responsible Authority for the Development Framework. WSPE has been appointed to undertake the Strategic Environmental Assessment (SEA) by Gillespies LLP, who prepared the draft masterplan on behalf of the consortium of housebuilders.

1.2 STATUTORY CONTEXT FOR THE SEA

The SEA has been undertaken in accordance with The Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004 (hereafter referred to as the 'SEA Regulations') since the first formal preparatory act on the Development Framework was prior to February 2006 (after which date the Environmental Assessment (Scotland) Act 2005 applies).

In accordance with the SEA Regulations, a Screening Report was prepared by PKC in November 2006 setting out the Council's view, as Responsible Authority, that the Development Framework is likely to have significant environmental effects and therefore that SEA was required. The report was issued to the three SEA Consultation Authorities (Scottish Natural Heritage (SNH), Scottish Environment Protection Agency (SEPA) and Historic Scotland (HS)) each of whom responded during December 2006 indicating agreement with PKC's view.

The Council has subsequently prepared a Determination that SEA is required for the Development Framework (under Article 13 of the Regulations) and publicly advertised this.

1.3 PURPOSE OF THIS ENVIRONMENTAL REPORT

The purpose of this Environmental Report (ER) is to set out the findings of an environmental assessment of the Development Framework. In accordance with Part 3 of the SEA Regulations, the ER identifies, describes and evaluates the likely significant effects on the environment of implementing the Development Framework and the reasonable alternatives to this which have been assessed.

The ER is intended to provide this information for the Consultation Authorities and the general public during public consultation on the draft Development Framework. Further information on the approach to consultation activities in relation to the Development Framework and the SEA is presented in Section 1.5 of this report.

This ER has been prepared with reference to the following SEA guidance:

- European Commission Directorate General (DG) Environment (2004) Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment;
- Office of the Deputy Prime Minister (2005) A Practical Guide to the Strategic Environmental Assessment Directive;
- Scottish Executive (2003) Environmental Assessment of Development Plans, Interim Planning Advice;

- Scottish Executive Circular 2004/2 (2004) Strategic Environmental Assessment for Development Planning; the Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004; and
- Scottish Executive (2006) Strategic Environmental Assessment Toolkit, Version 1.

The most relevant guidance, and that which has been followed most closely in preparation of this report, is the Scottish Executive SEA Toolkit.

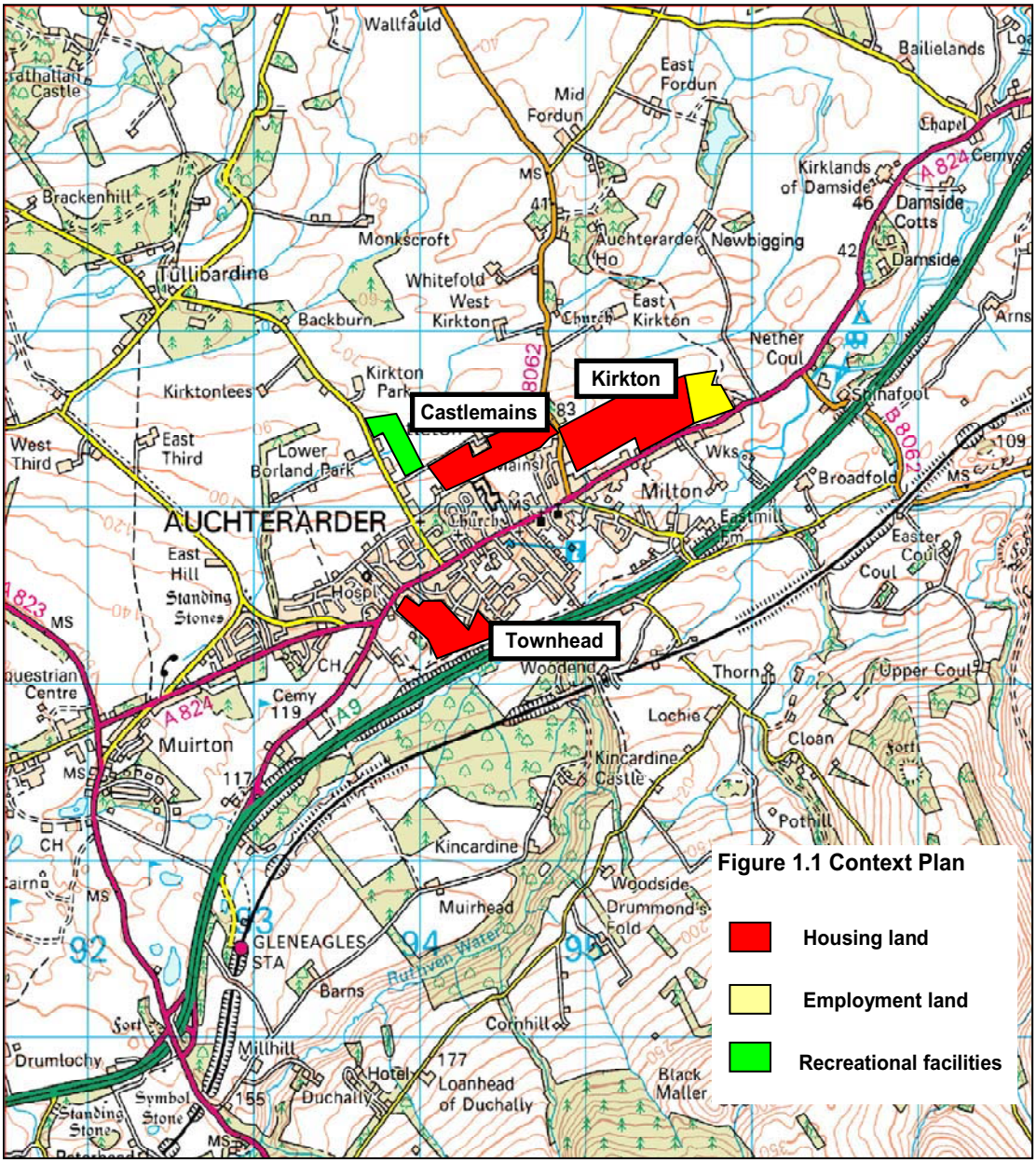
1.4 KEY FACTS ABOUT THE AUCHTERARDER DEVELOPMENT FRAMEWORK

Key facts relating to the Development Framework are presented here, based upon the draft Masterplan which has been prepared by Gillespies LLP and which has been made publicly available by PKC via its website.

Name of Responsible Authority	Perth and Kinross Council
Title of Plan	Auchterarder Expansion – Townhead and North East Development Framework
Requirement for the Plan	The finalised Strathearn Area Local Plan was adopted in 2001 following a Public Local Inquiry, and made provision for a mixed use housing development on the northern edge of Auchterarder. It is a condition of this provision that the Council, in conjunction with landowners, developers, the local community, statutory and non-statutory bodies, would ensure the provision of a masterplan for the development.
Plan Subject	The Development Framework is for a mixed use land use development which is predominantly based on the provision of up to 800 new homes across three sites in Auchterarder, Perth and Kinross. In addition, it incorporates provision for A9 junction improvement works at Loaninghead and Shinafoot, which will be the subject of a separate approval process and has been the subject of a STAG appraisal.
Period Covered by the Plan	The Development Framework is intended to be implemented in three key phases over a period of 10 to 15 years, with the majority of the new housing expected to be complete by 2020.
Frequency of Updates	The Development Framework sets out aspirations for the detailed planning applications which will be submitted to PKC for each housing area and other land uses. It is not anticipated that the Masterplan will be updated, unless PKC determines at any point in the future that new planning or design guidance warrants an amendment to the Masterplan.
Plan Area	The Development Framework applies to the Castlemains, Kirkton and Townhead sites in the town of Auchterarder in Perth and Kinross.
Plan Purpose and Objectives	The purpose of the Development Framework is to set out the proposals for new housing development on three key sites in Auchterarder. These are: ■ Kirkton, on the north east edge of the town; ■ Castlemains, on the northern edge of the town and immediately west of the Kirkton site; and ■ Townhead, in the south western area of Auchterarder.

Figure 1.1 indicates the location of the proposed development areas and their geographical context within Auchterarder. The masterplan sets out the planning, landscape and infrastructure context for the developments including guidelines on house design, layouts and associated landscaping.

Figure 1.1 Context Plan



Contact Points

Queries on the Development Framework should be addressed to:

- Katrina McWilliam, Perth & Kinross Council, Environment Service, Pullar House, 35 Kinnoull Street, Perth PH1 5GD
- Telephone 01738 475386
- Email: klmcwilliam@pkc.gov.uk

Queries on the SEA of the Development Framework should be addressed to:

- Andrew Mitchell, WSP Environmental Ltd, 4/5 Lochside View, Edinburgh Park, Edinburgh, EH12 9DH
- Telephone 0131 344 2300

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1.5 PUBLIC AND STAKEHOLDER CONSULTATION

Consultation activities in relation to proposals for housing development at a strategic level in Auchterarder and nearby areas can be traced back to the original consultation exercises undertaken by PKC in preparation of the Strathearn Area Local Plan, which was adopted in May 2001. Key activities in this process included:

- Newsletters outlining key planning issues;
- Press releases and presentations;
- Public notices and advertisements; and
- Several public meetings where settlement proposals were presented as part of the draft Local Plan.

Consultation with key stakeholders on development proposals in Auchterarder yielded comments and inputs on how the development should relate to the existing settlement, on design guidance for new houses and on the need for affordable housing. In the light of the public and stakeholder consultation, the Local Plan (including the development proposals in Auchterarder) was amended and a Public Local Inquiry (PLI) held. At the PLI, it was determined that a masterplan should be developed for the housing proposals in consultation with the relevant parties, including the local community and that the previously proposed development on the northern side of Auchterarder (at Kirkton and Castlemains) should be augmented with the addition of a housing site at Townhead on the south west side of the town.

The finalised Local Plan was adopted in 2001 and accordingly made provision for mixed use housing developments in Auchterarder. In 2001, work on the required Masterplan for the proposals was started and the evolution of the development proposals was concluded with a draft Masterplan prepared by the end of 2005.

Extensive public and stakeholder consultation was undertaken in the development of the Masterplan for the expansion sites at Auchterarder, and following the preparation of the draft Masterplan. The key activities were:

- Stakeholder consultation throughout the preparation of the Masterplan with a range of planning, community and environmental organisations (including SEPA and Historic Scotland);
- Establishment of a Masterplan Steering Group comprising representatives of a number of community organisations;
- A public exhibition, held in Auchterarder (for a two week period in April 2006) to present the Masterplan concept to the public and to obtain information and public response to the proposals, which fed back into finalisation of the draft Masterplan;
- The final report of the draft Masterplan (dated December 2005) was subsequently uploaded onto PKC's website and has been available for informal public comment since this time.

A schedule of all comments received during the April 2006 exhibition on the masterplan was subsequently prepared and made public by PKC, incorporating the views of the Consortium and the Council's planning, transport, education and recreation officers on each issue. Issues raised by this process, and additional comments made by the Council on the Masterplan, are currently being discussed and agreed with the Consortium and its advisors.

Since there has been an extensive level of consultation at all stages of development of the Masterplan, it is not PKC's intention to have a further round of public exhibitions in parallel with the SEA. Instead, an appropriate period of public consultation on the Development Framework and the ER is proposed prior to adoption of the plan by PKC. Further details of the next stages for the Development Framework following publication of this ER are presented in Section 5 of this report.

1.6 STRUCTURE OF THIS REPORT

This ER is structured as follows:

- Section 2 sets out the context for the Development Framework including a review of the strategic context of the Development Framework, an outline of the environmental baseline and analysis of relevant problems and opportunities in the Auchterarder area which have informed the appraisal framework and objectives of this SEA.
- Section 3 of the report presents the results of the environmental assessment, reviews alternatives to the Development Framework and presents proposal for mitigation of any significant environmental effects reported.

- Section 4 presents the approach to be adopted in relation to monitoring the environmental effects of the Development Framework.
- Section 5 sets out the next steps and key milestones for the Development Framework and the SEA.

The report is supported with the following appendices:

- Appendix A: Lists of Strategies, Plans and Programmes Reviewed.
- Appendix B: Analysis of Other Strategies, Plans and Programmes.
- Appendix C: Objectives and Sub-Objectives.
- Appendix D: Environmental Baseline.
- Appendix E: Appraisal Matrices
- Appendix F: Responses to Comments on Scoping Report.

2 Context of the Development Framework

2.1 INTRODUCTION

This section of the ER provides the context for the SEA. This has been undertaken through a review of other relevant strategies, plans and programmes to identify relevant issues, baseline information and objectives which are linked in some way with the Development Framework and/or with the environmental appraisal of it. This section also presents an overview of the relevant environmental baseline conditions, highlighting in particular issues and problems therein.

It is PKC's view that the focus of the SEA should be at a relatively 'local' level since the strategic context for the housing proposals has been dealt with through the progression and adoption of the statutory Development Plan (which comprises the Perth & Kinross Structure Plan and the Strathearn Area Local Plan). The Structure Plan was subject to a sustainability appraisal and the key strategic policy arguments and issues were considered at the inquiry into the Strathearn Area Local Plan. The approach to review and analysis of the context for the Development Framework has therefore been to concentrate on the key documents which provide information and objectives at the regional, sub-regional and local level in order to focus the SEA onto the key issues for the town of Auchterarder and its relevant sub-regional connections.

2.2 RELATIONSHIP WITH OTHER PLANS, PROGRAMMES AND ENVIRONMENTAL OBJECTIVES

An understanding of the relevance of other legislation, policy and plans to the Development Framework is an essential step in understanding its context, the relationship with other strategies and in deriving the necessary environmental baseline for the assessment.

A range of strategies, plans and programmes have been reviewed to provide a context for the SEA, and from which to identify potentially applicable objectives for the environmental assessment. Since the focus of this SEA is at a localised level (see Section 2.1), the review of plans and programmes has been focused on relevant strategy and policy at the Scottish, the regional and the local levels. This is considered to be appropriate not just because of the localised focus of the SEA, but also because all relevant international and European environmental legislation has been implemented into national strategy and guidance, and regional planning strategy reflects the range of environmental and sustainability issues which are prevalent at the national and international level. In addition, experience from previous SEA suggests that a point is reached in reviewing strategies where all of the key issues and objectives are identified with very marginal (or no) benefit to be gained from exhaustive reviews of all possible strategies and plans.

For these reasons we have adopted a targeted approach to plan and policy review. The strategies and plans which have been assessed are listed in Appendix A and the information obtained from the reviews is set out in Appendix B.

Since the focus of the environmental assessment is concentrated on development at a localised level, the review of policies and plans has included the statutory Development Plan. The strategy and objectives within these plans have been considered, and relevant aspects of some of the broader and environment specific policies were also adopted within the long list of possible objectives for the SEA presented in Appendix C. In this way we have ensured that regional and local policy has been taken into account in the objectives, and hence the appraisal framework for the SEA.

Planning policy guidance has been considered in relation to relevant Scottish Planning Policies (SPPs) and National Planning Policy Guidance (NPPGs), however Planning Advice Notes (PANs) have not been included in the review as these are considered to be detailed statements on planning issues (and for the planning system) which are more relevant to detailed design and planning applications than to the level of appraisal undertaken for an SEA. The appraisal undertaken has assumed that all best practice would be implemented, including that identified within all of the relevant PANs.

A summary of the key information identified from the review process, including the relationship between the Development Framework and the most relevant plans reviewed is presented in Table 2.1.

Table 2.1 Review of Plans and Programmes and Linkages with the Development Framework

Name of Plan	Main Requirements of Plan	How it affects or is affected by the Development Framework
Changing our Ways – Scotland's Climate Change Programme, 2006	Encourage more efficient use of energy by the public and Scottish businesses while increasing "greener'' renewable sources of electricity.	Incorporation of energy efficiency and microgeneration measures into the principles of the Development Framework to maximise sustainability of the development.
SPP 3: Planning for Housing, 2003	National level policy and priorities on the role of the planning system in the delivery of housing, including standards and approach in relation to the provision of new housing development.	Focus on the importance of design quality and safety by design, minimising the environmental impacts of housing development and the integration of transport and land use planning. Key policies and principles to be incorporated into the Development Framework and ultimately into the scheme design. Requirements for provision of affordable housing in new schemes.
NPPG11: Sport, Physical Recreation and Open Space, 1996	Protection and provision of open space and recreational facilities while safeguarding the quality of the natural and cultural heritage.	Consideration of open space impacts and adequate provision within the Development Framework.
NPPG 14: Natural Heritage	Provides guidance on how Government policies on conservation and natural heritage should be addressed in the planning system.	The Framework involves the permanent change in land currently under agriculture (mainly grassland) therefore some loss of this habitat and the species it supports is inevitable and requires mitigation.
NPPG 5: Archaeology and Planning	National policy framework for the protection of archaeology from development proposals.	Framework has the potential to directly and indirectly affect known and unknown areas of archaeological sites and importance.
SPP 11: Physical Activity and Open Space Consultation Draft	Draft framework for policy on recreation and open space including for the edges of urban areas.	The Framework should take the opportunity to enhance the provision and quality of open space and green areas in the new housing developments.
Perth & Kinross Structure Plan	Part of the statutory development plan. Sets out the long term land use planning vision for development and the environment.	Provides a strategic context for the Framework, including the basis for housing allocations. Includes key objectives for communities, resource use and the environment which are relevant to the SEA.
Strathearn Area Local Plan, 2001	Part of the statutory development plan. Sets out the local development and planning context for development in Auchterarder.	Various objectives which seek to control the environmental effects of new development, including biodiversity, landscape, waste minimisation, energy efficiency, water and flooding, and sites and features of cultural heritage importance. Development framework must address these areas to ensure that any development which comes forward as a result is sustainable, policy compliant and appropriate to the local context of Auchterarder.
Perth & Kinross Joint Environmental Strategy and Action Plan 2004 to 2008	Prepared by the Perth & Kinross Community Planning Environment Partnership. The Plan sets out an interim vision and strategic framework for the environment.	The priorities for action relating to biodiversity, waste, energy and sustainable construction. Particular to the natural heritage, the plan seeks to ensure that new and existing urban development enhances opportunities for landscape and wildlife value. The Development Framework provides the opportunity to pursue the

Name of Plan	Main Requirements of Plan	How it affects or is affected by the Development Framework
		objectives of the strategy, and provide an exemplar of how sustainable urban development can be undertaken in a way which protects and enhances the local environment.
Tayside Landscape Character Assessment	Sets out a written and mapped assessment of the landscape character of the Tayside region.	The implementation of the Framework will need to take account of existing landscape character of the setting of Auchterarder and the nearby townscapes of the urban area.
Perth & Kinross 2007/10 Corporate Plan	Opportunity for joint working with other organisations to deliver new homes.	Promotes role of Perth & Kinross Council as the responsible authority for the SEA.

From the review of the plans and programmes, and in particular those listed in the table above, a series of objectives were identified and taken forward for further consideration in deriving a complete set of objectives for the SEA. Relevant objectives identified from the plans and programmes analysed have been listed in the review proforma tables in Appendix B. The objectives identified were then allocated according to their relevant SEA topic (see Section 2.3 for SEA topics) and augmented with other potential SEA objectives which have been identified from relevant guidance documents and those which have been drafted by the SEA team from a number of sources. The resulting long list of objectives and sub-objectives is presented in Appendix C of this ER.

The process of refining and identifying objectives, developing sub-objectives, and their role in the appraisal framework for the SEA is discussed further in Section 3.4 of this ER.

2.3 ENVIRONMENTAL BASELINE

2.3.1 Overall Approach

This section identifies the structure of the environmental baseline for the SEA of the Development Framework and summarises the key environmental issues and problems which were identified from the review of plans and programmes and the analysis of the baseline environmental conditions. It provides a summary of the environmental baseline data gathered for the Auchterarder area relevant to the SEA topics identified in Table 2.2. Further details of the environmental baseline are presented within Appendix D.

The collation and analysis of the environmental baseline has been undertaken to a level of detail appropriate to the SEA of the Development Framework. Information has been collated for a study area which has been identified to include the town of Auchterarder, adjacent areas of the A9 trunk road where junction improvements are proposed and to include a sufficient 'buffer' area (of approximately 5km – see Figure 1.1) around the town to take account of baseline conditions in locations which may be indirectly affected by the proposed housing expansion areas.

Baseline data have been identified and collated to a more detailed level than would normally be undertaken for an SEA, taking account of PKC's 'localised' focus for the environmental assessment and the fact that the masterplan sets out information on the proposed development areas, their anticipated phasing and on the potential design and landscaping arrangements.

The size of the study area, and the extent of the baseline data gathered, therefore reflects the scope and level of detail anticipated for the environmental assessment.

2.3.2 Environmental Baseline Topics and Scope

The relationship between the environmental topics for the SEA and the criteria required by the SEA Regulations is shown in Table 2.2, together with an indication of the key environmental issues for the Development Framework which have been identified for each topic.

Table 2.2 SEA Topics, Criteria and Issues

SEA Environmental Topics	Criteria from Schedule 2 of the SEA Regulations	Key Environmental Issues
Air Quality and Noise	Air, Climatic Factors, Human Health, Population	■ Air quality (concentrations of nitrogen dioxide (NO_2) and particulate matter (PM_{10})) particularly from road traffic sources ■ Noise climate and noise sources (including traffic) ■ Construction noise
Soils and Geology	Soil, Material Assets	■ Designated sites ■ Soil types, resources and quality ■ Historical sources of land contamination
Aquatic Environment	Water, Climatic Factors	■ Physical form, hydrological and hydrogeological regime ■ Freshwater quality ■ Flooding and flood risk
Climate Change	Climatic Factors, Material Assets, Population	■ Carbon dioxide (CO_2) emissions ■ Climate change response/'proofing' ■ Local climate ■ Eco homes concept
Landscape, Townscape & Visual Effects	Landscape	■ Designated landscapes ■ Landscape/townscape character, quality and sensitivity ■ Visual receptors and views ■ Design quality and layout
Biodiversity	Biodiversity, Fauna, Flora	■ Designated areas ■ Protected (and other recognised) habitats and species
Cultural Heritage	Cultural Heritage	■ Designated sites ■ Archaeological sites and monuments ■ Historic landuse/landscapes
Population and Human Health *	Population, Human Health	■ Accessibility to open space, recreation and community facilities ■ Community safety and security ■ Effects of local environmental problems and nuisances
Material Assets	Material Assets	■ Open space and recreational facilities ■ Waste minimisation and management ■ Drainage and wastewater capacity
(Cumulative Effects)	Interaction between these factors	■ Cumulative effects of the Framework will be considered in the assessment, drawing on the relevant environmental baseline data from the above topics.

* In accordance with guidance in the SEA Toolkit, population and human health will be considered as a combined topic.

The scope of several of the criteria in Schedule 2 of the Regulations is potentially very wide. We have attempted to define the issues covered under these criteria (and thus for each relevant topic) in a way which is meaningful for this SEA and for the Auchterarder Development Framework. We have also been conscious of the Scottish Executive's guidance on SEA, and previous correspondence with the Consultation Authorities, which stresses that SEAs should focus on environmental issues only – it is not the role of SEA to consider economic and socio-economic issues in detail. Hence the scope of topics for human health and population and material assets in particular have been deliberately focussed (as shown in Table 2.2) on environmental issues which are of relevance to the SEA being undertaken.

2.3.3 Current and Future Environmental Baseline

A detailed review of the environmental baseline for the Auchterarder area which has been gathered to date has been presented in Appendix D of this report. This baseline dataset has been updated from that presented in the Scoping Report with relevant additions suggested during consultation, and used to inform the environmental assessment of the Development Framework.

A summary of the baseline environmental information, and key issues identified, is presented in Table 2.3 for reference. Relatively few statutorily or locally designated sites have been identified from the baseline review. The information in Table 2.3 also considers how the environmental baseline of the area may change in the forthcoming years during which phased development of housing at Auchterarder is proposed (in the absence of the Development Framework).

Table 2.3 Baseline Environment Summary

SEA Topic	Summary of Baseline	Future Baseline Projection
Air Quality and Noise	■ No recent air quality monitoring data are available ■ Noise survey for the masterplan indicates higher ambient levels at Townhead in proximity to the A9 ■ Traffic flow data for 2004 indicate flows along the main street (A824) of 5,825 vehicles per day	Roadside air pollutants will be influenced by changes in traffic flows and improved efficiencies of future vehicles
Soils and Geology	■ Prime quality agricultural land is located along northern edge of Auchterarder (Kirkton & Castlemains) ■ Potentially contaminative former land use adjacent to the Townhead site associated with a former tip	Land uses are not predicted to change significantly in the absence of the Development Framework
Aquatic Environment	■ The Ruthven Water runs to the south of Auchterarder and is classified by SEPA as Grade B (Fair) and A2 (good) water quality at different stretches of the watercourse ■ The development areas are not located in flood risk areas	Water quality may improve slightly in future years as programmes for compliance with the Water Framework Directive are implemented
Climate Change	■ No emissions data are available at the regional level. Key emissions of carbon dioxide are predicted to be from traffic and combustion of fossil fuels for heating of homes and businesses in Auchterarder	Climate change predictions suggest warmer and wetter winters and drier summers
Landscape, Townscape & Visual Effects	■ No designated landscape areas within or around Auchterarder ■ The town is located on the edge of the Broad Valley Lowland and Lowland Hills landscape character areas	The landscape and visual baseline is not predicted to change significantly in the absence of the Framework
Biodiversity	■ There are four Sites of Special Scientific Interest (SSSIs) within 2km of Auchterarder ■ LBAP habitats surrounding the town include farmland,	The ecological baseline is not predicted to change significantly in the absence of the Framework

SEA Topic	Summary of Baseline	Future Baseline Projection
	urban and built environment and woodland	
Cultural Heritage	■ Auchterarder Castle, located on the northern edge of the Castlemains site is a Scheduled Ancient Monument ■ Gleneagles garden and designed landscape lies to the west of Auchterarder ■ There are a number of listed buildings along the spine of the main street through Auchterarder ■ One NMRS site is located within the Kirkton site boundary (Auchterarder Tipperquheywell)	The cultural heritage baseline is not predicted to change significantly in the absence of the Framework
Population and Human Health	■ Auchterarder had a recorded population of 3,945 (in 1,752 households) in the 2001 census ■ There is no specific evidence of environmental problems affecting community health	The population of Auchterarder and its health is not predicted to change significantly in the absence of the Framework
Material Assets	■ Existing assets include a new community school with associated playing fields and a sports centre	No significant changes predicted

2.4 ENVIRONMENTAL PROBLEMS

Environmental issues and problems in the study area for the proposed Development Framework have been identified from the process of environmental baseline data gathering, collation and analysis. Where relevant, information and observations relating to environmental problems raised by stakeholders involved in the Masterplan and SEA process have also been recorded.

The key issues and problems which have been identified to date are summarised in Table 2.4

Table 2.4 Environmental Problems and Issues

Topic	Problem or Issue	Relevance to Development Framework and/or SEA
Air Quality and Noise	No significant problems have been identified from the baseline collated. Proximity to the A9 as a source of traffic noise at the Townhead site.	Need for detailed design considerations in relation to ensuring that any new build housing on the Townhead site is not subject to unacceptable noise levels due to its proximity to the A9.
Soils and Geology	Potentially contaminative historical land uses have been identified adjacent to the Townhead and Kirkton sites.	Site investigations have been undertaken and development will need to accord with mitigation proposals.
Aquatic Environment	No specific environmental problems have been identified in relation to the aquatic environment.	SEA to consider construction effects and hydrological change from development areas on watercourses and flooding.
Climate Change	No specific existing environmental problems relating to climate change have been identified.	Carbon emissions from traffic generated by the development will need to be assessed.
Landscape, Townscape & Visual Effects	Located on a ridge, Auchterarder is very prominent in views from the surrounding area. Existing houses in the town will have changes in views from the new housing development.	Detailed consideration of views from the wider landscape. Potential issues for the current properties in Auchterarder whose outward views will be changed.

Topic	Problem or Issue	Relevance to Development Framework and/or SEA
Biodiversity	No specific environmental problems have been identified in relation to biodiversity.	Assessment to consider effects of proposals on loss of key habitats.
Cultural Heritage	No specific environmental problems in relation to cultural heritage have been identified.	There is the opportunity for development to improve access to and understanding of cultural heritage sites and features such as incorporation of the 'Auchterarder Tipperquheywell' into the design of the development.
Population and Human Health	No specific environmental problems affecting human health or population have been identified.	No specific issues.
Material Assets	No specific environmental problems relating to material assets have been identified.	No specific issues.

2.5 SEA OBJECTIVES

Based on the review of other plans and programmes, the current and future environmental baseline, environmental problems and feedback from the Consultation Authorities on the Scoping Report, a headline SEA objective has been identified for each of the SEA topics as follows:

- Air Quality & Noise: To minimise the effects which changes in noise and air quality may have on the community.
- Soils and Geology: To ensure that the development does not impact adversely on soils and geology.
- Aquatic Environment: To safeguard the quality and status of waterbodies, prevent an increase in the risk of flooding and use water responsibly.
- Climate Change: To minimise direct and indirect emissions of carbon dioxide (CO_2) from the development and to protect new homes from the effects of climate change.
- Landscape, Townscape & Visual Effects: To conserve landscape features, to strengthen and enhance landscape character and to minimise visual intrusion.
- Biodiversity: To protect biodiversity and ensure no net loss in key habitats and species.
- Cultural Heritage: To protect and where appropriate enhance the built heritage, the archaeological resource and the historic setting.
- Population & Human Health: To create a healthy and safe living environment for Auchterarder.
- Material Assets: To develop and operate the assets associated with the framework in a resource efficient manner.

A number of sub-objectives/criteria were also developed to support the headline objectives, and these are identified in the appraisal framework presented in Table 3.2.

The approach to assessment of the various components of the document, and the application of the objectives and sub-objectives/criteria to the appraisal process through the appraisal framework is discussed in Section 3.5.

3 Assessment of Environmental Effects

3.1 INTRODUCTION

This section presents the approach to and findings of the assessment of environmental effects of the Development Framework based on the scope, approach and level of detail identified in the Scoping Report. The approach to alternatives is discussed, together with an analysis of the likely significant environmental effects predicted and the measures assumed to mitigate these effects. The assessment presented in this chapter is based upon a set of detailed appraisal matrices presented in Appendix E.

3.2 SCOPING OF LIKELY SIGNIFICANT ENVIRONMENTAL EFFECTS

An initial environmental appraisal of the potential effects of the Development Framework was presented in the Scoping Report, and concluded that none of the SEA environmental topics should be scoped out of the assessment. However, following the assessment process (and the application of appropriate and committed mitigation measures), it has emerged that there will not be significant environmental effects upon some of the environmental topics scoped into the assessment. This was expected at the scoping stage but, in accordance with the precautionary approach to environmental assessment, PKC determined that it was nonetheless necessary to examine the potential environmental effects of all environmental topics.

The Scoping Report was submitted in March 2007 to the three Consultation Authorities (Historic Scotland, Scottish Environment Protection Agency (SEPA) and Scottish Natural Heritage (SNH). Scoping responses were received from these bodies in April 2007. The responses generally concurred with the findings of the Scoping Report and the proposed approach to environmental assessment. A number of issues of detail were raised by the Consultation Authorities and these have been incorporated as far as possible into this Environmental Report. A table of the key comments made, and a response to these comments is presented in Appendix F of this ER.

3.3 APPROACH TO ALTERNATIVES

The approach to the treatment of alternatives for housing development and housing supply in the Strathearn area has been one of evolution of proposals primarily during the drafting and approval of the local plan for the area (the Strathearn Area Local Plan 2001). Preparation of the Plan needed to take account of the requirements of the then Tayside Structure Plan (which has been replaced subsequent to adoption of the Local Plan, in 2003) in terms of housing requirements to the period for 2006 and in the longer term.

The draft Plan prepared in 1998 identified Auchterarder as a location suitable for provision of a significant proportion of the required housing land supply in the Strathearn area, and the initial proposals were then amended in the light of public and stakeholder consultation and the Local Plan Inquiry. During these stages, alternatives were considered in relation to the scale, location and form of housing development in the town which resulted in the balance currently proposed in the subsequent masterplan. In particular, due to the lack of sufficient brownfield and infill sites in the town, a strategic area at the northern edge of Auchterarder, known as the Opportunity 3 site, was identified as the only realistically available option for meeting the longer term housing requirements. This process included consideration of environmental issues, in particular in relation to land take of agricultural land and the landscape setting of the boundaries of the northern edge of the development.

The Council determined that the appropriate mechanism for integrating the major housing expansion with the rest of the town, and to address more detailed planning and environmental issues, was the preparation of a Masterplan. This reflects the strategic nature of the development proposals which, at the time of the Local Plan Inquiry, were estimated to include for development of 1000 houses (now proposed for 800 houses) over a period well beyond the lives of the Local Plan and Structure Plan (ie to around 2020). A third housing site, at Townhead in the south western part of Auchterarder, was added to the scope of the Masterplan following recommendations by the Reporter from the Local Plan Inquiry. A number of other amendments were made to the development proposals in response to the conclusions of the Reporter, most significantly in environmental terms being the re-drawing of the settlement boundary at the northern edge of the town to reflect the natural topographical setting.

The indicative allocations of housing in the proposed Development Framework therefore reflect the planning constraints, housing requirements and environmental issues associated with the options for development in Auchterarder. Table 3.1 provides a summary of the development proposals on each site within the Framework area, along with the proposed phasing of development and overall densities.

Table 3.1 Housing Development Sites and Phasing

	Kirkton			Castlemains			Townhead		
	Phase			Phase			Phase		
	1	2	3	1	2	3	1	2	3
Gross area (hectares)	14.5	10.87	3.77	4.67	7.78	1.55	4.7	4.0	2.0
Area for employment (ha)	2.0	1.5	0.65	-	-	-	-	-	-
Area for housing (ha)	10.2	7.65	2.55	4.05	6.10	1.4	4.04	3.35	1.61
Area for other (ha) [1]	2.3	1.72	0.57	0.62	1.68	0.15	0.66	0.65	0.39
Housing Densities (units per ha) [3]	19.6			19.3			19.6		
- Phase 1 (2007-2011) total units	200			100			92 [2]		
- Phase 2 (2012-2016) total units	150			64			65		
- Phase 3 (2017-2021) total units	50			59			20		
Total Units	400			223			177		

Note: All dates and areas are indicative only, and exclude the areas proposed for formal recreational facilities north of the Castlemains site.

[1] eg open space, structure planting, paths, etc.

[2] Including flatted affordable housing.

[3] Housing densities calculated based on total area for housing and not gross area of site

The draft Development Framework has taken account of strategic and locational alternatives during its development, and the approach to assessment of alternatives for the SEA has therefore focused on analysis of the different phasing options for each of the three identified development sites. Revisions and refinements to the masterplan have evolved in response to issues identified during the environmental assessment process.

3.4 FRAMEWORK FOR ENVIRONMENTAL ASSESSMENT

The SEA has been undertaken using the set of SEA objectives identified in Section 2.5. These cover each of the environmental topics scoped into the assessment. A framework for the environmental assessment was developed during the scoping stage of the SEA. This framework sets out the objectives, sub-objectives and criteria for each SEA topic, and has been used to guide the assessment. The SEA framework is presented in Table 3.2.

The appraisal objectives were derived and presented at two levels. For each environmental topic (column 1) a high level or strategic objective (column 2) sets out the overall intention and direction for that topic, and secondly a set of sub-objectives (column 3) provides more specific appraisal intentions. In synthesising these objectives and sub-objectives the SEA team has drawn on:

- Objectives of relevance to the assessment identified in the review of relevant strategies, plans and programmes undertaken at the scoping stage and discussed in Section 2.2;
- The initial analysis of the environmental baseline including trends, issues and areas of specific environmental problems (see Sections 2.3 and 2.4); and
- A review of appropriate “generic” objectives from relevant guidance documents on SEA, including the Scottish Executive SEA Toolkit.

The objectives were selected and drafted through a process of refinement involving the WSP SEA team, PKC, Gillespies and the development consortium. The process of objective setting was guided by the need to maintain the relevance of the objectives to the specific scope and influence of the Development Framework.

A series of appraisal criteria or indicators (column 4) were identified in the framework which focus the appraisal and wherever possible provide a basis for quantitative analysis of the environmental issues. It is important to note that the purpose of these indicators is to guide the prediction and evaluation of the environmental effects, and that monitoring of implementation of the anticipated developments will require consideration of a separate series of indicators which can be used to track retrospectively the environmental effects over time.

The objectives and indicators used in the assessment were refined as a result of specific comments received from the Consultation Authorities on the Scoping Report, and the final SEA appraisal framework is presented in Table 3.2. The specific comments and changes that have been made as a result of the Scoping consultation are identified in the summary table in Appendix F.

Table 3.2 SEA Framework

Topic	Objective	Sub Objective	Criteria
A r Qua ty and No se	To m n m se the effects wh ch changes n no se and a r qua ty may have on the commun ty	■ To m n m se the effects of the deve opment on a r qua ty ■ To m t no se and a r qua ty re ated nu sance from traff c us ng new and ex st ng roads n the town ■ To prov de enhanced routes for journeys on foot and by cyc e ■ To encourage and fac tate the prov s on of better pub c transport serv ces ■ To remove traff c adjacent to recreat ona areas	■ Nu sance from construct on act v t es and traff c ■ Traff c f ows on key routes ■ Leve s of roads de no se and oca a r po utant concentrat ons (n part cu ar NO_2 and PM_{10}) ■ New footways and cyc eways ■ Pub c transport serv ces ■ Speed reduc ng measures on new and ex st ng roads
So s and Geo ogy	To ensure that the deve opment does not mpact adverse y on so s and geo ogy	■ To prevent contam nat on of and ■ To m n m se the oss of pr me qua ty agr cu tura so s	■ Area of pr me agr cu tura and affected ■ Area of brownf e d or dere ct and re-used ■ Best pract ce construct on env ronmenta management
Aquat c Env ronment	To safeguard the qua ty and status of waterbod es, prevent an ncrease n the r sk of f ood ng and use water respons b y	■ To prevent the po ut on of watercourses (surface and ground) dur ng construct on and operat on of the deve opment ■ To prevent an ncrease n run-off from the hous ng area ■ To des gn homes to m n m se the use of fresh water	■ Qua ty of surface watercourses ■ Insta at on of SUDS measures ■ Use of permeab e pav ng ■ Water meter ng, water recyc ng and ow water app ances n new houses
C mate Change	To m n m se d rect and nd rect em ss ons of carbon d ox de (CO_2) from the deve opment and to protect new homes from the effects of c mate change	■ To m n m se energy used n mater a s se ect on and construct on ■ To make new homes as energy eff c ent as reasonab y pract cab e ■ To encourage non-car trave wherever poss b e ■ To des gn and bu d homes wh ch recogn se the	■ Spec f cat on of ow embod ed energy n bu d ng mater a s ■ Target ng 'Exce ent standard n BREEAM assessment for homes ■ Incorporat on of energy eff c ency and m cro-generat on systems n new homes and

Topic	Objective	Sub Objective	Criteria
		potent a effects of c mate change and can adapt to them	bu d ngs ■ Wa k ng and cyc ng routes to oca serv ces wh ch are more d rect than tr ps by car ■ Hous ng des gn wh ch w w thstand greater and more severe weather effects ■ Sourc ng mater a s oca y to he p reduce the overa carbon footpr nt of the deve opment
Landscape, Townscape & V sua Effects	To conserve andscape features, to strengthen and enhance andscape character and to m n m se v sua ntrus on	■ To m n m se mpacts on the andscape sett ng of Auchterarder ■ To protect and ntegrate w th andscape and townscape features, character and qua ty ■ To m n m se mpacts on key v ews and v sua ntrus on ■ To promote a h gh qua ty of hous ng ayout and des gn wh ch ref ects the oca d st nct veness and vernacu ar of the Auchterarder area.	■ Landscape character area(s) affected ■ Landscape and townscape features affected ■ Key v ews affected ■ Hous ng des gns ref ect ng vernacu ar arch tecture, mater a s and sett ement ayouts
B od vers ty	To protect b od vers ty and ensure no net oss n key hab tats and spec es	■ To m n m se hab tat oss from new hous ng deve opment ■ To protect adjacent hab tats and spec es dur ng construct on works ■ To enhance oca b od vers ty through appropr ate p ant ng and hab tat creat on	■ Area of key hab tats ost (part cu ar y LBAP hab tats) ■ Effects on known LBAP spec es popu at ons ■ Measures to protect hab tats adjacent to hous ng areas ■ Proposa s for hab tat creat on (nc ud ng SUDS ponds)
Cu tura Her tage	To protect and where appropr ate enhance the bu t her tage, the archaeo og ca resource and the h stor c sett ng	■ To prevent deve opment from hav ng a detr menta d rect or nd rect effect on des gnated features ■ To m n m se the d rect effects of deve opment on archaeo og ca s tes ■ To m n m se nd rect effects on the sett ngs of	■ Known archaeo og ca s tes affected (des gnat ons nc ude SAMs, sted bu d ngs and gardens and des gned andscapes) ■ Effects on sett ngs of cu tura her tage s tes and features

Topic	Objective	Sub Objective	Criteria
		archaeo og ca s tes, bu d ngs, des gned andscapes and h stor c andscapes ■ To enhance access to, and nterpretat on of, cu tura her tage features n the town	■ Effects on h stor c andscapes and the r sett ngs ■ Prov s on of wa k ng routes to h stor c or cu tura s tes and nterpretat ve mater a s
Popu at on and Human Hea th	To create a hea thy and safe v ng env ronment for Auchterarder	■ To ma nta n and mprove opportun t es to access open space and recreat ona fac t es ■ To create cond t ons to encourage wa k ng and cyc ng for short journeys ■ To enhance commun ty safety through des gn and ayout ■ To m n m se adverse effects from ex st ng or future sources of po ut on ■ To avo d the use of mater a s hazardous to hea th	■ Proport on of popu at on w th n 500m of recreat ona fac t es ■ Length of new wa kways and cyc eways nk ng hous ng to oca fac t es ■ Deve opment ayouts to promote safety and pr or t se peop e over cars ■ Spec f c env ronmenta prob ems or nu sances from ex st ng sources and those wh ch cou d be created as a resu t of mp ementat on ■ Veh c e numbers n Auchterarder town
Mater a Assets	To deve op and operate the assets assoc ated w th the framework n a resource eff c ent manner	■ To create and manage new recreat ona fac t es and open space ■ To max m se the use of recyc ed mater a s n construct on ■ To manage waste respons b y dur ng construct on ■ To des gn for recyc ng n house des gn and deve opment ayouts	■ New or enhanced recreat on fac t es and open space ■ Susta nab ty of mater a s used n the deve opment ■ Waste m n m sat on and recyc ng p an for construct on ■ Des gn ng for recyc ng

3.5 APPRAISAL METHODOLOGY

3.5.1 Overall Approach

At this level of appraisal, it is necessary to focus on the strategic level environmental effects insofar as they relate to the policy context. It is not the purpose of this SEA to identify the site level environmental effects of developing the three sites identified in the Development Framework, but rather to assess the environmental implications of adopting the Development Framework as council policy. However, the results of the SEA provide a means of focusing-in on the likely significant environmental effects, which can be used to inform work undertaken for later stages of development such as Environmental Impact Assessment (EIA) if required. Whilst for the most part it has not proven possible to undertake a quantitative assessment of the Development Framework, this would arguably not be the most appropriate means of assessment in any event given its strategic nature.

The Development Framework provides for phased development over three distinct but interdependent phases spanning a significant period of time up to 2020, when development is anticipated to be complete. The environmental assessment has therefore considered the environmental effects separately at each of the three stages, taking account of changes to the environmental baseline that will have occurred as a result of the preceding phase of development.

Within each phase of development, a spatially-based approach to assessment was considered to be the most appropriate. At the Scoping stage, it was envisaged that assessment tables would be required for the Castlemains and Kirkton sites, and separately for the Townhead site, followed by an assessment of the combined (or cumulative) effects of the Development Framework at each phase of development. However, in undertaking the assessment, and recognising the need for it to remain strategic and at a "policy" level, it emerged that a more useful approach was to undertake a single assessment table for each phase of development, incorporating all of the effects from the three sites and from other components within the Development Framework, such as the proposed provision of sports facilities. This approach has proved to be the most effective in capturing the likely significant environmental effects of that Development Framework and identifying areas where further assessment and/or mitigation is likely to be required.

The baseline used for assessment of each phase of development incorporates the changes arising as a result of previous phases of development. The assessment of operational effects presented for Phase 3 of development can therefore be considered to represent a strategic level assessment of the environmental effects of the completed and implemented Development Framework, as it takes into account the environmental effects of each of the preceding phases.

An assessment has been undertaken of the significant environmental effects:

- of Phase 1 on the predicted future baseline at the start of construction; then
- of Phase 2 on the predicted future baseline at the proposed commencement date of this phase, including the changes arising as a result of Phase 1; then
- of Phase 3 on the predicted future baseline at the proposed commencement date of this phase, including the changes arising as a result of Phases 1 and 2.

In addition to this assessment, predicted cumulative effects of the Development Framework with other development proposals in the area are presented. This relates to cumulative effects other than the effects of the combination of the three masterplan sites. The assessment of cumulative effects takes into account any other significant development proposals or concepts within and proximate to Auchterarder, which may influence the extent or significance of predicted environmental effects when considered alongside proposals in the Development Framework.

3.5.2 Prediction and Evaluation of Effects

Environmental impacts have been predicted for each topic using the SEA framework to guide the scope of the assessment. In particular, the potential impacts of the Development Framework are predicted in relation to the detailed criteria for each topic. These criteria reflect the level of assessment considered appropriate by PKC based on the location-specific approach to the SEA previously discussed. Given the relatively long lead time for the housing developments and the phased nature of the proposals, the assessment considers the potential for significant impacts during the construction stages in addition to the longer term permanent and operational effects of the development.

Nonetheless, this assessment is strategic, and relates to the environmental effects of adopting the Development Framework as a matter of Council policy rather than the site-level environmental effects of development that may come forward as a result of it. Recognising that some form of further project-level environmental assessment work will need to be carried out in support of the planning process prior to implementation of each of the three development

sites, the SEA identifies environmental topics and issues which should be the subject of such work (either as part of an Environmental Impact Assessment (EIA) or through component studies to support applications for planning permission). This relates in particular to elements of the assessment where it has not been possible, at the strategic level, to determine precisely all of the potential environmental effects of the Development Framework.

Environmental effects are predicted taking into account available information on the phased development of each site and the nature and sensitivity of the baseline environment. A set of assumed mitigation measures is also presented to enable an informed assessment of residual significance for each topic area to be made, ie effects that will remain significant after the application of assumed mitigation.

Use of the detailed appraisal indicators has depended upon the extent to which it is possible to quantify effects. Some elements of the Development Framework have been assessed in a qualitative way, drawing on professional judgement. In addition, the assessment of indirect elements such as traffic related noise and air quality draws upon existing information prepared in support of the Development Framework and detailed quantitative appraisal of these effects is not considered to be within the scope of the SEA. Instead, and where data support it, assessment of such effects has been undertaken based upon proxy information such as traffic flow data and using appropriate professional judgement to estimate the significance of effects.

3.5.3 Assumptions and Limitations

A number of assumptions have been made in the environmental assessment process to take account of information gaps and areas of uncertainty. The key assumption of relevance to the assessment findings is that the mitigation measures which are set out in the appraisal tables would be implemented in the construction and design of the development sites, and therefore the significance of the environmental effects predicted equates to the residual nature of these effects.

A number of other, more specific assumptions have been made in the assessment. These are listed below:

- Timescales for the construction period for each phase of the development (ie Phases 1, 2 and 3) have been estimated as approximately 24 months, with a 12 month gap period between phases. The method and phasing of construction on each site is not currently known and would be a matter for detailed consents, however an assessment of the environmental effects of the construction stages of each phase has been undertaken based on the appraisal team's knowledge of construction processes and best practice site environmental management.
- The dates of completion of each phase of the development have been estimated as 2010 (Phase 1), 2013 (Phase 2) and 2016 (Phase 3).
- The development areas for each of the three sites during each phase have been scaled approximately from the plans presented for the three phases in the Masterplan document.
- As the details regarding the location and number of new recreational playing fields are still under discussion between Perth & Kinross Council and the Consortium, the SEA has assumed that one new synthetic football pitch would be constructed adjacent to the community school on land within the Castlemains site (in Phase 1), one grass football pitch would be constructed on the site to the north west of Castlemains (on Castleton Road) during Phase 2, and a further grass football pitch and changing facilities would be constructed at this location in Phase 3. These allocations may change slightly in the coming months but this is not considered to alter the findings of the SEA significantly.

Finally, traffic data in the form of predicted with-development turning movements were prepared to support the Masterplan. These data have been used qualitatively in commenting on the potential for traffic related noise and local air quality effects as a result of operational traffic from the new housing areas. The traffic data relate to the completed development and have therefore only been used to comment specifically on the Phase 3 assessment since this represents the complete housing development. It should be noted that the traffic predictions were undertaken some time ago and relate to a project opening year some time before the likely completion of Phase 3. However in the absence of other information the data have been used as a reasonable approximation of the operational traffic effects of the development.

3.6 ASSESSMENT OF ENVIRONMENTAL EFFECTS

3.6.1 Overview

The assessment of environmental effects presented in the tables in Appendix E has been undertaken in line with the principles of SEA – ie that the assessment must be by its very nature strategic. With this in mind, and the fact that the

Development Framework is effectively a masterplan for development and not a proposal per se, the level of detail of the assessment is less developed than would be the case in, for example, an EIA or component studies that would be required at the planning stage. It is not possible to determine precisely what the environmental effects of such development would be at the strategic (policy) level, and in any event such assessment would pre-empt the results of a more appropriate level of assessment at the detailed stage. The mitigation and monitoring proposals presented in Chapter 4 further address this issue, in particular focusing on where specific mitigation measures have been assumed in the assessment, and where further detailed assessment work is considered most important.

The following provides a summary of the environmental effects predicted to arise for each phase of development. For a full account of the assessment reference should be made to the appraisal tables presented in Appendix E.

3.6.2 Summary of Environmental Effects – Phase 1

During construction, the main effects of the Development Framework are likely to arise from disruption due to construction activities and vehicles, particularly given that this will be the first phase of development and will therefore be most noticeable to existing residents. There will be significant short term adverse visual effects of construction works for properties close to the new sites which have existing views across them as well as on the setting of various Scheduled Ancient Monuments (SAM) and listed buildings.

Once operational, residents living in Phase 1 housing areas are likely to use motorised transport for commuting to work, and therefore the associated traffic noise and air quality, as well as greenhouse gas emissions, are predicted to remain a minor negative impact, although unlikely to be significant. This may need to be tested in more detail at the planning stage. The change to the existing landscape and visual environment is also considered to represent a minor negative effect upon both landscape character and key local views. The loss of semi-improved grassland may have a minor adverse effect in relation to its biodiversity value, although this is considered to be limited and subject to more detailed species and habitat survey work at the appropriate stage.

3.6.3 Summary of Environmental Effects – Phase 2

The construction effects of Phase 2 are predicted to be broadly similar to those arising as a result of Phase 1. In particular, the disruption effects arising from construction work and traffic movements and the temporary negative effects on landscape character and key views. There is assumed to be a period of around 12 months between completion of Phase 1 and commencement of Phase 2.

Once completed, the increased provision of open space, paths for walking and play facilities in Auchterarder will represent a minor positive effect in relation to population and material assets. In Phase 2, there is predicted to be a slight negative indirect effect on the setting of Auchterarder Castle SAM, although no physical impacts on the SAM will result. A minor negative impact on roadside noise and local air pollution is also predicted due to the effects of increases in resident populations and their associated car travel.

3.6.4 Summary of Environmental Effects – Phase 3

Again, the construction effects of Phase 3 are related to disruption, noise and air quality, and the temporary landscape and visual effects. In this final phase, construction is moved closer to residential receptors which may therefore be subjected to a greater magnitude of change, although all aspects will be limited to the 24 month period of construction.

As discussed previously, the assessment of the operational effects of Phase 3 represent an assessment of the Development Framework overall, as it takes into account changes to the environmental baseline as a result of the initial phases of development. In addition, this can be considered to represent an assessment of the cumulative effects of the different phases of development as each has been considered in relation to changes arising from the previous. In broad terms, potential significant adverse effects are predicted in relation to noise and air quality as well as landscape and visual effects, and further assessment and site specific mitigation is likely to be required for these topic areas. However, it is considered that the development overall will result in positive effects on population and material assets through the provision of new and upgraded community facilities, open space and sports pitches, new housing units including affordable housing, and land for employment use. In relation to climate change, it is considered likely that most people will continue to use their cars for travel outside of the town, and this will contribute to carbon emissions. There will be an increase in traffic related greenhouse gas emissions as a result of the development and therefore a minor negative impact is predicted to result in relation to climate change.

3.6.5 Significance of Environmental Effects across Phases

Due to the nature of the likely construction programme, it is considered that the significance of environmental effects for each topic area will change across the construction programme, in particular where the effects of a single phase of development may result in environmental effects of lower significance than would arise as a result of the Development Framework in its entirety.

Table 3.3 presents a summary of the predicted residual environmental effects of each phase of development for each SEA topic. The appraisal of significance of predicted impacts has been undertaken based upon professional expertise and judgements as to the sensitivity of the environmental baseline and the likely magnitude of the effects predicted to occur (as presented in the appraisal tables in Appendix E). The SEA toolkit acknowledges that the context and nature of the plan, programme or strategy being appraised will be a key factor in the determination of significance. The strategic level of this assessment and the status of the document as a Development Framework has determined that, in the absence of suitable criteria, thresholds or site specific information on the likely environmental effects, professional judgement is the most appropriate means of evaluating effects. At the consenting stage of development it will be possible to apply significance criteria to predicted environmental effects, but this is not considered appropriate for the SEA.

Table 3.3 Significance of Effects by Phase

Topic		Phase 1	Phase 2	Phase 3
Air Quality and Noise	Construction	Minor Negative	Minor Negative	Minor Negative
	Operation	Minor Negative	Minor Negative	**Moderate Negative**
Soils and Geology	Construction	Not significant	Not significant	Not significant
	Operation	Not significant	Not significant	Not significant
Aquatic Environment	Construction	Not significant	Not significant	Not significant
	Operation	Not significant	Not significant	Not significant
Climate Change	Construction	Not significant	Not significant	Not significant
	Operation	Not significant	Not significant	Minor Negative
Landscape, Townscape & Visual Effects	Construction	**Moderate Negative**	**Moderate Negative**	**Moderate Negative**
	Operation	Minor Negative	Minor Negative	Minor Negative
Biodiversity	Construction	Minor Negative	Minor Negative	Minor Negative
	Operation	Minor Negative	Minor Negative	Minor Negative
Cultural Heritage	Construction	Minor Negative	Minor Negative	Minor Negative
	Operation	Not significant	Minor Negative	Minor Negative
Population and Human Health	Construction	Minor Negative	Minor Negative	Minor Negative
	Operation	Minor Positive	Minor Positive	**Moderate Positive**
Material Assets	Construction	Not significant	Not Significant	Not significant
	Operation	Minor Positive	Minor Positive	**Moderate Positive**

3.7 CUMULATIVE ENVIRONMENTAL EFFECTS

The cumulative effects of each of the phases of development are reported as the operational effects of Phase 3 of development (see Section 3.6.4 above). However, it is also possible for environmental effects to arise cumulatively with other known developments in the vicinity. In addition to considering the cumulative effects of each of the different components, sites and phases in the Development Framework, it is also necessary to consider the potential for environmental effects to arise as a result of the Development Framework in combination with other development proposals in and around Auchterarder. It is possible for these to result in an accumulation of smaller effects which, when combined, result in a more significant effect.

The Responsible Authority has identified the following main development proposals and aspirations in the general area:

- Gleneagles West – proposal for 170 housing units (mixture of holiday homes and permanent residences), constructed over a number of phases, the first of which totalling 50 units;
- A proposed film studio to the north east of Auchterarder (no applications or specific proposals have been brought forward for this to date); and
- A series of applications and consents for wind farms to the south, south west and north west of Auchterarder. There is currently a public inquiry ongoing on various wind farm proposals in the Ochil Hills.

It is considered that only the first of these has the potential to result in cumulative effects if it is constructed concurrently with any of the phases of the Development Framework. These could include further increases in construction and operational traffic on local roads, and related noise and air quality effects on sensitive receptors. In addition, there may be an increased demand for community facilities provided through the Development Framework, such as open space, sports facilities and play areas. However, in comparison to the proposed housing densities in the Development Framework, this is a relatively small development and it is unlikely that any cumulative effects arising would be significant.

3.8 IMPLICATIONS FOR ADOPTING THE DEVELOPMENT FRAMEWORK

Although this environmental appraisal has been undertaken with information regarding the specific development areas proposed for the housing expansion in Auchterarder, the approach throughout has been to maintain a strategic approach which reflects the level of information available on the development and which recognises that the SEA is for the implementation of the Development Framework as Supplementary Planning Guidance (SPG). A distinction needs to be made between the role of SEA in assessing the environmental implications of adopting the Development Framework as part of Council policy and the role of the development control process in determining applications for planning permission which are likely to be forthcoming once the Development Framework becomes SPG. For this reason the SEA has not sought to undertake environmental appraisal at a level which would be commensurate with project level Environmental Impact Assessment (EIA) or with the level of detail of designs which would be required at planning application stage.

The SEA has therefore set out a broader view of the environmental implications of adopting the Development Framework as SPG. These have focussed on identification of the likely environmental issues of concern and the aspects of the policy which may give rise to significant environmental effects when the Framework is implemented. The assessment has concluded that noise and air quality as well as landscape, townscape and visual effects are those where there is the potential for significant negative environmental effects to arise in the longer term as the housing sites are occupied. Significant positive effects are predicted to arise as a result of the Development Framework in relation to population and material assets, relating to the new and improved provision of various community facilities such as open space, play areas, paths and sports facilities.

In addition to identification of these issues, the SEA provides an overarching framework or vehicle to ensure that potentially significant environmental effects are considered in more detail at the appropriate stages of project development and that the need for any mitigation to reduce or offset these effects is addressed in more detail. In this respect the ER can be used to scope the areas where further environmental studies may be needed, to provide high level baseline information and assessment on which to base these studies and to highlight uncertainties or data gaps in the appraisal work that is reported from the SEA

4 Mitigation and Monitoring

4.1 INTRODUCTION

This section presents an overview of the mitigation measures which have been assumed in the appraisal of the environmental effects of the Development Framework. The key mitigation commitments are highlighted in Section 4.2 along with relevant sources of information and guidance. Section 4.3 identifies the significant environmental effects of the Development Framework and the relevant indicators which may be used to monitor these effects as the proposals proceed through planning and implementation.

4.2 MITIGATION

Mitigation is an essential component of the environmental assessment which has been undertaken. The appraisal findings, in terms of the significance of the residual environmental effects of the Development Framework, has been based on assumptions made by the SEA team that certain minimum mitigation and best construction practices would be adopted and adhered to during the construction and operation of the developments. The key mitigation measures which have been assumed are specifically set out in the appraisal tables presented in Appendix E.

It is also important to note that the measures assumed for this SEA are at a strategic level commensurate with the details available on the development and the assessment adopted. In taking the developments forward and assessing them in more detail as appropriate during the development consenting process, further and more site specific mitigation will need to be developed and implemented. For example these measures might include additional surveys for habitats and species on site (and appropriate measures to safeguard any protected species) and targeted site investigations to assess the nature of any historic land uses which may have potential for contamination.

A summary of the mitigation relevant to the significant adverse effects predicted for the Development Framework is set out in Table 4.1.

Table 4.1 Mitigation of Significant Environmental Effects

Significant Effect	Mitigation Measures	Lead Authority	Proposed Timescale
Roadside noise and air quality effects from operational traffic (Phase 3)	Network of new paths and cycleways. Traffic effects to be considered further for noise and air quality.	• Development Consortium/Applicants for development consent • PKC	To support applications for development consent.
Landscape and visual effects during construction (All Phases)	Best practice site management including attention to location of plant, construction compounds, etc.	• Development contractor and client	Construction periods for Phases 1, 2 & 3

The measures identified in Table 4.1 relate only to the significant environmental effects identified through the SEA. However, for each environmental topic within the scope of the assessment there is a range of assumed mitigation identified in the tables in Appendix E. It will be for those ultimately constructing the scheme to implement most of these measures, and the role of PKC as consenting authority to ensure they are provided for within any subsequent planning permission which may be granted.

In addition to the measures identified in the table to specifically address significant effects, a number of other sources of guidance and information of relevance to future mitigation have been identified through the SEA process and as a result of consultation. These are highlighted here for information only:

- SEPA Policy and Supporting Guidance on Provision of Waste Water Drainage in Settlements (Policy 55);
- SEPA Groundwater Protection Policy for Scotland (Policy 19);

- SNH's Landscape Character Assessment (LCA) Report, which includes guidelines specific to each landscape character type identified;
- Perth & Kinross Council's Local Biodiversity Action Plan (LBAP) which identifies species and habitats of local importance which should be taken into account in future surveys and mitigation proposals.

Finally, the detailed layout and design of the housing proposed at Auchterarder should be guided by the original masterplan for the development so that materials, styles and landscaping works fit with the townscape and surrounding landscape of the development sites as closely as possible.

4.3 MONITORING

Unusually for SEA, in the case of the Auchterarder Development Framework there is a high degree of certainty that the development proposals for the three housing sites will proceed in the locations set out, and according to the broad outlines presented in the Development Framework. For development to go ahead, planning applications will need to be made to PKC, and these may require the submission of further environmental information depending upon the views of the Council on the specific circumstances of each site and application.

Any forthcoming planning permissions will almost certainly be accompanied by a series of planning conditions. These conditions will set out controls over the way in which the development should be built and are likely to include environmental aspects. Ultimately, the planning conditions will form the key monitoring 'indicators' for the framework's implementation and the Council will be the authority with the key responsibility for the programme of monitoring, although much of this may be delegated to the applicant. For example the conditions may require a programme of monitoring for site dust and noise during construction to ensure that local residents are not adversely disrupted by construction works, and it is generally the contractor's responsibility to undertake such monitoring on site during construction.

However, it is recognised that this ER, as a strategic overview of the policy, should set out the broad parameters for environmental monitoring. Table 4.2 therefore includes a set of high level issues based on the environmental topics where negative environmental effects have been predicted in the SEA.

Table 4.2 Indicative Monitoring Proposals for the Development Framework

SEA Topic	SEA Objective	Proposed Indicator	Suggested Responsibility
Air Quality & Noise	To minimise the effects which changes in noise and air quality may have on the community	• Road traffic counts • Baseline roadside noise and air quality (NO_2 and PM_{10}) monitoring and assessment prior to developments commencing	• Developers, in consultation with PKC Transportation and Environmental Health
Climate Change	To minimise direct and indirect emissions of carbon dioxide (CO_2) from the development and to protect new homes from the effects of climate change	• Road traffic counts	• Developers, in consultation with PKC Transportation
Landscape & Townscape	To conserve landscape features, to strengthen and enhance landscape character and to minimise visual intrusion	• Site visits to ensure best construction practices and to check landscaping establishes	• PKC Planning (or environmental representative for developers)
		• Considerate Constructors registration	• Developers/Contractors
Biodiversity	To protect biodiversity and ensure no net loss in key	• Site visits to check proper establishment of new tree, shrub and	• PKC Planning (or environmental representative for

	habitats and species	habitat planting, and protection of existing habitats.	developers)
Cultural Heritage	To protect and where appropriate enhance the built heritage, the archaeological resource and the historic setting	• Site visits to ensure adequate protection of cultural heritage sites and features.	• PKC Planning (or environmental representative for developers)
Population & Human Health	To create a healthy and safe living environment for Auchterarder	• Site visits to ensure best construction practices • Considerate Constructors registration	• PKC Planning (or environmental representative for developers) • Developers/Contractor

It is only during implementation of the Development Framework, and the development control process, that the most significant environmental effects will be identified and this will determine the requirements for monitoring of the developments.

5 Next Steps

5.1 PROPOSED CONSULTATION TIMESCALES AND METHODS

The ER has been published for public consultation in July 2007, and this will be followed by consultation period of 6 weeks. The ER will be uploaded to the PKC website for public access (www.pkc.gov.uk).

Following public consultation, the comments received from the SEA Consultation Authorities and other representations from the public will be taken into account in the final drafting of the Development Framework, which PKC anticipates to be adopted by late Summer 2007 together with a post adoption SEA Statement.

5.2 ANTICIPATED MILESTONES

The key remaining milestones in the development of the SEA are as follows:

- Publication of this ER – August 2007;
- Consultation on ER and Development Framework – August/September 2007;
- Amendments to the Development Framework (and ER if required) – September 2007;
- Adoption of the Development Framework and publication of the post adoption SEA Statement – late 2007.

Appendix A List of Strategies, Plans and Programmes

Appendix A List of Strategies, Plans and Programmes Reviewed

National Policy and Legislation
Changing Our Ways, Scotland's Climate Change Programme, 2006
Scotland's Biodiversity: It's In Your Hands, 2004
Scotland's Historic Environment Policy (SHEP1): Scotland's Historic Environment
Scottish Executive's Community Regeneration Statement Better Communities in Scotland – Closing the Gap, June 2002
National Waste Plan, 2003
National Transport Strategy
National Air Quality Strategy
Choosing Our Future: Scotland's Sustainable Development Strategy
Scotland's Climate Change Declaration, 2007
Water Framework Directive
Designing Places: a policy statement for Scotland
Scottish Historic Environment Policy 2
Passed to the Future

National Planning Policy/Guidance
SPP1: The Planning System, 2002
SPP3: Planning for Housing, 2003
SPP6: Renewable Energy (draft), and Annex to PAN 45 Planning for Micro Renewables, 2006
SPP7: Planning and Flooding, 2004
SPP17: Planning for Transport, 2005
NPPG5: Archaeology and Planning, 1998
NPPG11: Sport, Physical Recreation and Open Space, 1996
NPPG14: Natural Heritage, 1999
NPPG18: Planning and the Historic Environment, 1999

Regional and Local Policy
Perth and Kinross Structure Plan, Written Statement, Approved 13 June 2003
Perth and Kinross Structure Plan, Sustainability Appraisal, July 2002
Strathearn Area Local Plan, 2001
New Perth Local Plan (Consultative Draft), 2004
Draft TACTRAN Regional Transport Strategy, 2007
Perth and Kinross Council Affordable Housing Policy, 2005
Working Together for Perth and Kinross: The Community Plan, 2004-2008
Perth & Kinross Joint Environmental Strategy and Action Plan, 2004 to 2008
Perth and Kinross Council Local Housing Strategy 2004-2009, 2004
Tayside Local Biodiversity Action Plan, 2002
Tayside Landscape Character Assessment, 1999
Tayside Area Waste Plan

Appendix B Analysis of Strategies, Plans and Programmes

Appendix B Analysis of Strategies, Plans and Programmes

This appendix has been structured as follows:

1. Reviews of National Policy and Legislation;
2. Reviews of National Planning Policy; and
3. Reviews of Regional and Local policy.

A template form has been completed for each of the strategy and policy documents identified in the list presented in Appendix A.

1 National Policy and Legislation

Name and Date of Plan: Changing our Ways, Scotland's Climate Change Programme, Scottish Executive (2006)	
Legislation and Main Requirements: Based on the global level response to climate change (such as UN Framework Convention on Climate Change and Kyoto Protocol), the document aims to tackle Scotland's impact on climate change.	
Relevance to Framework: Sets out the strategic context for carbon emissions reductions in Scotland and what can be achieved in the residential sector.	
Relevant SEA Objectives and Issues: In this document, the Executive puts in place a framework to help reduce Scotland's vulnerability to the effects of climate change. It recognises that understanding climate impacts and developing effective adaptation responses is an important element of the overall climate change response, and features many of the themes outlined in SEA guidance (e.g. biodiversity, population, water and soil). The document sets out the targets for Scotland's require carbon emissions reductions in order to contribute to UK national and international targets. Although no specific objectives are listed, the report highlights five guiding principles for sustainable development and climate change: • Living within environmental limits • Ensuring a strong, healthy and just society • Achieving a sustainable economy • Promoting good governance • Using sound science responsibly	
Opportunities/synergies: • Housing contribution to Scottish share and targets through selection of materials, energy efficiency, design and use of renewables.	**Constraints/challenges:** • Ensuring high quality of design, specification of materials and exceeding Building Regulations requirements in relation to efficiency and energy use.

Name and Date of Plan: Scotland's Biodiversity: It's In Your Hands, Scottish Executive, 2004
Legislation and Main Requirements: This is a strategy for the conservation and enhancement of biodiversity in Scotland – references various biodiversity and environmental regulations.
Relevance to Framework: Sets out strategic context for conservation.
Relevant SEA Objectives and Issues: Five strategic objectives are listed in the plan. Three of relevance are listed here: • To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats • To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice • To develop an effective management framework that ensures biodiversity is taken into account in all

decision making	
Opportunities/synergies: • Ensuring that rail infrastructure recognises and adheres by the biodiversity aims and objectives	**Constraints/challenges:** • development of transport infrastructure and network may be hindered by strict biodiversity regulations

Name and Date of Plan: Scotland's Historic Environment Policy (SHEP 1): Scotland's Historic Environment, March 2006
Legislation and Main Requirements: SHEP 1 is the overarching policy statement for the historic environment providing a framework for more detailed strategic policies and operational policies to inform the day-to-day work of a range of organisations.
Relevance to Framework: Protection and sustainable management of the historic environment from the potential negative impacts of new infrastructure.
Relevant Objectives: • The historic environment is cared for, protected and enhanced for the benefit of our own and future generations • There is increased public appreciation and enjoyment of the historic environment amongst all people of Scotland and visitors to the country • The historic environment's importance as a key asset in Scotland's economic, social and cultural success is recognised and skilfully enhanced

Opportunities/synergies: • Policy set in place to protect the historic environment	**Constraints/challenges:** • Housing infrastructure may impact negatively on the historic environment

Name and Date of Plan: The Scottish Executive's Community Regeneration Statement *Better Communities in Scotland – Closing the Gap*, June 2002
Legislation and Main Requirements: Sets out how the Scottish Executive and partners intend to turn around disadvantaged communities to improve quality of life and social justice.
Relevance to Framework: Stresses importance of regeneration and community planning in reducing inequality and poverty.
Relevant Objectives: • To make core public services as effective as possible in deprived areas • To ensure individuals and communities have the social capital, including resources, to take advantage of and increase the opportunities available to them Community regeneration has 5 priority areas – health, education, transport, crime and employment

Opportunities/synergies: • Better housing has a role to play in improvement of social capital	**Constraints/challenges:** • Housing is only a small part of the strategy which focuses on public services and social capital

Name and Date of Plan: National Waste Plan, Waste Action Scotland, 2003
Legislation and Main Requirements: Framework Directive on Waste (75/442/EEC) (as amended), The Environment Act 1995.
Relevance to Framework: waste management and resource efficiency in Scotland.
Relevant Objectives: The aims of the Plan are to minimise the impact of waste on the environment, both locally and globally, to improve resource use efficiency in Scotland, and to remedy the environmental injustices suffered by those who have to live with the consequences of a wasteful society.

Opportunities/synergies:	Constraints/challenges:
• Reduction in waste created by construction of new housing developments	• Improving re-use, recovery and recycling in the construction sector

Name and Date of Plan: National Transport Strategy	
Legislation and Main Requirements: Prepared to set out the long term future for transport in Scotland.	
Relevance to Framework: Growth in housing and population in the town will imply a demand for transportation and access to areas outwith Auchterarder by future residents.	
Relevant Objectives: The NTS has five high level objectives for transport: • Promote economic growth • Improve integration • Promote social inclusion • Improve safety of journeys • Protect our environment and improve health Reduction of emissions forms one of three key strategic outcomes of the strategy which is relevant to this review. Improvements to junctions on the A9 at Auchterarder also contribute to the outcome to improve journey times and connections.	
Opportunities/synergies: • The strategic outcomes are intended to help deliver on other key priorities which include regeneration • Walking and cycling links will be important to ensure local journeys can be undertaken by non motorised modes	**Constraints/challenges:** • Increased housing development will give rise to an increase in private vehicle journeys • Need for improved public transport services to minimise impacts of increased car travel

Name and Date of Plan: National Air Quality Strategy, DEFRA, January 2000	
Legislation and Main Requirements: sets out the air quality strategy for the Uk with objectives and targets, refers to Environment Act 1995 legislation	
Relevance to Framework: traffic and transport emissions are major air pollutants	
Relevant Objectives: The primary objective is to ensure that ambient air quality in public places poses no significant risk to health or quality of life. The aim of the plan is to reduce the levels of 8 harmful pollutants present in the air, which in turn promote; • The protection of human health. • The protection of vegetation and ecosystems.	
Opportunities/synergies: • To look towards reducing pollution caused by transport and therefore protecting the health of people and the environment	**Constraints/challenges:** • Reducing congestion and pollution caused by traffic

Name and Date of Plan: Choosing Our Future, Scottish Sustainable Development Strategy	
Legislation and Main Requirements: Sets out the measures that are proposed in Scotland to help meet the UK national sustainable development framework (*One future, different paths*).	
Relevance to Framework: Provides a context for sustainability, including environmental objectives, for new development.	
Relevant Objectives: The principles for sustainable development from the UK Framework are: • Living within environmental limits • Ensuring a strong, health and just society • Achieving a sustainable economy • Promoting good governance • Using sound science responsibly The priorities for Scotland are listed as the following: sustainable consumption and production; climate change and energy; natural resource protection and enhancement; sustainable communities.	
Opportunities/synergies: • New housing can contribute to various aspects of sustainable development in a positive way	**Constraints/challenges:** • Linking housing with community development, sustainable transport and resource use

Name and Date of Plan: Scotland's Climate Change Declaration, 2007	
Legislation and Main Requirements: Commitment of all local authorities in Scotland to tackle climate change.	
Relevance to Framework: PKC has committed to the SCCD and is therefore required to take climate change into account in all of its actions.	
Relevant Objectives: • Reduction in greenhouse gas emissions • Ensure that greenhouse gas reduction and climate change adaptation measures are clearly incorporated into [local authority] new and existing strategies, plans and programmes, in line with sustainable development principles.	
Opportunities/synergies: • Opportunity to ensure energy efficiency and greenhouse gas emissions are considered and addressed in the Development Framework.	**Constraints/challenges:** • Energy supply mixed determined at national level. Costs of micro generation.

Name and Date of Plan: Water Framework Directive (Directive 2000/60/EC)
Legislation and Main Requirements: The Water Environment and Water Services (Scotland) Act 2003. The Water Framework Directive requires EU Member States to put in place systems for managing their water environments, based on natural river basin districts and underpinned by extensive environmental monitoring and scientific investigation ("river basin management").
Relevance to Framework: The WFD requires that the physical and polluting impacts of land based activities are controlled, with the aim of achieving "good" ecological status for most rivers etc by specified deadlines –

2015 in most cases.

Relevant Objectives:

The basic objectives to be achieved as set out in Article 4(1) are summarised below:

- Prevent deterioration in the status of surface water bodies
- Protect, enhance and restore all bodies of surface water with the aim of achieving good surface water status by 2015
- Prevent deterioration of the status of groundwater bodies
- Protect, enhance and restore all bodies of groundwater with the aim of achieving good groundwater status by 2015
- Prevent or limit the input of pollutants to groundwater and reverse any significant and sustained upward trend in the concentration of pollutants in groundwater
- Comply with European wide measures against priority and hazardous substances
- Achieve compliance with any relevant standards and objectives for protected areas

Opportunities/synergies:	**Constraints/challenges:**
• Scope is not restricted to what happens on or in water • Land use and activities are central to achieving the objectives of the WFD • Requires consideration of any human intervention that could effect water quality, wherever the intervention takes place	• Challenge of achieving, monitoring and sustaining good ecological status • Adopting a holistic approach to water management based on river basin management planning

Name and Date of Plan: Designing Places: A Policy Statement for Scotland

Legislation and Main Requirements: No legislative requirement.

Relevance to Framework: Sets out the policy context for policy, design, practice and education for designing important places.

Relevant Objectives:

Six qualities are identified at the heart of design:

- Identity;
- Safe and pleasant places;
- Ease of movement;
- A sense of welcome;
- Adaptability;
- Good use of resources.

Notes that sustainability should focus on greener lifestyles, energy efficiency, mixed uses, biodiversity, transport and water quality.

Opportunities/synergies:	**Constraints/challenges:**
• Stresses the importance of reflecting the local landscape in design and using landscape design to create harmonious places.	• Sensitive location and design including house styles are needed.

Name and Date of Plan: Scottish Historic Environment Policy 2	
Legislation and Main Requirements: Ancient Monuments and Archaeological Areas Act 1979	
Relevance to Framework: Sets out Scottish Ministers' policy on scheduling of nationally important monuments	
Relevant Objectives: This is largely an operational document on scheduling and policy and does not contain objectives relevant to this review.	
Opportunities/synergies: • Several scheduled monuments in the vicinity of Auchterarder	**Constraints/challenges:** • Protection of settings of monuments

Name and Date of Plan: Passed to the Future, Historic Scotland 2002	
Legislation and Main Requirements: Historic Scotland's policy for the sustainable management of the historic environment	
Relevance to Framework: Protection and sustainable management of the historic environment from the potential negative impacts of new development and infrastructure	
Relevant Objectives: Historic Scotland considers the following broad principles as fundamental: • Recognising value • Good stewardship • Assessing impact • Working together	
Opportunities/synergies: • Preserving the historic environment • Promoting sustainable practices	**Constraints/challenges:** • Maintaining setting of historic features adjacent to the development areas

2 National Planning Policy

Scottish Planning Policy (SPPs)

Name and Date of Plan: SPP1: The Planning System, Scottish Executive, November 2002	
Legislation and Main Requirements: Town and Country Planning (Scotland) Act 1997, Planning etc (Scotland) Act 2006, and associated Regulations.	
Relevance to Framework: SPP1 identifies the main objectives and role of the planning system in ensuring sustainable development.	
Relevant Objectives: Primary objectives of the planning system are: • to set the land use framework for promoting sustainable economic development; • to encourage and support regeneration; and • to maintain and enhance the quality of the natural heritage and built environment.	
Opportunities/synergies: • The planning system can encourage more sustainable travel patterns by allocating land for development and selecting priority areas for regeneration to maximise the scope for access by foot, cycle and public transport; • Opportunities to pursue shared sustainable development objectives.	**Constraints/challenges:** • Protecting the natural and built environment whilst enabling appropriate, sustainable development to take place.

Name and Date of Plan: SPP3: Planning for Housing, Scottish Executive, February 2003
Legislation and Main Requirements: Housing (Scotland) Act 2001. Town and Country Planning (Scotland) Act 1997, Planning etc (Scotland) Act 2006, and associated Regulations.
Relevance to Framework: Sets national level policy and priorities on the role of the planning system in the delivery of housing.
Relevant Objectives: • Extensions to existing towns must respect the landscape setting and architectural styles of the existing town, • Plans and proposals for residential development should seek to minimise adverse effects on natural heritage, including landscape character and biodiversity. • The potential impact of housing land allocations on archaeological sites and landscapes of historic importance must also be fully considered. Care must be taken to avoid impact on the site and setting of scheduled monuments which are safeguarded in the national interest. • To create quality residential environments - New housing should make a positive contribution to the built and rural environment, and should be designed and laid out to provide lasting benefits. • To encouraging energy efficient housing, including siting and orientation. • To ensure landscape is considered as a part of the design and layout from the outset of the development process (developers should consider advance structural planting to establish a landscape framework within which development can take place). • To promote the inclusion of SUDS in new development. • To integrate land use and transport to tackle climate change

Opportunities/synergies:	Constraints/challenges:
• Implementing a sustainable new housing development on the edge of an existing settlement in line with SPP3 principles.	• Protecting the character and amenity of the existing settlement.

Name and Date of Plan: Draft SPP6: Renewable Energy and Annex to PAN 45 Planning for Micro Renewables, Scottish Executive, 2006	
Legislation and Main Requirements: Town and Country Planning (Scotland) Act 1997, Planning etc (Scotland) Act 2006, and associated Regulations.	
Relevance to Framework: Recongises the importance of domestic and community level micro renewables in reducing carbon emissions and helping to meet the Government's targets to renewable energy generation.	
Relevant Objectives: • to support the full range of renewable generation technologies, including micro-renewables, to enable Scotland to realise its considerable renewable energy potential. • to see a major increase in the small-scale production of heat and electricity from renewable sources • to recognise the importance of ensuring that developers fully consider options for micro-renewable technologies as part of a range of energy efficiency measures to be included in new residential developments.	
Opportunities/synergies: • to consider micro renewables at an early stage in the design process. • To contribute to Government objectives for micro renewables.	**Constraints/challenges:** • Technology and cost.

Name and Date of Plan: SPP7: Planning and Flooding, Scottish Executive, 2004	
Legislation and Main Requirements: Sustainable Flood Management supported by The Water Environment and Water Services (Scotland) Act 2003 ("The WEWS Act").	
Relevance to Framework: Gives guidance to ensure that development proposals have due regard to flood risk and sustainable flood management.	
Relevant Objectives: • To prevent further development which would have a significant probability of being affected by flooding or which would increase the probability of flooding elsewhere. • To prevent further development which adds to the areas of land which requires protection by flood prevention measures, affect the ability of the functional flood plain to attenuate the effects of flooding by storing flood water, or interfere detrimentally with the flow of water in the flood plain. • To ensure flooding from sources other than watercourses and on the coast are addressed where new development is proposed, if necessary through a drainage assessment.	
Opportunities/synergies: • Opportunities for SUDS. • Inclusion of appropriate flood prevention/protection measures in scheme design.	**Constraints/challenges:** • Development on functional flood plain. • Need consider implications of site development on other areas.

Name and Date of Plan: SPP17: Planning for Transport, Scottish Executive, 2005.
Legislation and Main Requirements: Town and Country Planning (Scotland) Act 1997, Planning etc (Scotland) Act 2006, and associated Regulations.

Relevance to Framework: Integration of transport and development proposals to encourage sustainable travel patterns.	
Relevant Objectives: • To reduce the need to travel; • To enable people to access local facilities by walking and cycling; • To provide high quality public transport access, in order to encourage modal shift away from car use to more sustainable forms of transport, and to fully support those without access to a car; • To effectively manage motorised travel, within a context of sustainable transport objectives.	
Opportunities/synergies: • Consider the impact of the development on the need to travel, and provision of public transport.	**Constraints/challenges:** • Deregulated responsibility for public transport.

National Planning Policy Guidance (NPPGs)

Name and Date of Plan: NPPG5 Archaeology and Planning, October 1998	
Legislation and Main Requirements: associated with Planning Advice Note *Archaeology - the Planning Process and Scheduled Monument Procedures*	
Relevance to Framework: Sets the national policy framework for protection of archaeology from development proposals.	
Relevant Objectives: • To preserve and enhance archaeological heritage	
Opportunities/synergies: • Consider the impact of implementing the development framework on archaeology.	**Constraints/challenges:** • Protection of the archaeological resource whilst facilitating appropriate sustainable development.

Name and Date of Plan: NPPG11 Sport, Physical Recreation and Open Space, June 1996	
Legislation and Main Requirements: considers the land use implications of sport and physical recreation and aspects of informal physical recreation that take place in urban open spaces and the countryside, associated with the House of Commons Environment Committee's Report The Environmental Impact of Leisure Activities, 1995	
Relevance to Framework: access to sport and the implications on land use as a result of this access	
Relevant Objectives: • To meet the sporting and recreational needs of residents, tourists and visitors, while safeguarding the quality of the natural and cultural heritage. • To safeguard a system of open spaces for formal and informal recreation needs within urban areas, ranging from easily accessible small local green spaces to country parks and path networks. • To safeguard facilities and resources for sport and recreation in urban areas and the countryside which contribute to existing and predicted future needs. • To take a long term and spatially strategic perspective on provision. • To provide local facilities, including for children's play, to meet standards within or close to residential areas. • To lead by example in resisting the development of council owned land.	
Opportunities/synergies: • Ensuring that leisure activities are a means of creating awareness of, and appreciation for, the	**Constraints/challenges:** • Potential environmental impacts of sport and recreation.

environment. • To improve the health of the population.	

Name and Date of Plan: NPPG14 Natural Heritage, January 1999	
Legislation and Main Requirements: Wildlife and Countryside Act 1981, Town and Country Planning (Scotland) Act 1997, Planning etc (Scotland) Act 2006, and associated Regulations.	
Relevance to Framework: Provides guidance on how the Government's policies for the conservation and enhancement of Scotland's natural heritage should be reflected in land use planning, associated with the UK BAP.	
Relevant Objectives: • To ensure that society's land requirements in terms of housing, economic activity, transport infrastructure and recreation are met in ways which do not erode environmental capital. • To conserve and enhance Scotland's natural heritage.	
Opportunities/synergies: • To protect and, where appropriate, enhance, the local environment and natural heritage.	**Constraints/challenges:** • Habitat protection, prevention of fragmentation and compensation.

Name and Date of Plan: NPPG18 Planning and the Historic Environment, April 1999	
Legislation and Main Requirements: Town and Country Planning (Scotland) Act 1997, Planning etc (Scotland) Act 2006, and associated Regulations.	
Relevance to Framework: national planning guidance for planning and the historic environment, deals primarily with listed buildings, conservation areas, world heritage sites, historic gardens, designed landscapes and their settings	
Relevant SEA Objectives and Issues: • Protection, conservation and enhancement of the historic environment.	
Opportunities/synergies: • Consideration of opportunities to enhance the historic environment in the vicinity of the development.	**Constraints/challenges:** • Possible restrictions on development in proximity to historic environment features.

3 Regional and Local Policy

Name and Date of Plan: Perth and Kinross Structure Plan, Written Statement Approved 13 June 2003

Legislation and Main Requirements: key strategic land-use planning document providing the long term land use planning vision for development and the environment in Perth & Kinross to the year 2020

Relevance to Framework: Sets out the strategic context for development in Auchterarder

Relevant Objectives:

The Structure Plan has three key themes: (1) building sustainable communities (2) creating a sustainable economy (3) sustaining the environment and resources. Relevant strategic planning objectives from these themes are listed below:

Building Sustainable Communities

- To produce a more efficient settlement pattern by ensuring that the location of new development contributes to reducing the need to travel and supporting developments/locations which support alternative modes of travel thus dealing with general traffic growth and traffic growth caused by development.
- To ensure access to town centres, community and other facilities and other concentrations of activity for those who require access while reducing unnecessary or inefficient forms of access.
- To create healthier and safer living environments.
- To improve provision of infrastructure for walking, cycling and public transport.
- To improve air quality, reduce pollution problems and congestion.
- To accommodate population and household growth.
- To provide housing in the most energy efficient locations and manner while raising the quality of design in new development.

Creating a Sustainable Economy

- To address the relationships between employment areas and other land uses, primarily housing, to ensure that new development reduces the need to travel.

Sustaining the Environment and Resources

- To protect habitats and species of international, national and local importance
- To protect landscape character of national and local importance
- To ensure the maintenance and enhancement of the cultural heritage
- To ensure the safeguarding of water resources and water quality
- To protect and enhance built heritage
- To improve the standard of design of new development to improve the quality of the urban environment
- To ensure the use or rehabilitation of previously developed land and making the best use of previously used buildings and materials
- To protect and enhance green space in urban areas
- To secure optimal use of renewable and non-renewable resources
- To promote a sustainable approach to waste management in Perth and Kinross through the reduction, re-use and recycling of waste

A series of Structure Plan policies are then set out under each of the above three themes as chapters of the Plan. These policies have not been included in this review as they essentially provide further and very specific detail to the objectives listed above.

A sustainability appraisal of the Structure Plan was undertaken. Relevant environmental objectives and criteria from this appraisal have been reviewed and included in the list of objectives in Appendix C.

Other Information:

- Auchterarder located in the Lowland Area of Perth & Kinross, within the planning area of Strathearn
- Auchterarder is classed as a former Burgh. The former Burghs are identified as the main settlements for growth and the provision of services.

- The Strategy of the Structure Plan seeks to promote greater social and economic self-sufficiency and facilitate diversification of the rural economy.
- Housing allocations in Auchterarder are discussed and reference is made to the requirement for a masterplan for housing which will be integrated with the Strathearn Area Local Plan.

Opportunities/synergies:	**Constraints/challenges:**
• Plan objectives and policies provide the strategic context for the Development Framework	• Ensuring that new development in the former Burghs (including Auchterarder) is consistent with the environmental and resource objectives and policies of the Structure Plan

Name and Date of Plan: Strathearn Area Local Plan 2001

Legislation and Main Requirements: Statutory land use planning document prepared as part of Development Plan by Perth & Kinross Council. Presents the Council's detailed land use policies and proposals for the Strathearn area which includes Auchterarder.

Relevance to Framework: Sets out the local development and planning context for development in Auchterarder

Relevant Objectives:

The Plan does not contain objectives *per se*, however in relation to the pursuit of sustainable development, the following issues, *inter* alia, are listed:

- The identification of previously undeveloped land only where there are no further opportunities to re-use underused or derelict land within settlements.
- The conservation of the most important areas of the natural and built environment together with the promotion of such practices to the whole of the Strathearn area.

The Strategy of the Plan aims to:

- Provide development opportunities in appropriate locations.
- Protect and enhance the quality and diversity of Strathearn's environment.

Relevant planning policies (or extracts thereof) which provide suitable objectives for the appraisal have also been identified. Very specific policies and locational criteria have not been included. The relevant extracts have been listed as follows:

- The quality of the natural environment should be maintained or improved.
- Biodiversity is conserved.
- The production of all types of waste should be minimised.
- Conserve landscape features, sense of local identity and strengthen and enhance landscape character.
- Use of energy efficient materials.
- Avoid development in areas liable to flood or where remedial measures would adversely affect flood risk elsewhere.
- Development which affects areas designated as being of local nature conservation or geological interest will not normally be permitted.
- The Council will protect and seek to enhance Historic Gardens and Designed Landscapes.
- The Council will safeguard the settings and archaeological landscapes associated with Scheduled Ancient Monuments from adverse development.
- The Council will seek to protect unscheduled sites of archaeological significance and their settings.

Opportunities/synergies:	**Constraints/challenges:**
• Plan objectives and policies provide the local planning context for the Development Framework and support general environmental protection principles	• Ensuring that new development in Auchterarder is consistent with the environmental policies of the Local Plan

Name and Date of Plan: Working Together for Perth and Kinross: The Community Plan 2004-2008	
Legislation and Main Requirements: Produced by the Community Planning Partnership under the Local Government in Scotland Act 2003 to improve life for all through combined private, public and voluntary sector working	
Relevance to Framework: Indirect relevant through joint public and private sector involvement in the Auchterarder expansion	
Relevant Objectives: The vision of the plan is of a confident and ambitious Perth and Kinross, to which all can contribute and all can share. The area will be a vibrant, successful, safe, healthy and sustainable environment, where learning and enterprise are nurtured and supported. There are no specific objectives of relevant to the SEA.	
Opportunities/synergies: • Partnership working on housing	**Constraints/challenges:** • n/a

Name and Date of Plan: Perth & Kinross Joint Environmental Strategy and Action Plan 2004 to 2008	
Legislation and Main Requirements: Prepared by the Perth & Kinross Community Planning Environment Partnership, which is intended to support the Community Plan's vision (see above). The Plan sets out an interim vision and strategic framework for the environment.	
Relevance to Framework: Sets out the Council's aspirations and areas for environmental protection and enhancement.	
Relevant Objectives: There are no specific objectives in the Strategy. Relevant topics in the plan include: climate change and energy use; sustainable consumption, production and use of natural resources. The priorities for action are (1) biodiversity (2) waste (3) energy and (4) sustainable construction. Priorities for the natural heritage include the following: • allow freshwater ecosystems to function naturally; • ensure that new and existing urban development enhances opportunities for landscape and wildlife value; • improve the access network for recreation.	
Opportunities/synergies: • Contribution to priorities through good design and following guidance on sustainable buildings.	**Constraints/challenges:** • Guidance on issues for sustainable construction.

Name and Date of Plan: Draft TACTRAN Regional Transport Strategy, 2007
Legislation and Main Requirements: Transport (Scotland) Act 2005
Relevance to Framework: Sets regional policy on the transport network and its future development.
Relevant Objectives: Economy: To ensure transport helps to deliver regional prosperity. • To improve the efficiency, reliability and integration of the movement of goods and • people; and • To address issues of peripherality associated with the TACTRAN area. Accessibility, Equity and Social Inclusion: To improve particularly for those suffering from social exclusion. • To improve access to employment. • To improve access to public services, including health and education. • To improve access to retail, recreation and leisure facilities. • To reduce severance and social and economic isolation caused by transport, or by a lack of it. • To improve the accessibility and inclusivity of the transport system.

The Environment: To ensure that the transport system contributes to safeguarding the environment and promotes opportunities for improvement.

- To contribute to the achievement of the Scottish national targets and obligations on greenhouse gas emissions.
- To promote a transport system that respects both the natural and the built environment.
- To promote a shift towards more sustainable modes.

Health and Well-Being: To promote the health and well-being of communities.

- To help meet or better all statutory air quality requirements in the TACTRAN area.
- To promote a culture of active and healthy travel.

Integration: To improve integration, both within transport and between transport and other policy areas.

- To improve integration of the transport modes.
- To ensure integration with land-use planning.

Opportunities/synergies:	**Constraints/challenges:**
• Minimising the environmental effects of transport. • Improving access to public transport. • Promoting sustainable travel patterns.	• Changing attitudes to personal travel and associated behaviours.

Name and Date of Plan: Perth and Kinross Council Affordable Housing Policy, 2005	
Legislation and Main Requirements: Housing (Scotland) Act 2001	
Relevance to Framework: Policy for provision of affordable housing in new housing developments.	
Relevant Objectives: • **Affordable housing quote of 25% on sites of 5 units and above.** • **On site provision preferred for larger sites.**	
Opportunities/synergies: • To contribute to levels of affordable housing provision on Perth and Kinross.	**Constraints/challenges:** • On versus off site provision of affordable housing.

Name and Date of Plan: Perth and Kinross Council Local Housing Strategy 2004-2009, 2004	
Legislation and Main Requirements: Housing (Scotland) Act 2001	
Relevance to Framework: Although predominantly related to local authority housing, the LHS does recognise the role of affordable housing in social inclusion.	
Relevant Objectives: • **Increase the supply of affordable housing for sale by a minimum of 130 units by 2009**	
Opportunities/synergies: • To contribute to levels of affordable housing provision in Perth and Kinross.	**Constraints/challenges:** • N/A

Name and Date of Plan: Tayside Local Biodiversity Action Plan, 2002	
Legislation and Main Requirements: Wildlife and Countryside Act 1981 (as amended)	
Relevance to Framework: Protection and enhancement of biodiversity across the whole of Tayside.	
Relevant Objectives: • to conserve and enhance the region's biodiversity, taking into account both local and national priorities • Protection of 6 key habitat types: coasts and estuaries, farmland, upland, urban and built environment, water and wetlands, and woodland.	
Opportunities/synergies:	**Constraints/challenges:**

• Protection and enhancement of LBAP priority habitats and species.	• enabling appropriate development whilst protecting key habitats and species.

Name and Date of Plan: Tayside Landscape Character Assessment, 1999	
Legislation and Main Requirements: Prepared for Scottish Natural Heritage as part of a series of landscape character assessments covering Scotland	
Relevance to Framework: Sets out a written and mapped assessment of the landscape character of the Tayside region, which includes Auchterarder.	
Relevant Objectives: • The document does not include any relevant objectives.	
Opportunities/synergies: • Sets landscape context for Auchterarder, which has been used in the development of the masterplan.	**Constraints/challenges:** • Ensuring that new development integrates with the existing landscape

Name and Date of Plan: Tayside Area Waste Plan	
Legislation and Main Requirements: Required by the Scottish National Waste Strategy (1999) which implemented European directives on waste.	
Relevance to Framework: Based on the core waste management hierarchy of reduce, re-use, recycle and compost, energy recovery and disposal to landfill. Waste management to be considered during construction of housing and in design to move domestic waste management up the waste hierarchy.	
Relevant Objectives: • To contribute to the sustainable development of the Tayside area by developing waste management systems that will control waste generation, reduce the environmental impacts of waste production, improve resource efficiency, stimulate investment and maximise the economic opportunities arising from waste.	
Opportunities/synergies: • Waste minimisation in new development • Sustainable construction practices • Designing for domestic recycling	**Constraints/challenges:** • Changing public attitudes and behaviours

Appendix C Relevant Objectives

Appendix C Relevant Objectives

This appendix presents the long list of objectives which have been identified from the review of relevant strategies, plans and programmes and other relevant sources of objectives (eg guidance and previous SEAs) and which have been listed in order of the most relevant SEA topic.

SEA Topic	Objectives	Source
Air Quality and Noise	To produce a more efficient settlement pattern by ensuring that the location of new development contributes to reducing the need to travel and supporting developments/locations which support alternative modes of travel thus dealing with general traffic growth and traffic growth caused by development. To ensure access to town centres, community and other facilities and other concentrations of activity for those who require access while reducing unnecessary or inefficient forms of access. To improve air quality, reduce pollution problems and congestion. To address the relationships between employment areas and other land uses, primarily housing, to ensure that new development reduces the need to travel. To improve provision of infrastructure for walking, cycling and public transport.	Perth & Kinross Structure Plan 2003
	To ensure everyone can enjoy a level of ambient air quality in public places which poses no significant risk to health or quality of life	UK Air Quality Strategy
	Air quality objectives for key air pollutants including pollutants from transport emissions	
	Air quality objectives for the protection of plants and ecosystems	
	Reducing emissions Protect our environment and improve health	National Transport Strategy
	To limit noise related nuisance from operation of the transport system and development of new infrastructure	National Transport Strategy Strategic Environmental Assessment (2006)
	To maintain and improve air quality	SEA Toolkit
	Limit air pollution to levels that do not damage natural systems	A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
	Reduce the need to travel	
	Reduce respiratory illness	
	To meet European and UK commitments and targets on greenhouse gases and local air quality	SPP1 The Planning System
	To contribute to the achievement of the Scottish national targets and obligations on greenhouse gas emissions.	TACTRAN RTS

SEA Topic	Objectives	Source
	To help meet or better all statutory air quality requirements in the TACTRAN area.	
	To set out a range of noise issues that should be considered in formulating development plans and making planning decisions	PAN 56 Planning and Noise
	To demonstrate the role of the planning system in preventing and limiting the adverse effects of noise without prejudicing investment in enterprise, development and transport	
Soil and Geology	Ensure pollutant inputs to soil and land use practices that do not irreversibly affect soil quality Prevent contamination of land	Perth & Kinross Structure Plan: Sustainability Appraisal
	Development which affects areas designated as being of local nature conservation or geological interest will not normally be permitted	Strathearn Area Local Plan
	Safeguard soil quality, quantity and function Reduce levels of brownfield, derelict and contaminated land	SEA Toolkit
	To safeguard the quantity and quality of the soil resource	National Transport Strategy Strategic Environmental Assessment (2006)
	Reduce contamination, and safeguard soil quality and quantity	A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
	Minimise waste, then re-use or recover it through recycling, composting or energy recovery	
Aquatic Environment	To ensure the safeguarding of water resources and water quality	Perth & Kinross Structure Plan 2003
	Limit water pollution to levels that do not damage natural systems	A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
	Maintain water abstraction, run off and recharge with carrying capacity (including future capacity)	
	Maintain and restore key ecological processes (e.g. hydrology, water quality and coastal processes)	
	Promote the use of sustainable drainage systems Ensure development does not constitute unacceptable flood risk	Perth & Kinross Structure Plan: Sustainability Appraisal
	To prevent further development which would have a significant probability of being affected by flooding or which would increase the probability of flooding elsewhere. To prevent further development which adds to the areas of land which requires protection by flood prevention measures, affect the ability of the functional flood plain to attenuate the effects of flooding by	SPP7: Planning and Flooding

SEA Topic	Objectives	Source
	storing flood water, or interfere detrimentally with the flow of water in the flood plain. To ensure flooding from sources other than watercourses and on the coast are addressed where new development is proposed, if necessary through a drainage assessment.	
	Avoid development in areas liable to flood or where remedial measures would adversely affect flood risk elsewhere	Strathearn Area Local Plan
	Allow freshwater ecosystems to function naturally	Perth & Kinross Joint Environmental Strategy and Action Plan
	Maintain water run-off and recharge within carrying capacity	SEA Toolkit
	To support the achievement of the good water status objective of the Water Framework Directive (WFD)	Scotland Rural Development Programme 2007 – 2013 SEA Environmental Report, Scottish Executive (2006)
Climate Change	To tackle climate change and energy use	One Future Different Paths – UK's Shared Framework for Sustainable Development
	Reduce emissions of pollutants from buildings and vehicles, taking into account greenhouse gas emissions and global climate change	Perth & Kinross Structure Plan: Sustainability Appraisal
	Climatic factors – to reduce energy consumption and CO_2 emissions and the associated impacts of climate change (e.g. flooding)	National Transport Strategy Strategic Environmental Assessment (2006)
	To reduce the cause and effects of climate change Reduce greenhouse gas emissions	SEA Toolkit
	Reduce vulnerability to the effects of climate change e.g. flooding, disruption to travel by extreme weather	A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
	To contribute to the achievement of the Scottish national targets and obligations on greenhouse gas emissions.	TACTRAN RTS
	To integrate land use and transport to tackle climate change To encouraging energy efficient housing, including siting and orientation.	SPP3 Planning for Housing
	To support the full range of renewable generation technologies, including micro-renewables. To see a major increase in the small-scale production of heat and electricity from renewable sources. To ensure developers fully consider options for micro-	SPPP6: Renewable Energy

SEA Topic	Objectives	Source
	renewable technologies as part of a range of energy efficiency measures to be included in new residential developments.	
Landscape, Townscape & Visual Effects	To protect landscape character of national and local importance To improve the standard of design of new development to improve the quality of the urban environment.	Perth & Kinross Structure Plan 2003
	Protect and enhance designed landscapes, greenbelt and trees and woodlands	Perth & Kinross Structure Plan: Sustainability Appraisal
	Conserve landscape features, sense of local identity and strengthen and enhance landscape character	Strathearn Area Local Plan
	Ensure that new and existing urban development enhances opportunities for landscape and wildlife value	Perth & Kinross Joint Environmental Strategy and Action Plan
	Create places, spaces and buildings that work well, wear well and look well	A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
	Protect and enhance the landscape everywhere and particularly in designated areas	
	To safeguard the character, diversity and unique qualities of the landscape	National Transport Strategy Strategic Environmental Assessment (2006)
	To ensure that society's land requirements in terms of housing, economic activity, transport infrastructure and recreation are met in ways which do not erode environmental capital. To conserve and enhance Scotland's natural heritage.	NPPG14: Natural Heritage
	Value and protect diversity and local distinctiveness	SEA Toolkit
	Extensions to existing towns must respect the landscape setting and architectural styles of the existing town, Plans and proposals for residential development should seek to minimise adverse effects on natural heritage, including landscape character. To ensure landscape is considered as a part of the design and layout from the outset of the development process (developers should consider advance structural planting to establish a landscape framework within which development can take place).	SPP3: Planning for Housing
Biodiversity	To protect habitats and species of international, national and local importance	Perth & Kinross Structure Plan 2003
	Protect and enhance biodiversity through national and local designated sites and sites of importance identified through the Tayside Biodiversity Action Plan	Perth & Kinross Structure Plan: Sustainability Appraisal

SEA Topic	Objectives	Source
	No net loss in key habitats and species, monitored through the Tayside Biodiversity Partnership Habitat Action Plans	
	The conservation of the most important areas of the natural and built environment together with the promotion of such practices to the whole of the Strathearn area Biodiversity is conserved Development which affects areas designated as being of local nature conservation or geological interest will not normally be permitted	Strathearn Area Local Plan
	Prevent damage to designated wildlife sites and protected species Reverse the long term decline in farmland birds Provide appropriate opportunities for people to come into contact with and appreciate wildlife and wild places	SEA Toolkit
	To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats	Scotland's Biodiversity: It's in your hands, Scottish Executive, 2004
	To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice	
	To develop an effective management framework that ensures biodiversity is taken into account in all decision making	
	To conserve, safeguard and enhance biodiversity	NPPG 14 Natural Heritage
	Maintain biodiversity, avoiding irreversible losses Provide opportunities for people to come into contact with and appreciate wildlife and wild places	A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
	To protect and enhance current habitats, species and areas afforded protection under international and national designations	Scotland Rural Development Programme 2007 – 2013 SEA Environmental Report, Scottish Executive (2006)
	To reduce habitat fragmentation and enhance habitat connectivity	
	Plans and proposals for residential development should seek to minimise adverse effects on natural heritage, including…biodiversity.	SPP3 Planning for Housing
	To ensure that society's land requirements in terms of housing, economic activity, transport infrastructure and recreation are met in ways which do not erode environmental capital.	NPPG14: Natural Heritage

SEA Topic	Objectives	Source
	To conserve and enhance Scotland's natural heritage.	
	To conserve and enhance the region's biodiversity, taking into account both local and national priorities Protection of 6 key habitat types: coasts and estuaries, farmland, upland, urban and built environment, water and wetlands, and woodland.	Tayside LBAP
Cultural Heritage	To ensure the maintenance and enhancement of the cultural heritage To protect and enhance built heritage and the historic environment	Perth & Kinross Structure Plan 2003
	Protection and enhancement of cultural heritage, namely listed buildings ands buildings of local interest, conservation areas, ancient monuments and sites of archaeological interest	Perth & Kinross Structure Plan: Sustainability Appraisal
	The Council will protect and seek to enhance Historic Gardens and Designed Landscapes The Council will safeguard the settings and archaeological landscapes associated with Scheduled Ancient Monuments from adverse development The Council will seek to protect unscheduled sites of archaeological significance and their settings	Strathearn Area Local Plan
	There is increased public appreciation and enjoyment of the historic environment	Scotland's Historic Environment Policy 1
	Preserve historic buildings, archaeological sites and other culturally important features	A Practical Guide to the Strategic Environmental Assessment Directive ODPM
	To preserve and enhance archaeological heritage	NPPG5: Archaeology and Planning
	Protection, conservation and enhancement of the historic environment.	NPPG18: Planning and the Historic Environment
	To protect, and where appropriate, enhance or restore the historic environment Promote access to the historic environment	SEA Toolkit
	Care must be taken to avoid impact on the site and setting of scheduled monuments which are safeguarded in the national interest.	SPP3: Planning for Housing
Human Health	To create healthier and safer living environments	Perth & Kinross Structure

SEA Topic	Objectives	Source
	To protect and enhance green space in urban areas	Plan 2003
	Protect and enhance the quality and quantity of public open space Improve the level of protection for human health and the environment	Perth & Kinross Structure Plan: Sustainability Appraisal
	Create conditions to improve health Protect and enhance human health Maintain and improve opportunities to access public space	SEA Toolkit
	To promote the health of the human population with improved air quality, improved access to facilities and greater opportunity for engagement in physical activity	National Transport Strategy Strategic Environmental Assessment (2006)
	To create a Safe Route to School for every child in the UK, and maximise the associated benefits of modal shift: including environmental, health and socioeconomic.	Safer Routes to Schools Initiative
	To ensure that the impact of development proposals on transport networks does not compromise their safety or efficiency	SPP1 The Planning System
	To promote a culture of active and healthy travel.	TACTRAN RTS
	Promote healthy living, reduce health inequalities and improve quality of life through increased access and recreation	Scotland Rural Development Programme 2007 – 2013 SEA Environmental Report, Scottish Executive (2006)
Population	To accommodate population and household growth	Perth & Kinross Structure Plan 2003
	Improve the access network for recreation	Perth & Kinross Joint Environmental Strategy and Action Plan
	To achieve sustainable consumption and production	One Future Different Paths – UK's Shared Framework for Sustainable Development (2005)
	To protect the environmental resources on which we depend	
	To create places where people want to live and work, now and in the future	
	To change behaviour to achieve sustainable development	
	To improve the living environment for all communities, particularly through improved access to services and opportunities	National Transport Strategy Strategic Environmental Assessment (2006)
	To meet the sporting and recreational needs of residents, tourists and visitors, while safeguarding the quality of the natural and cultural heritage.	NPPG11: Sport, Physical Recreation and Open Space

SEA Topic	Objectives	Source
	To contribute to levels of affordable housing provision on Perth and Kinross.	Perth and Kinross Council Local Housing Strategy 2004-2009
	To improve access to public services, including health and education. To improve access to retail, recreation and leisure facilities. To reduce severance and social and economic isolation caused by transport, or by a lack of it.	Draft TACTRAN RTS
	To improve integration by making journey planning and ticketing easier and working to ensure smooth connection between different forms of transport.	A Practical Guide to the Strategic Environmental Assessment Directive ODPM 2005
	Create conditions to improve health and reduce health inequalities	
	Promote healthy living	
Material Assets	To provide housing in the most energy efficient locations and manner while raising the quality of design in new development To ensure the use or rehabilitation of previously developed land and making the best use of previously used buildings and materials To secure optimal use of renewable and non-renewable resources To promote a sustainable approach to waste management in Perth and Kinross through the reduction, re-use and recycling of waste	Perth & Kinross Structure Plan 2003
	Encouraging the prevention or reduction of waste production and its harmfulness	Perth & Kinross Structure Plan: Sustainability Appraisal
	The identification of previously undeveloped land only where there are no further opportunities to re-use underused or derelict land within settlements The production of all types of waste should be minimised Use of energy efficient materials	Strathearn Area Local Plan
	To safeguard a system of open spaces for formal and informal recreation needs within urban areas, ranging from easily accessible small local green spaces to country parks and path networks. To safeguard facilities and resources for sport and recreation in urban areas and the countryside which	NPPG11: Sport, Physical Recreation and Open Space

SEA Topic	Objectives	Source
	contribute to existing and predicted future needs. To take a long term and spatially strategic perspective on provision. To provide local facilities, including for children's play, to meet standards within or close to residential areas. To lead by example in resisting the development of council owned land.	
	To contribute to the sustainable development of the Tayside area by developing waste management systems that will control waste generation, reduce the environmental impacts of waste production, improve resource efficiency, stimulate investment and maximise the economic opportunities arising from waste.	Tayside Area Waste Plan
	To minimise the impact of waste on the environment To improve resource use efficiency in Scotland	National Waste Plan 2003
	Promote effective use of existing infrastructure	SEA Toolkit

Appendix D Environmental Baseline

Appendix D Environmental Baseline

AIR QUALITY AND NOISE

D1.1 Air Quality

There are a range of possible sources of local air pollutants and noise in Scotland, principally from transport and locally important industrial activities. In Scotland, Nitrogen Dioxide (NOx) and Particulate Matter (PM10) are generally the main local air pollutants of concern.

Under Part IV of the Environment Act 1995 each local authority in the UK is required to review and assess air quality in their area, measuring air pollution concentrations and predicting future changes with the aim of ensuring the national air quality objectives will be achieved throughout the UK by the relevant deadlines. If a local authority identifies an area where the objectives are not likely to be met, it is required to declare an Air Quality Management Area (AQMA), and prepare and implement a plan to improve the air quality in that area, known as a Local Air Quality Action Plan.

The Perth & Kinross Air Quality Report 2005 states that:

> *"Recent findings based on samples taken at a number of locations in Perth indicate that local air quality is very good. Perth and Kinross meets all the Government's targets except at a few traffic hotspots in Perth where those for the annual average levels of nitrogen dioxide and for particles in 2010 are unlikely to be met.*"

Perth and Kinross Council has completed a second round of air quality Review and Assessments and has declared an Air Quality Management Area (AQMA) covering the whole of Perth in May 2006, for nitrogen dioxide and PM10. Local air quality in Perth and Kinross is generally very good outside Perth itself, which is the only designated AQMA in the local authority area. In addition, Perth and Kinross has no designated Smoke Control Areas (SCA).

There are no relevant designations, and no particular local air quality issues identified from the baseline which relate directly to Auchterarder.

As no air quality monitoring data are available specific to Auchterarder, traffic flows presented in the Perth and Kinross Council Air Quality Updating and Screening Assessment 2006 have been identified as a proxy indicator. These are presented in the tables below for the A824, A823 and A9 as available.

Traffic Flow Data from the NAEI Data Warehouse (2004 data)

Road No.	X	Y	All Vehicles	Car	Bus	LDV	HGVr	HGVa	Moto
A824	293555	712000	2631	2206	50	290	55	5	25
A824	295000	713100	5825	4824	26	544	201	158	72
A824	297700	715300	3462	2824	28	466	92	23	29
A824	292700	712000	3036	2598	68	294	55	11	10
A823	290200	713200	1616	1303	16	200	49	4	44
A823	302000	697800	1739	1450	7	212	39	6	25

Traffic flow data for major roads in Perth and Kinross supplied by Transport Scotland (2005)

Count Ref	Route Number	X	Y	AADTF	Location
JTC00007	A9	301085	717825	25,999	A9 - North of Auchterarder - South of B934
JTC00008	A9	298175	715585	22,954	A9 - North End of Auchterarder By-pass
JTC00009	A9	292715	710738	24,657	A9 - Southwest of Auchterarder
JTC00067	A9	298488	716052	25,711	A9 North of Auchterarder bypass

D1.2 Noise

Noise can be defined as unwanted sound. There are a range of possible sources of noise, one of the most significant of which is transport, particularly where other sources of noise such as industrial activity and electricity generation are not present.

No national or widespread local monitoring of noise is undertaken, and monitoring data are generally only collected for the purposes of informing private development proposals. No meaningful noise data relating to Auchterarder have therefore been identified from sources other than work undertaken to inform development of the the original masterplan. For this proposal in particular, a traffic noise assessment was commissioned to inform development of the original masterplan, and this identified traffic noise from the A9 relating to the Townhead site is a potential issue of concern in relation to the noise environment, although the assessed and measured noise levels indicated that the site is not subjected to traffic noise levels which would have an adverse effect on the proposed development.

The Townhead site slopes steeply upwards from the A9 cutting. The nearest point is approximately 50m from the A9. The area between the road and the site is a steep banking with some trees and undergrowth. The higher parts of the site at 100m from the road are subject to noise from sections of the A9 to the East and West as well as noise from the cutting. This means that the distance reduction from the road is not as high as expected.

Measurements were carried out at three locations throughout the Townhead site to assess the noise levels at different distances from the A9. The site noise from the A9 varies with location and the levels reduce with the distance from the road. The reduction is less than expected by theoretical calculation as the rising ground exposes higher parts of the site to noise from sections of the A9 to the East and West. The noise from these areas varies with wind direction and traffic flow.

The LA_{10} 18 hours levels vary between 61 and 54dB. This is below the 68dB LA_{10} level which is the trigger level for compensation under the Noise Insulation Regulations. PAN 56 Day LAeq levels vary between 62 and 52dB, night LA_{eq} levels are between 55 and 45dB, which places all the site area in NEC Category B.

D1.3 Problems and Opportunities

No significant problems have been identified from the baseline collated.

The noise study commissioned as part of the masterplan development identified that there will be the need for detailed design considerations in relation to ensuring that any new build housing on the Townhead site is not subject to unacceptable noise levels due to its proximity to the A9.

D1.4 Evolution of Baseline without the Development Framework

As no significant problem areas have been identified in Auchterarder, it is not anticipated that a significant change in the baseline would result in the absence of the Development Framework. Any development activity in the absence of the Development Framework is likely to be modest, and therefore significant changes in the noise and air quality baseline are unlikely to result.

In Scotland, local air quality and noise control continues towards addressing specific problem areas through the use of AQMAs, SCAs and nuisance legislation and control. There is nothing in the current environmental baseline collated that suggests any deviation from this trend in Auchterarder.

D1.5 Data Gaps

The data available from the Air Quality Report Perth and Kinross Council (August 2005) are Perth City Centre based i.e. all the studies to attain measurements for Nitrogen Dioxide levels and Particulate Matter are taken from city central Perth Streets.

Perth and Kinross Council confirmed that no air quality assessments have been carried out in Auchterarder.

Perth and Kinross Council confirmed that the only noise monitoring which has been carried out in Auchterarder has been by private companies and as such the results are not publicly available.

D1.6 References

- http://www.airquality.co.uk/archive/laqm/laqm.php – designated AQMAs and SCAs.
- http://www.naei.org.uk/mapping/mapping_2003.php – 2003 emissions mapping.
- Air Quality Report Perth and Kinross Council August 2005.
- Air Quality Updating and Screening Assessment, Perth and Kinross Council, September 2006
- Traffic Noise Assessment: Auchterarder Residential Masterplan, Townhead Site, Acoustic Consultancy Services, August 2001.

D2 SOILS AND GEOLOGY

D2.1 Geology and Hydrogeology

There are no sites or areas designated for their geological interest within 1km of Auchterarder. This includes geological Sites of Special Scientific Interest (SSSI), Geological Conservation Review (GCR) sites and Regionally Important Geological Sites (RIGS). Auchterarder is proximate to the Highland Boundary fault.

Geological Map Sheet no. 91SW (1965), 1:10,560 solid and drift edition and Sheet no. NN 91SE (1963), 1:10,560 solid and drift edition shows the following geological sequence:

Geological Unit	Aquifer Status
Till	Non-Aquifer
Old Red Sandstone - Presumed Correlatives of Ruchill Group (North of Fault)	Minor Aquifer
Old Red Sandstone - Sheriffmuir Group (South of Fault)	Minor Aquifer

Drift geology comprises Till.

SEPA does not attribute a groundwater resource classification to aquifers in Scotland. The BGS 1:625,000 scale Groundwater Vulnerability Map of Scotland (2001) indicates that the

strata beneath the site are classified as highly permeable. The BGS 1:625,000 Hydrogeological Map of Scotland (1988) indicates that the area to the north of the site is underlain by Lower and Middle Old Red Sandstone forming locally important aquifers, aquifers in which flow is dominantly in fissures and other discontinuities. This is considered equivalent to the Environment Agency (England and Wales) classification of a Minor Aquifer, with the overlying Till representing a Non-Aquifer.

D2.2 Soils

The Landmark report has identified the area as a Nitrate Vulnerable Zone.

A study of historical Ordnance Survey maps has been undertaken to identify any potentially contaminative former land uses at or in the close vicinity of the proposed development areas. Historical maps indicate that the Castlemains area has remained as undeveloped open space prior to 1865 until present. The Kirkton area also comprised mainly undeveloped open space prior to 1864 until present, although a small quarry was recorded at the west of the site from pre 1901 to around 1981. Historical maps indicate that the Townhead area has remained as undeveloped open space utilised for gardens and recreational purposes from pre 1864 until the present time.

The following tables detail potentially contaminative historical land uses identified within 500m of each of the development areas.

Castlemains

Surrounding Features	Dates	Distance (m)	Direction
Graveyard	Pre 1865 – Present	230m	South
Burial Ground	Pre 1901 – Present	30m	North
Auction Mart	Pre 1901 – Pre 1981	270m	South
Works	Pre 1991 – Present	290m	South

Kirkton

Surrounding Features	Dates	Distance (m)	Direction
Works	Pre 1959 – Present	450m	South
Works	Pre 1981 – Present	Adjacent	West

Townhead

Surrounding Features	Dates	Distance (m)	Direction
Quarry	Pre 1863 – Pre 1972	140m	Northwest
Then Refuse Tip	Pre 1972 – Pre 1991		
Then Open space	Pre 1991 – Present		
Railway line	Pre 1866 – Present	460m	South
Smithy	Pre 1863 – Pre 1959	410m	East
Then Housing	Pre 1959 – Present		
Water works	Pre 1863 – Pre 1971	215m	West
Then Cistern (Covered)	Pre 1971 – Pre 1991		
Then Trees	Pre 1991 – Present		

St Margaret Hospital	Pre 1959 – Present	140m	Northwest
Works	Pre 1981 – Present	20m	East

As a former refuse tip exists in proximity to the Townhead site, there is the potential for migration of contamination. The presence of glacial till suggests this may be reduced, but nonetheless does not remove the need for more detailed consideration of this issue, in addition to the potential for landfill gas. In addition, the potentially infilled quarry on the Kirkton site is a potential source of contamination and landfill gas.

The Landmark database of environmental information relating to the presence of current and former landfills, waste treatment sites, authorised processes, discharge consents, pollution incidents and enforcements, prohibitions and prosecutions has been reviewed and records no other potential sources of contamination with 250m of any of the three residential development areas. It is therefore assumed that the former refuse tip noted above was never registered with the local authority or SEPA, and was not operated under a Waste Management Licence.

The Soil Survey of Scotland 1:50000 map for Perth and Kinross identifies much of the land in and around Auchterarder as Class 3(1) and 3(2) (land capable of producing a moderate range of crops).

D2.3 Problems and Opportunities

Potentially contaminative historical land uses have been identified at the Kirkton site and in proximity to the Townhead site. The solid geology of the site is highly permeable, giving rise to the potential for migrating groundwater to move contaminants. However, low permeability drift geology may inhibit migration at shallow depth. It is only at this local level that problems and opportunities relating to geology and soils arise.

D2.4 Evolution of Baseline without the Development Framework

There is the potential for migration of pollution, as well as landfill gas, from the quarry at the Kirkton site and the former refuse tip identified in proximity to the Townhead site. However, it is not considered that this potential is any different in the absence of the Development Framework, although it will be for the detailed assessment and design of the site to take into account any issues relating to this.

D2.5 Data Gaps

No site level information has been collated on ground conditions, such as drift lithologies and depths, geotechnical characteristics, geochemical characteristics, and the groundwater regime. This detailed information is not necessary for the SEA but will be required, through intrusive site investigations, if development proposals are brought forward.

No information is available on the potential infilling of the small former quarry at the Kirkton area, and a site inspection and likely intrusive investigations would be required to establish whether the quarry has been backfilled, and the nature of the backfill.

D2.6 References

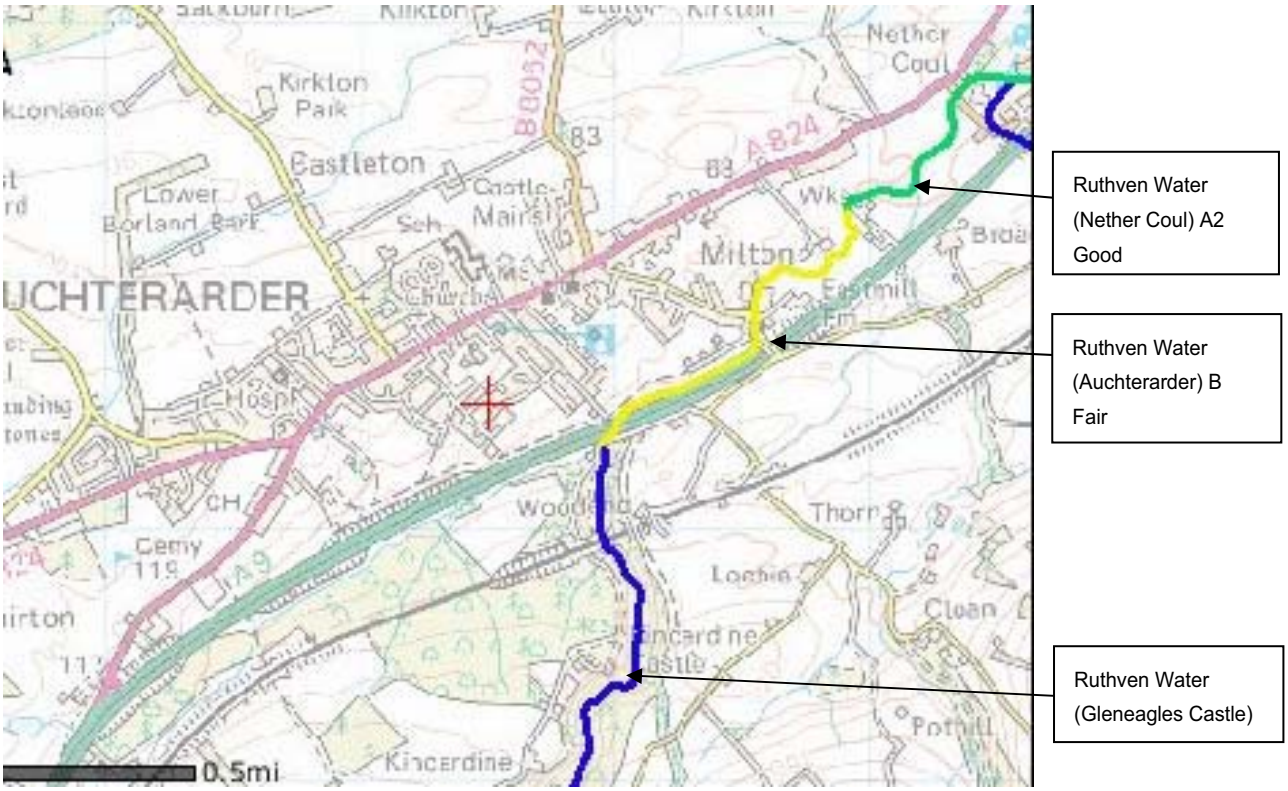
- Geological Map Sheet no. 91SW (1965), 1:10,560 solid and drift edition and Sheet no. NN 91SE (1963), 1:10,560 solid and drift edition
- BGS 1:625,000 scale Groundwater Vulnerability Map of Scotland (2001)
- Perth and Kinross Land Capability for Agriculture – Sheet 58, 1:50,000 map, The Macaulay Institute for Soil Research.
- Environcheck Reports Ref 20833689_1_1 and 20833988_1_1, Landmark Information Group, January 2007.

D3 AQUATIC ENVIRONMENT

D3.1 Water Resources and Water Quality

Ruthven Water is the main watercourse proximate to the site, and is classified by SEPA variously along its course as A2 (Good) and B (Fair). Figure D1 below illustrates the proximity of major watercourses to the subject area, and the current quality classifications according to recent SEPA's 2005 River Quality Classification data.

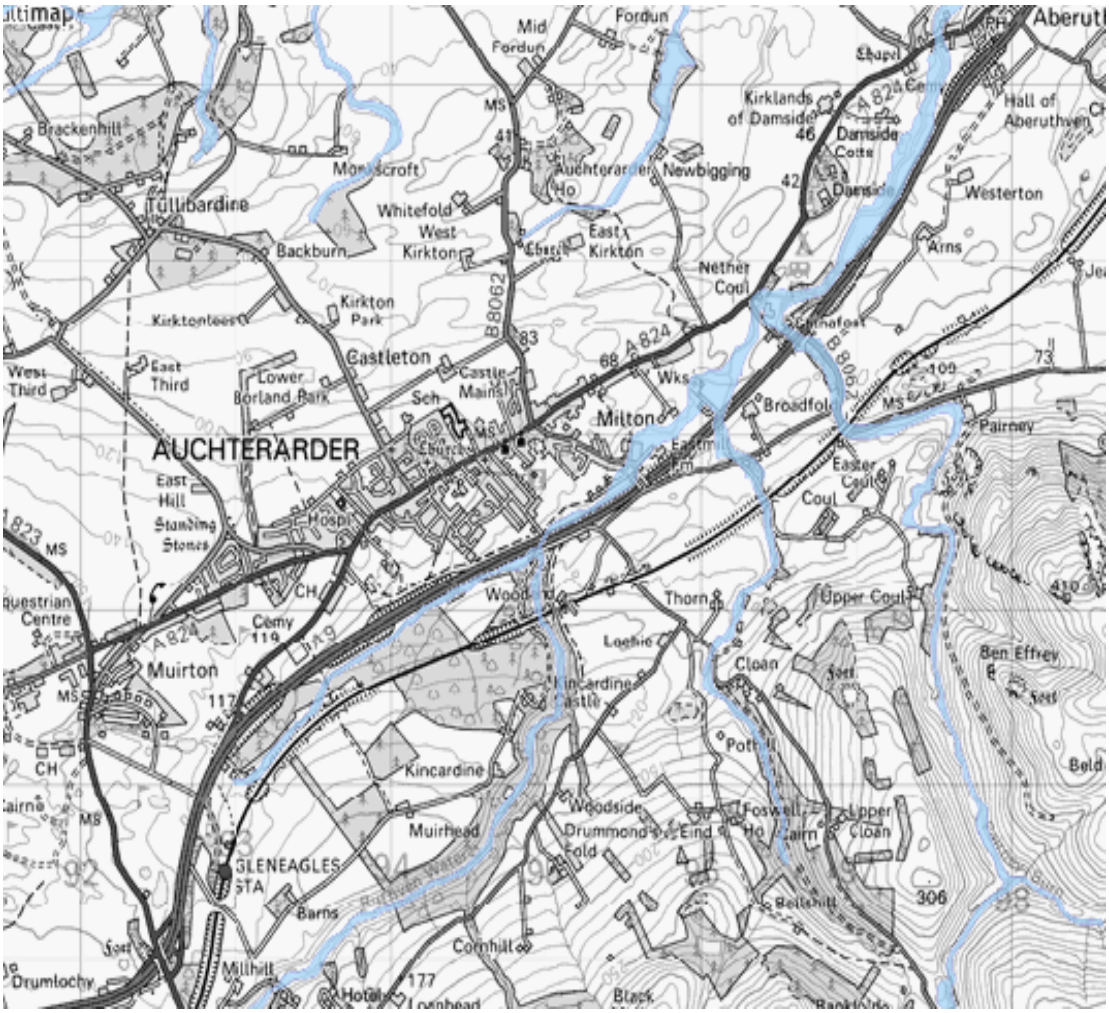
Figure D1 – SEPA Water Quality Classification of Ruthven Water



D3.2 Flooding and Flood Risk

SEPA also publishes flood risk mapping data for the whole of Scotland. Figure D2 below presents flood risk mapping for the subject area.

Figure D2 – SEPA Flood Map
Auchterarder



SEPA's Indicative River and Coastal Flood Map (Scotland) shows the majority of Auchterarder is not within an area where there is an estimated flood risk of 0.5% (1:200) or greater in any given year. However, the sewage works (Grid ref NN 959 132), fish farm (Grid ref NN 960 131), the north of Eastmill Farm (NN 956 129) and Ruthvenvale Mill (NN 955 129) are identified as being subject to a 1 in 200 annual probability of flooding from rivers.

D3.3 Problems and Opportunities

No specific environmental problems have been identified in relation to the aquatic environment. Previous concerns relating to the capacity of the waste water treatment system in Auchterarder have been addressed between Scottish Water and the consortium of housebuilders intending to take forward the Development Framework with funding agreed for upgrading of facilities to provide the necessary capacity. In addition, the risk of increased run-off from the development could be mitigated by sewers and SUDS

D3.4 Evolution of Baseline without the Development Framework

The trend between 2000 and 2005 data on water quality has shown a general improvement in water quality across Scotland, and this is likely to continue. There is the potential for local impacts on water quality of the Ruthven Water as a result of development activities in the area, although there are legislative provisions, including the Water Framework Directive and related regulations in Scotland, to prevent deterioration of water quality. As a result, no deviation from this trend is expected.

D3.5 Data Gaps

There are no gaps in the data presented.

D3.6 References

- www.sepa.org.uk

D4 CLIMATE CHANGE

D4.1 Introduction

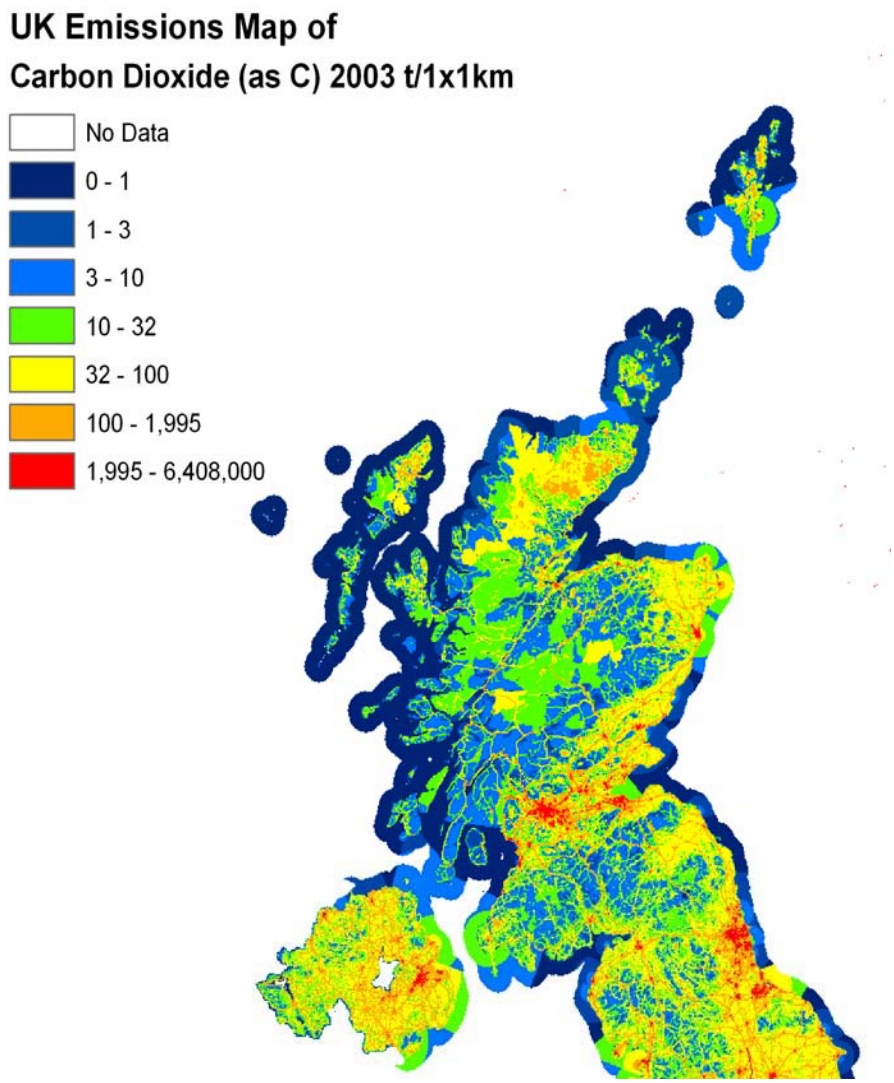
Perth and Kinross Council has signed up to Scotland's Climate Change Declaration (16th January 2007). *'The Declaration aims to secure a commitment from the Council that recognises the challenge climate change poses; acknowledges the work already being done to address this; and to produce a plan to improve and report on its performance on climate change'* Perth and Kinross Council.

D4.2 Current Baseline

No data specific to climate change in Perth and Kinross have been identified.

Carbon Dioxide is widely recognised as the main contributor to global climate change. The National Atmospheric Emissions Inventory (NAEI) provides datasets from 2003 relating to carbon dioxide emissions across the UK. Scottish emissions of ghg's in 2003 were estimated as 17.6 MtC (source: Scotland's Climate Change Programme: Changing our Ways, 2006). The residential sector was responsible for over 11% of these emissions (2 MtC) and emissions from this sector have risen between 1990 and 2003. A map of Scotland relating to the 2003 emissions data for carbon dioxide is presented as Figure D3.

Figure D3 Carbon Dioxide Emissions



D4.3 Problems and Opportunities

No specific environmental problems relating to climate change have been identified.

D4.4 Evolution of Baseline without the Development Framework

The United Kingdom Climate Change Impacts Programme (UKCIP) presents climate change scenarios based on low emissions and high emissions respectively. They provide an understanding of the ways in which the climate of Scotland could change over the coming years, and the types of changes we may be required to adapt to if the scenarios envisaged do indeed materialise.

Overall, the climate is predicted to change regardless of the Development Framework. Scenarios predict an overall average annual rise in temperatures across the UK of between 2°C and 3.5°C, and a decrease in precipitation of between 0% and 15% by the 2080s, depending on the scenario. A report compiled recently for SNIFFER indicates that both average temperatures and maximum temperatures in Scotland are predicted to follow trends in measured data during the 20th Century and continue to increase.

D4.5 Data Gaps

There are no regionally or locally specific climate change predictions.

References

- http://www.ukcip.org.uk/climate_change/location_details.asp?region_id=10 – UKCIP Scottish Climate Change Scenarios.
- http://www.sniffer.org.uk/climatehandbook/ (An Online Handbook of Climate Trends Across Scotland).
- The Air Quality Strategy for England, Scotland, Wales and Northern Ireland.
- National Atmospheric Emissions Inventory (NAEI).

D5 LANDSCAPE, TOWNSCAPE & VISUAL EFFECTS

D5.1 Introduction

Landscape Character Assessments (LCAs) prepared by Scottish Natural Heritage (SNH) identify and characterise Scotland's landscapes. In addition, there are a range of national, regional and local landscape designations which seek to protect the landscape from inappropriate development which would detract from landscape quality and result in negative visual impacts on sensitive receptors. Opportunities do however exist for developments to enhance the landscape and townscape.

The Tayside Landscape LCA 1999 has been used as the basis for the baseline presented in this section.

D5.2 Landscape Designations

There are no National Scenic Areas (NSA) in the immediate vicinity of Auchterarder. The nearest is the River Earn NSA (Comrie to St Fillans), approximately 20km to the north west of Auchterarder. There are no local landscape designations identified in the local plan.

D5.3 Landscape Character

Auchterarder is lies to the north of the Ochil Hills in the Strathearn Valley and is situated in the regional character area of the Tayside Lowlands. Three distinct landscapes have been identified:

- Broad Valley Lowland – *Auchterarder*
- Lowland Hills – *North Western Edge*
- Igneous Hills – *South East*

All three landscape types can be affected in terms of visual impact, however only Broad Valley Lowlands would be affected physically by development as a result of the Development Framework. The Broad Valley Lowland is characterised by broad straths formed by glacial erosion and deposition.

The main features of the landscape, as identified in the LCA, include:

- Extensive broadleaf woodland – limited to inner policy woodland and a few areas of unimproved land.
- Coniferous plantations on areas of poorer land, especially on valley sides.
- Dominant Agricultural Use – cereals, potatoes and oil seed rape, limited pasture, medium sized fields some enlarged (most dating back to parliamentary enclosure).

- Field boundaries – characteristically hedges with high density of mature hedgerow trees. The pattern has been weakened as trees felled.
- Settlement pattern – small villages, small market/processing towns, and larger market towns.
- Red sandstone building materials
- Historic features – comparatively limited due to the large amount of farming.
- Natural heritage features – fluvial glacial landforms. Ecological interest is limited to a few unimproved areas.
- Other landscape features – large modern agricultural buildings/ dominance of estates and historic houses.

The character of the landscape is influenced by a number of large estates, the dominance of arable and root crops and distinctive red soils in building stone. Tree loss along roads and field boundaries has weakened the rich and textured landscapes.

The landscape context of the three individual sites was analysed as part of the original masterplan document, and this is presented in Figures D4 to D6 extracted from the masterplan.

D5.3 Townscape

Auchterarder is known locally as 'the Lang Toon', a name derived from its extended High Street. This straight thoroughfare, two kilometres long, forms the backbone of the settlement, accommodating most of the shops, hotels, public buildings and parking. The High Street is orientated north east to south west on a steady rise, sited centrally on the whaleback topography defining Auchterarder.

Closer into the town, Auchterarder nestles in a matrix of woodland and individual trees. From within the town, glimpses are revealed of the Ochil Hills to the south, whilst from the north there are superb views across the broad strath of the River Earn to the distant Grampians. The High Street itself consists of two and three storey properties, with flats or offices above shop fronts, the taller buildings clustered towards the centre.

In summary Auchterarder is a rural town set in the Perthshire scenery of hills and fields. It is strongly identified by its High Street, which forms the focus for communal life. Recent built extensions, whilst ignoring the historic plan form, have nevertheless avoided introducing totally alien materials or colours.

D5.3 Problems and Opportunities

Located on a ridge, Auchterarder is very prominent in the wider landscape context. As a result its landscape setting will be a consideration in designing sympathetic development.

There will also be issues for the current properties in Auchterarder whose outward views will be changed.

D5.4 Evolution of Baseline without the Development Framework

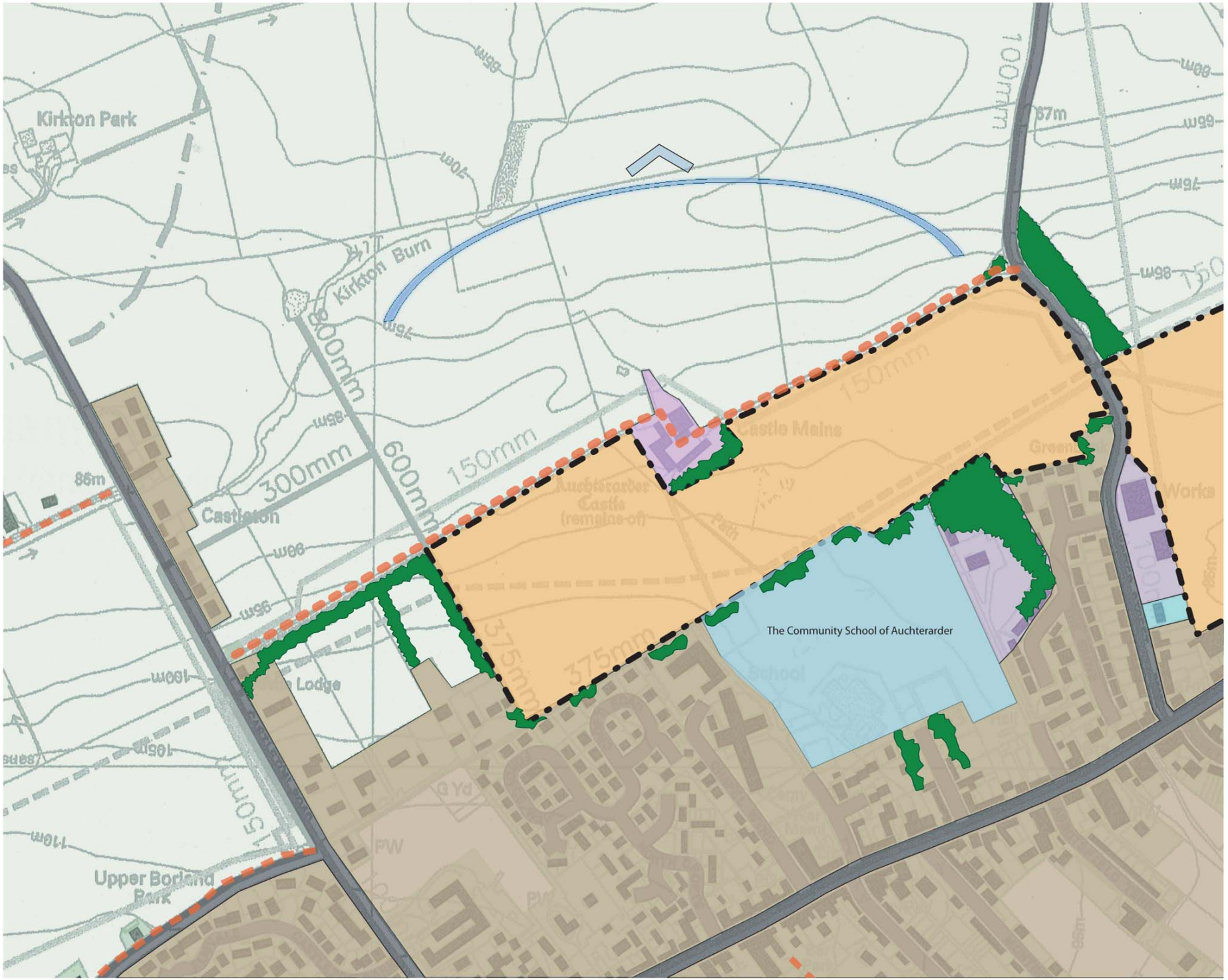
The evolution of landscape and townscape may be affected by a range of factors such as new developments and infrastructure.

In the absence of the Development Framework, any new development is likely to be modest in scale, and significant landscape, visual and townscape changes are therefore unlikely to occur.

D5.5 Data Gaps

There are no gaps in the data presented.

D3.6 References



Auchterarder Expansion

Castlemains Landscape Character Plan

- Site for expansion
- Existing Residential Development
- Community Use Facilities (e.g. play areas, school, park, etc)
- Agricultural Land (with field boundaries)
- Other uses (e.g. hotel, commercial, farm)
- Existing vegetation (derived from site analysis/aerial photos)
- Existing footpaths
- Views

General description

To north of existing settlement.
Land gently falling to NE.
Agricultural fields to north with existing farmsteadings adjacent to site.
Fields and residential to west.
Residential, community facilities (under construction) and hotel along southern boundary.
Eastern boundary abuts B8602 - potential access, wall and vegetation enclose corridor to north of site.
Overhead power lines dot through site (approximate locations shown).

Views

To north - Farm in foreground.
Slightly undulating fields with field boundaries delineated by lines of mature trees, fences, hedges. Long distance views across fields to NE to rising land on horizon. Large areas of woods, plantations, along ridgelines.
Mosaic of cleared (worked land) and mature vegetation.
Views to south enclosed by existing settlement.

Main Issues

Links to community facilities.
Extension of powerlines (underground?)
Reinforcement of patterns in the landscape e.g. field boundaries extended/reinforced, used as 'guides' in creating development parcels.
Tying in new residential development to existing.
Farm use to be retained.

Auchterarder Expansion

Kirkton Landscape Character Plan

- Site for expansion
- Existing Residential Development
- Community Use Facilities (e.g. play areas, school, park, etc)
- Agricultural Land (with field boundaries)
- Other uses (e.g. hotel, commercial, farm)
- Existing vegetation (derived from site analysis/aerial photos)
- Existing footpaths
- Views
- Tipperwhy well

General description

To north of existing settlement, access from either A824 or Hunter Street (B8062).
Typical farming land with small hillock toward centre of site.
Highest point 84m. Two mature trees retained on the hillock.

Agricultural land to north and east.
Residential land to south. Site abuts A824 along southern boundary - potential access.
Commercial use, child's play area and residential development to west. Site abuts Hunter Street - road corridor walled to either side.

Views

Views from raised section of the site extensive. Agricultural land to north, promoting long open views to surrounding countryside - typified by undulating land with agricultural fields with boundaries defined by mature trees. Dense woodland copses separate agricultural land in the middle and background of this view to the north. Ridgeline on the horizon to the NE is heavily vegetated.

Views into site

Along Hunter Street, a stone wall along the back of the kerb encloses the views at certain points. However, the site is very visible from this corridor, particularly across the play area.

Along the A824, the site is screened at certain points by existing vegetation - mature trees (beech, oaks) or stone walls, (some retaining) with existing planting on top. However, this screen is broken in many places, allowing direct views into the site. This road is an important entry road into the townand its integrity musst be retained, to maintainthe positive perception of the town (refer Landscape Guidelines).

Main Issues

Retention of existing features e.g. trees, walls, hillock, views.
Reinforcing patterns in the landscape to create 'development parcels' e.g.extend/reinforce field boundaries across the site.
Maintenance of character of access roads and entry to Auchterarder.
Extension of network of existing footpaths.
Screening between different uses e.g. commercial and residential.
Delineation of boundaries.
Tying in new residential development to existing.

Auchterarder Expansion

Townhead Landscape Character Plan

- Site for expansion
- Existing Residential Development
- Community Use Facilities (e.g. play areas, school, park, etc)
- Agricultural Land (with field boundaries)
- Other uses (e.g. hotel, commercial, farm)
- Existing vegetation (derived from site analysis/aerial photos)
- Existing footpaths
- Views

General description

To south of existing settlement, accessed off A824 Western Road/Townhead Street.
Land falling to SE at approx 1:5 slope.
Residential development and child's play area along eastern boundary.
Community facilities, including public park and recycling facility to west.
A9 to south, visually separated from site by planted berm.
Existing walking paths (Provost's Walk) along western and southern boundary of site.
Low lying land along western boundary.

Views

A9 not visible from site because of berm along its length.
Views to SE across heavily wooded area in foreground to hills behind, characterised by mature vegetation delineating field boundaries and woodland copses.
Views enclosed to east into residential area.
Views enclosed to west by mature vegetation along boundary of public park.

Views into site

From child's play area and existing residential area.

Main Issues

Connections to community facilities.
Noise attenuation required from the A9.
Extension of paths into settlement.
Good access from main road.
Tying in new residential development to existing.

- The Tayside Landscape Character Assessment, 1999

D6 BIODIVERSITY

D6.1 Introduction

A number of sites and features of interest in relation to biodiversity in and around Auchterarder have been identified, and these are shown on Figure D7.

D6.2 Designated Sites

There are no designated sites of international or European nature conservation importance within 5km of Auchterarder.

The local plan identifies four Sites of Special Scientific Importance (SSSI) within 1km and south/east of the town. These are:

- Kincardine Castle Wood
- Gleneagles Mire
- Craig Rossie
- Bog Wood and Meadow

The location of these sites is presented on Figure D7.

D6.2 Local Biodiversity Action Plan (LBAP)

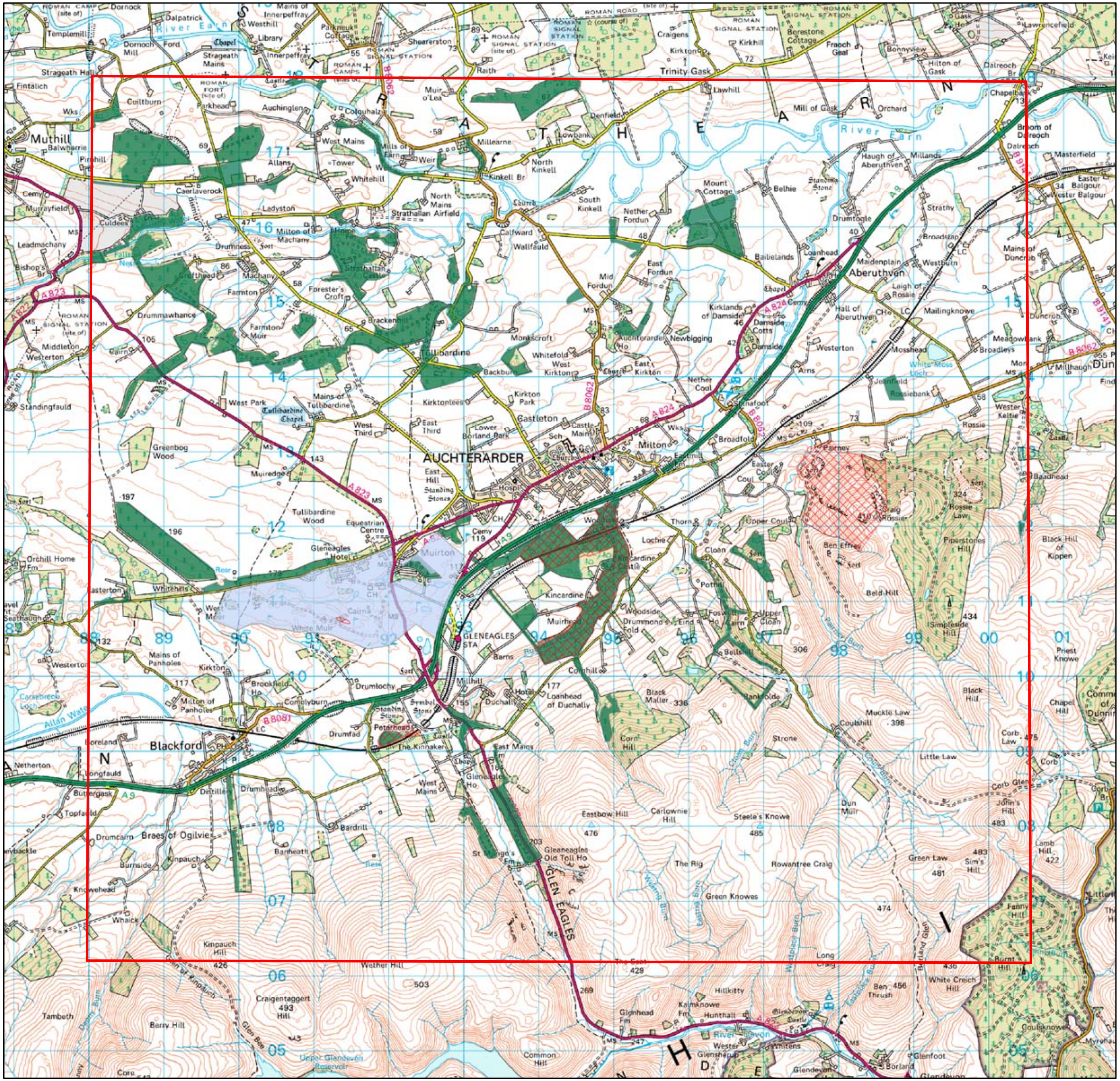
The six main habitat types in Tayside are identified as:

- Coastal and estuaries
- Farmland
- Upland
- Urban and built environment
- Water and wetlands
- Woodland

LBAP identifies 15 priority habitats for which action plans have been prepared, as follows:

- Ancient and/or species-rich hedgerows
- Blanket bog
- Cereal field margins
- Coastal saltmarsh
- Coastal sand dunes
- Eutrophic standing waters
- Lowland raised bog
- Maritime cliff and slopes
- Native pine woodlands
- Reedbeds
- Seagrass beds
- Upland heathland
- Upland mixed ashwoods
- Upland oakwood
- Wet woodland

In addition, there are a number of broad and local habitats for which action plans have been prepared.



Legend

- Search Area
- S te of Spec a Sc ent f c Interest
- H stor c Gardens and Des gned Landscape
- Anc ent Wood and Inventory

N

Figure D7:
Biodiversity and Nature Conservation

Sca e: 1:50,000

Auchterarder Deve opment Framework SEA
Perth & K nross Counc

WSP

Date: 13.02.07
Rev s on: A
Drawn by: AR

12151200 Auchterarder Development Framework SEA

D6.3 Problems and Opportunities

No specific environmental problems have been identified in relation to biodiversity.

D6.4 Evolution of Baseline without the Development Framework

It is not anticipated that a significant change in the baseline would result in the absence of the Development Framework. Any development activity in the absence of the Development Framework is likely to be modest, and it is the role of the planning system to guide inappropriate development away from designated sites and features of interest. As a result, significant changes to the biodiversity and nature conservation interest in Auchterarder are unlikely to result.

D6.5 Data Gaps

There are no gaps in the data presented.

D3.6 References

- Tayside Local Biodiversity Action Plan
- Strathearn Local PlanLocal plan
- www.snh,org.uk

D7 CULTURAL HERITAGE

D7.1 Introduction

The historic environment encompasses built heritage features (ancient monuments, archaeological sites and landscapes, historic buildings, townscapes, parks, gardens and designed landscapes) and the context or setting in which they sit, and the patterns of past use.

There are a range of sites and features of historical importance and interest in the vicinity of Auchterarder. These include national designation such as Scheduled Ancient Monuments (SAM) and Gardens and Designed Landscapes, and more regional and local designations such as B and C(s) listed buildings and National Monuments Register of Scotland (NMRS) archaeological sites.

D7.2 Historical Context

Archaeological remains and burials in the locality of Auchterarder indicate settlements from 2,700BC, whilst the line of a Roman road, with its associated camps, lies 4 miles to the north. Tradition asserts that King Malcolm Canmore (1052-93) established Auchterarder Castle and that by 1200 the town achieved the status of Royal Burgh. The town had association with King Robert the Bruce in 1323, and during the Reformation, Mary of Lorraine, mother to Mary Queen of Scots. Wealth followed from such royal patronage, and Auchterarder developed as a centre of the chain mail industry in Scotland.

By 1707, with the union of the Scottish and English Parliaments, this prosperous situation had fallen into decline and Auchterarder lost its privileges as a Royal Burgh. Following the Jacobite rising of 1715 the town was sacked by the retreating Jacobites. During the eighteenth century Auchterarder gradually recovered prosperity, with the economy based on agriculture and its by-products, on the town market and on weaving. The coming of the railway with a network of good roads during the nineteenth century encouraged further commerce and prosperity.

D7.3 Scheduled Ancient Monuments

A review of the PASTMAP dataset website provided by the Royal Commission on the Ancient and Historic Monuments of Scotland (RCAHMS) has identified that there are 15 SAMs in the vicinity of Auchterarder. These are identified in the following table, and shown on Figure D8:

Index Number	Description	Original Schedule Date	Grid Reference
8706	Easthill Standing Stones 250m SSE of Auchterarder	10th May 2000	NN929124
1634	Auchterarder Castle	15th March 1951	NN943133
5590	St Mackessog's Church Auchterader	8th February 1993	NN948140
*8708	West Mains of Tullibardine	13th Dec 2000	NN911133
90308	Tullibardine Chapel	30th April 1920	NN909134
7735	North Mains Strathallen	13th Dec 2000	NN926162
7729	Bernie Fort	13th Dec 2000	NN928158
7733	Calfwood, ring ditch	28th Feb 2000	NN937154
9540	Ash Keys	11th Dec 2002	NN963146
9313	Broadfold Cottage	23rd Feb 2001	NN960125
4213	Castle Craig	30th Jan 2003	NN975127
9373	Easter Coul Cottage	30th Jan 2003	NN974128
9367	Thorn Fort	12th Feb 2001	NN961120
4088	Lochie Enclosure	23rd Jan 1998	NN959115
3073	Ogle Hill, fort	3rd Dec 1971	NN969114
5952	St Bean's Church, Kinkell	14th Mar 1994	NN938162

In addition to the specifically scheduled area for these sites, the setting of the monuments is very important as it provides a historical and cultural context for the feature.

D7.4 Gardens and Designed Landscapes

The only designated designed landscape in proximity to Auchterarder is the nearby Gleneagles Hotel and estate to the west of the town. This is also identified on Figure D8.

D7.5 Listed Buildings

Listed buildings are designated as either Category A, B or C(s) depending on their importance as follows:

- *"Category A buildings of national or international importance, either architectural or historic, or fine little-altered examples of some particular period, style or building type*
- *Category B buildings of regional or more than local importance, or major examples of some period, style or building type which may have been altered*
- *Category C(S) buildings of local importance, lesser examples of any period, style or building type, as originally constructed or altered, and simple, traditional buildings, which group well with categories A and B or are part of a planned group such as an estate or an industrial complex."* (Historic Scotland, Memorandum of Guidance, 1998).

There are no A-listed buildings in Auchterarder. There are 18 B-listed buildings and 13 C(s)-listed buildings. The majority of these are located on the High Street. These are identified in the following table:

HBNUM	Description	Category
21337	Aytoun Hall, High St	C(S)
21336	Old Parish Church Tower and Grave Yard	B
21339	Masonic Hall, 85 – 89 High St	B
21338	Girnal House, High St	B
21347	86, 88, 90 High St	C(S)
21348	Golf Hotel, 138 High St	C(S)
21349	200 – 206 High St	B
21350	St Kessog's Episcopal Church	C(S)
21355	The Priory Crown Wynd	C(S)
21343	St Andrews and West Church	B
21340	65/67 High St	B
21356	Drumcharry, Montrose Rd	B
21345	34 High St	C(S)
21346	36/38 High St	C(S)
21342	Barony Parish Church	B
21344	Mansefield, High Street	B
21353	78/80 Feus	C(S)
21354	St Margaret's Hospital	B
21341	Railway Hotel, High St	B
21351	70/72 Feus	C(S)
21352	76 Feus	C(S)
21357	Ruthven Tower Hotel	B
21358	Coll Earn Castle Hotel, Hunter St	B
21359	Coll-Ear Lodge, Hunter St	B
21360	The DooCot	B
*4552	Kincardine Castle Lodge	B
*5811	Strathearn Home Institute	C(S)
*4553	Tullibardine Cottage	C(S)
*4570	Gleneagles Hotel	B
5810	St Mackessog's Church and Church Yard	B
8525	Eaglesview, Upper Boreland	C(S)

D7.6 Other sites

There are a range of other sites of historical interest identified on the National Monuments Register for Scotland (NMRS). In total 65 other sites have been identified in and around Auchterarder, one of which is located within the Kirkton Site, identified as 'Auchterarder Tipperquheywell'.

Other NMRS sites are located within close proximity to the proposed development sites in the Framework. These include the St Margaret's Hospital which is close to the boundary of the Townhead site, Castlemains which borders the boundary of the Castlemains site, and St Makessog's Well which borders the Kirkton site to the north. The settings of these sites will be important considerations for the design and construction of new housing in their vicinity.

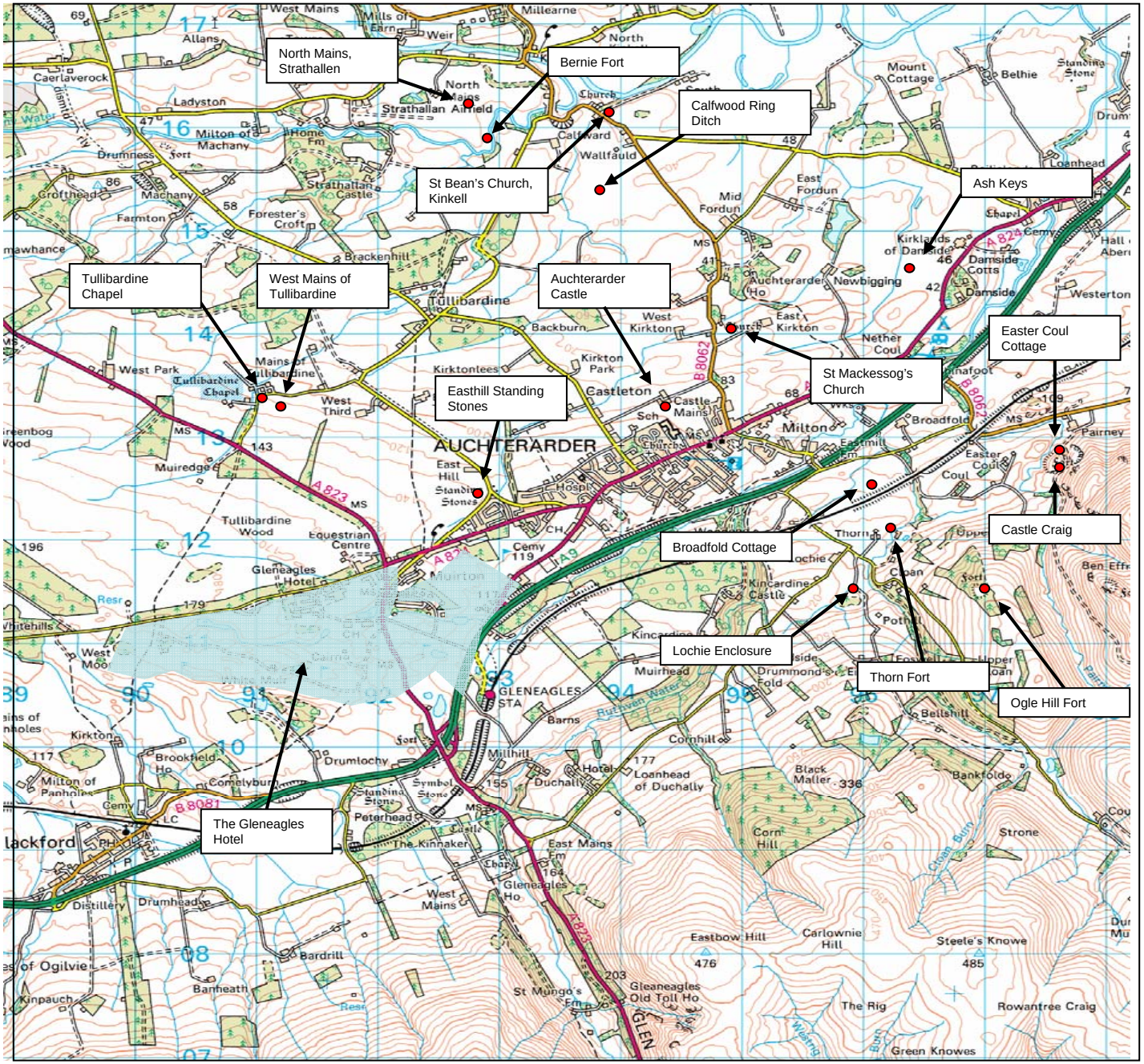
D7.7 Problems and Opportunities

No specific environmental problems in relation to cultural heritage have been identified.

There is the opportunity for development as a result of the Development Framework to improve access to and understanding of cultural heritage sites and features such as incorporation of the 'Auchterarder Tipperquheywell' into the design of the development.

D7.8 Evolution of Baseline without the Development Framework

Whilst the existence of the archaeological and cultural heritage baseline itself will not change, understanding of it will continue to develop and evolve as new developments encounter previously unknown archaeological and cultural heritage remains and these are preserved



Legend

- Scheduled Ancient Monument
- Historic Garden and Designed Landscape

Figure D8:
Cultural Heritage

Scale: Not to Scale

Auchterarder Development Framework SEA
Perth & Kinross Council

WSP

Date: 15.06.07
Revision: B
Drawn By: AM

and recorded, or lost to development. This will clearly depend on the level of development activity in Auchterarder which, in the absence of the Development Framework, is likely to be modest. As a result, significant changes to the archaeology and cultural heritage baseline are unlikely to occur.

D7.9 Data Gaps

There are no gaps in the data available.

D3.6 References

- http://jura.rcahms.gov.uk/PASTMAP/start.jsp

D8 POPULATION AND HUMAN HEALTH

D8.1 Population

The population of Perth and Kinross has been growing for the past thirty years due to in migration, and economic and employment growth. Since the mid 1990's this however has slowed down. The current population of Perth and Kinross, taken from the 2001 census is 134,949. This was a 6.9% increase from the 1991 data. In comparison to other regions in Scotland it was the fifth fastest growing local council area.

The following comparative population data were extracted from the 2001 census

	Auchterarder	Perth & Kinross	Scotland
Population	3,945	134,949	5,062,011
Male %	47	48	48
Female %	53	52	52
Under 16 %	18	19	19
Pensionable Age %	27	24	21

The population structure of Auchterarder broadly reflects that of Perth and Kinross and Scotland, the only notable difference being a slightly higher percentage of people of pensionable age.

D8.1 Human Health

General health statistics specifically for Auchterarder have been extracted from the 2001 census as follows:

	Auchterarder	Perth & Kinross	Scotland
General Health: Good (%)	71	72	68
General Health: Fairly Good (%)	23	21	22
General Health: Not Good (%)	6	7	10
Average age of person in good health	37	36	33
Average age of person with limiting long term illness	65	61	58

The health profile of Auchterarder generally reflects, and if anything is slightly better than, that of Perth and Kinross and Scotland.

D8.3 Problems and Opportunities

No specific environmental problems relating to population and human health have been identified.

D8.4 Evolution of Baseline without the Development Framework

The 2001 census provides population projections for Scotland and for Perth and Kinross as follows:

Year	Scotland	Perth and Kinross
2014	5118926	143003
2024	5123769	145740

It is expected that the population of Aucterarder would grow slightly in the absence of the Development Framework, depending on the level of other housing development such as on infill and other sites in the town.

D8.5 Data Gaps

There are no data gaps in the information presented.

References

- Scotland's Census Results Online, http://www.scrol.gov.uk/scrol/common/home.jsp

D9 MATERIAL ASSETS

D9.1 Summary of Material Assets

There are a range of material assets within Auchterarder that have been identified, including sports and recreational facilities, footpaths, churches and public buildings and facilities. These are identified in the following table.

Facility	Location
Playing Fields/Football pitches	Public Park
Indoor Sports Facilities (5 multi use courts)	Community of Auchterarder School
Outdoor Astroturf Pitch	Community of Auchterarder School
Bowling Green	Castle Wynd
Auchterarder Golf Course	South west of settlement
Gleneagles Golf Course	South west of town
5 Community Based Play Areas	Various Locations
Skate Board facility	East side of public park
Walks	Footpaths/Bridlpaths (forming an almost circuitous route around the town)Cemetry
Recycling Centre	South side of public park
Supermarket	High Street
Health Centre	Beggermuir Road
Churches	Central Auchterarder
Library	Immediately off High St

Reference to SEPA's on line data for local authority waste statistics indicates that in 2004/2005 a total of 100,167 tonnes of waste was collected by the local authority from Perth and Kinross's 67,325 households. Of this amount, 31,109 tonnes (or 31%) was collected for recycling and the remainder was collected for disposal. On average, households in Perth and Kinross produce 1.24 tonnes per annum, compared with the Scottish average of 1.17 tonnes.

The large majority of material recycled in Perth and Kinross in 2004/2005 was sourced from bring (drop off) systems (as opposed to kerbside collection for example). However, 43,000 households (64%) were offered kerbside recycling collections which yielded a total of 3,715 tonnes of material. A average of 86kg of material per household was recycled in the area, compared with the average across Scotland of 98kg. An additional 8,572 tonnes of material was composted in the same year in Perth and Kinross.

D9.3 Problems and Opportunities

No specific environmental problems relating to material assets have been identified.

D9.4 Evolution of Baseline without the Development Framework

It is not considered that the baseline environmental assets in Auchterarder would change significantly in the absence of the Development Framework

D9.5 Data Gaps

There are no data gaps in the information presented.

D3.6 References

- None

Appendix E Appraisal Tables

Table E1 Phase 1

Site(s):	A S tes – Cast ema ns, K rkton and Townhead
Phase and assumed assessment year:	Phase 1 (48 months, 2007-2011)
Assumed changes in baseline:	Pred cted future base ne w thout deve opment

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
A r Qua ty & No se	■ Nu sance from construct on act v t es and traff c ■ Traff c f ows on key routes ■ Leve s of roads de no se and oca a r po utant concentrat ons (n part cu ar NO_2 and PM_{10}) ■ New footways and cyc eways ■ Pub c transport serv ces ■ Speed reduc ng measures on new and ex st ng roads	CONSTRUCTION Increased traff c eve s on oca roads as a resu t of construct on commenc ng, n part cu ar HGVs de ver ng and remov ng mater a s from s tes, and assoc ated no se and amen ty effects. S gn f cant d srupt on effects are pred cted to be m ted to the bus est per ods w th n the overa construct on programme. Poss b e human hea th effects of ncreased oca a r po utants from construct on act v t es and traff c (predom nant y dust and part cu ates) a though these w be temporary and m ted to per ods of dry weather. No se and a r qua ty (dust) effects of construct on works at hous ng s tes on adjacent oca res dents and receptors.	A best pract ce construct on measures for the contro of no se and dust. Measures nc ude, dust suppress on, whee wash ng, no se screen ng, comprehens ve p ant ma ntenance, etc. Mater a s sourced from as c ose as s reasonab y pract cab e to the s te n order to reduce the need for transport and assoc ated em ss ons. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	Assum ng that a best pract ce m t gat on measures are mp emented dur ng construct on, t shou d be poss b e to adequate y contro the no se and a r qua ty effects of construct on works such that no s gn f cant res dua effects are pred cted. Roads de a r qua ty s not pred cted to be s gn f cant y affected by oca ncreases n construct on veh c es. However, g ven that Phase 1 w resu t n the f rst and arguab y therefore the most not ceab e change n eve s of construct on traff c and bu d ng works w th n the town, t s cons dered that a **minor negative** effect w resu t.
		OPERATION Once operat ona , the ma n traff c effects w be on the ma n street through the town at the AM and PM peaks. B8062 (Hunter Street) w be upgraded prov d ng roundabout access to Cast ema ns s te. Creat on of part of the new d str butor road to K rkton, a so accessed from Hunter Street. Potent a for ncrease n oca po utant concentrat ons from traff c us ng new routes. A so potent a for new bus	Deta ed des gn and ayout of the s tes undertaken w th a v ew to prevent ng no se and a r qua ty effects from traff c on new occupants, and from ater phases of deve opment on occupants of Phase 1. Any traff c ca m ng measures shou d avo d the use of vert ca speed reduc ng so ut ons, so as not to prec ude use by	The ncrease n traff c as a resu t of the deve opment may ncrease oca eve s of po utant concentrat ons assoc ated w th exhaust em ss ons. However, the road capac ty s cons dered adequate to support the pred cted eve s of traff c growth, and therefore no queu ng traff c s expected. In add t on, the des gn of the scheme s such that pub c transport

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		serv ces to use these routes. Hous ng n the Townhead s te was assessed as No se Exposure Category (NEC) B from PAN56. Deta ed s te ayout and hous ng des gn w therefore need to be cons dered to ensure that traff c no se from the A9 does not adverse y affect the new dwe ngs. Deve opment may be the cata yst for de very of a town bus serv ce n Auchterarder, wh ch s current y not n p ace due to the s ze of the town and the near nature of the ex st ng sett ement. Poss b e human hea th effects of ncreased oca a r po utants from operat ona traff c. Spec f c operat ona traff c pred ct ons for nd v dua phases have not been undertaken, other than recogn t on of the fact that there w be an ncrease n car traff c proport ona to the ncrease n popu at on resu t ng from Phase 1. Changes n peak hour traff c f ows for the comp eted deve opment have been est mated and are presented n the appra sa tab e for Phase 3.	buses. Ser es of new paths and cyc eways mp emented on a s tes and prov de h gh qua ty wa k ng routes from the hous ng areas to the fac t es and amen t es of the town centre.	and wa k ng/cyc ng are encouraged for oca tr ps. At th s eve of assessment s gn f cant ncreases n roads de no se and a r po utant concentrat ons are not pred cted but th s w need to be ver f ed through more deta ed work for each app cat on. Des gn so ut ons for nd v dua p ots shou d enab e the effects of road traff c no se from the A9 on new res dents to be adequate y m t gated, n ne w th PAN 56. Nonethe ess, the pred cted overa ncrease n traff c, and n part cu ar the ke hood of commuters us ng cars for onger tr ps, t s pred cted that a **minor negative** res dua effect w resu t n terms of roads de no se and a r qua ty a ong the roads n the town wh ch exper ence the greatest ncreases n traff c.
So s and Geo ogy	▪ Area of pr me agr cu tura and affected ▪ Area of brownf e d or dere ct and re-used ▪ Best pract ce construct on env ronmenta management	CONSTRUCTION Potent a for m grat on of any ground contam nat on present and the re ease of andf gas from the former refuse t p dent f ed 140m from the Townhead s te and from the sma n-f ed quarry w th n the K rkton s te, wh ch may need to be nvest gated further pr or to deve opment. So compact on from construct on p ant and veh c es, and assoc ated ncreases n surface water runoff.	Gas protect on, and measures dur ng construct on to prevent m grat on of po utants n accordance w th S te Invest gat ons comm ss oned for Townhead. Further nvest gat on of sma former quarry w th n K rkton s te to determ ne nature of any nf ng. Measures to prevent so compact on, such as spread ng heavy oads. Imp ementat on of a construct on	The nature of the under y ng geo ogy suggests that, w th appropr ate cons derat on of the potent a for po utant m grat on, construct on effects upon geo ogy and so s can be prevented, and w therefore not be s gn f cant. Overa the res dua effect of Phase 1 on geo ogy and so s s **not predicted to be significant**.

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
			Env ronmenta Management P an (EMP).	
		OPERATION Once operat ona , t s not cons dered that Phase 1 w resu t n any effects on geo ogy and so s. However, Phase 1 of deve opment w nonethe ess requ re the permanent oss of some pr me qua ty agr cu tura and as fo ows: Cast ema ns – 2.34ha – NB assumed to be approx mate y ha f of tota Phase 1 and take as southern ha f of s te s c ass f ed as "Urban". K rkton – 14.5ha Townhead – zero (c ass f ed as "Urban").	The deve opment footpr nts for the three s tes respect ex st ng f e d boundar es therefore and take does not encroach beyond the areas requ red eg nto ne ghbour ng f e ds/farm un ts.	There w nonethe ess be a oss of 16.84ha of pr me qua ty agr cu tura and to Phase 1 f deve opment. However, th s effect n re at on to so s s **not predicted to be significant**.
Aquat c Env ronment	▪ Qua ty of surface watercourses ▪ Insta at on of SUDS measures ▪ Use of permeab e pav ng ▪ Water meter ng, water recyc ng and ow water app ances n new houses	CONSTRUCTION Ruthven Water runs to the south east of a of the s tes, and t s h gh y un ke y that construct on-re ated runoff and re ated po ut on of th s watercourse wou d resu t. Ruthven Water s c ass f ed as good/moderate by SEPA. K rkton Burn s ocated north of the Cast ema ns and K rkton s tes, and there s the potent a for runoff from construct on re ated act v t es to affect th s watercourse.	Best pract ce m t gat on measures to prevent surface water runoff and protect a watercourses. Th s nc udes adherence to Po ut on Prevent on Gu de nes pub shed by SEPA. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	Assum ng the mp ementat on of po ut on prevent on measures and appropr ate management of s te dra nage dur ng construct on, the res dua effect of Phase 1 on the aquat c env ronment s **not predicted to be significant**.
		OPERATION There are areas prone to f ood ng wh ch fo ow the course of the Ruthven Water. However, SEPA dent f es that the major ty of Auchterarder s not w th n an area where there s an est mated f ood r sk of 0.5% (1:200) or greater n any g ven year. SUDS retent on ponds are to be constructed w th n Cast ema ns and Townhead s tes.	Dra nage Impact Assessment to cons der potent a for f ood ng and surface water runoff and to adequate y cater for s te dra nage. Permeab e pav ng to be used n hard surfaced areas (eg dr veways) wherever pract cab e. SUDS des gn w ncorporate f ood assessment and deta ed p ant ng	Deta ed cons derat on of dra nage and f ood ng w ensure that the scheme can be des gned to prevent res dua env ronmenta effects from the operat ona deve opment on the aquat c env ronment. Therefore, the operat ona effects of Phase 1 on the aquat c env ronment are

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
			proposa s. A new houses to be des gned to reduce water usage n ne w th current best	**not predicted to be significant**.
C mate Change	▪ Spec f cat on of ow embod ed energy n bu d ng mater a s ▪ Target ng 'Exce ent standard n BREEAM assessment for homes ▪ Incorporat on of energy eff c ency and m cro-generat on systems n new homes and bu d ngs ▪ Wa k ng and cyc ng routes to oca serv ces wh ch are more d rect than tr ps by car ▪ Hous ng des gn wh ch w w thstand greater and more severe weather effects ▪ Sourc ng mater a s oca y to he p reduce the overa carbon footpr nt of the deve opment	CONSTRUCTION Potent a for short term ncreases n carbon and other greenhouse gas em ss ons from construct on re ated veh c es and processes.	Imp ementat on of a construct on Env ronmenta Management P an (EMP).	G ven ts oca and temporary effects, the mpacts of construct ng Phase 1 on g oba c mate change are **not predicted to be significant.**
		OPERATION D rect wa k ng and cyc ng routes w be prov ded from the areas of new hous ng nto the town, wh ch w make such tr ps more attract ve by these susta nab e modes. For onger d stance tr ps, t s ke y that the car w rema n the most common mode of transport, part cu ar y for commuters. Carbon em ss ons from motor sed transport are therefore ke y to ncrease as a resu t of the Deve opment Framework n ne w th the ncrease n popu at on of the town fo ow ng ts expans on. Carbon and other greenhouse gases w be em tted from energy use of bu d ngs a though the adopt on of BREEAM targets and the use of M crogenerat on offers and opportun ty to make the houses 'best n c ass n re at on to carbon em ss ons.	Mater a s sourced from as c ose as s reasonab y pract cab e to the s te n order to reduce the need for transport and assoc ated em ss ons. Des gn gu de nes nc ude energy eff c ency and susta nab ty requ rements, nc ud ng the use of renewab e energy so ut ons where appropr ate, and the use of env ronmenta y fr end y mater a s from susta nab e sources. Incorporat on of energy eff c ency measures nto the des gn of new hous ng and other bu d ngs. Spec f cat on and use of c mate-proofed/res stant mater a s where pract ca . New paths and cyc eways to encourage non motor sed users. The consort um of housebu ders s comm tted to ach ev ng a BREEAM rat ng of Exce ent for a new homes.	G ven the ke hood of hous ng des gn ach ev ng an exce ent BREEAM rat ng, and the ncorporat on of measures to reduce the carbon footpr nt of the deve opment, there s the opportun ty to reduce carbon em ss on from the deve opment. However, t s st cons dered that most peop e w cont nue to use the r cars for trave outs de of the town. Th s w contr bute to carbon em ss ons for Scot and, but at a nat ona and g oba eve t s un ke y that em ss ons from the operat on of Phase 1 wou d represent a tang b e proport on of em ss ons and therefore the operat ona effects are **not predicted to be significant**.
Landscape, Townscape &	▪ Landscape character area(s) affected	CONSTRUCTION Dur ng construct on, effects on ex st ng v ews for	Construct on programme to be as short as	S gn f cant short term adverse v sua

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
V sua Effects	■ Landscape and townscape features affected ■ Key v ews affected ■ Hous ng des gns ref ect ng vernacu ar arch tecture, mater a s and sett ement ayouts	receptors adjacent to the deve opment s tes w ar se from the operat on of construct on p ant on s te. However, th s w be temporary for the durat on of the construct on. The effects of the deve opments on andscape and townscape are permanent and have been addressed be ow under 'Operat on .	reasonab y pract cab e. Locat on of temporary s te area and p ant to be cons dered n re at on to andscape, townscape and v sua effects.	effects are pred cted for propert es c ose to the hous ng s tes wh ch have ex st ng v ews across the s tes. A **moderate negative** effect s pred cted, a though th s w be temporary for the durat on of the construct on works.
		OPERATION Landscape Character and Features K rkton s the most eastern of the s tes, and w contr bute to def n ng the form of the town at ts northern edge a though on y a sma area w be affected for Phase 1. Auchterarder Cast e forms a d st nct ve andmark w th n an area of re at ve y f at agr cu tura and wh ch wou d be part y deve oped for Cast ema ns Phase 1. Townhead has an open aspect w th urban fr nge character w th some areas of mature tree p ant ng wh ch w be changed by nf deve opment of new hous ng for Phase 1. Key V ews and V sua Impact Operat ona deve opment w be v s b e, n vary ng degrees, from surround ng houses, roads and countrys de. Greatest effects are pred cted to be for users of the A824 and B8062, a though v ews are sporad c due to ex st ng andscape features and bu t deve opment. Where mmed ate y adjacent, the mpact on v ews from roads w be greatest. A re at ve y sma number of res dent a propert es adjacent to each s te w exper ence changed v ews, part cu ar y from the rear of propert es. V sua prom nence of northern edge on the approaches from Strathearn.	Des gn gu de nes to m n m se potent a v sua mpacts and reduce change to the andscape sett ng and character of the town. Hous ng des gn must take account of oca vernacu ar and mater a s, as we as sett ement patterns, f e d boundar es and h stor c p an form n ne w th the Masterp an. Des gned to f t w th both rura edge and ex st ng town. Screen p ant ng w be prov ded between the K rkton s te and ex st ng bus ness on Hunter Street, to prov de v sua and phys ca separat on. V ews reta ned through use of stock proof fenc ng and hedg ng, w th occas ona trees, for garden boundar es front ng the countrys de a ong the northern edge. Structure p ant ng s proposed throughout a three s tes.	Tak ng account of the ex st ng andscape character, qua ty and sens t v ty to change, and the proposa s for structura andscap ng, andscape effects are pred cted to be **minor negative** and therefore not s gn f cant. V sua mpacts from ex st ng hous ng n Auchterarder, from users of paths and roads, are pred cted to be **minor negative**.

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		Longer d stance v ews from the Och H s to the south may be s ght y affected a though the degree of change w be sma .		
B od vers ty	■ Area of key hab tats ost (part cu ar y LBAP hab tats) ■ Effects on known LBAP spec es popu at ons ■ Measures to protect hab tats adjacent to hous ng areas ■ Proposa s for hab tat creat on (nc ud ng SUDS ponds)	CONSTRUCTION Potent a for construct on works to affect s te- eve b od vers ty, f ora and fauna. There are no des gnat ons ocated on the hous ng s tes, or n c ose prox m ty. SSSIs n the w der s te context are un ke y to be affected by construct on.	Deta ed s te- eve survey work to determ ne ex stence of any protected spec es, LBAP hab tats and spec es or other b od vers ty nterest. Any cens ng requ rements as a resu t of hab tats or spec es on s te must be str ct y adhered to.	Assum ng that s te eve survey work s undertaken to dent fy and protect any spec es on s te, nc ud ng f ora and fauna, the res dua effect of Phase 1 s ke y to rema n s gn f cant to some extent as t w nvo ve some oss of hab tat and d sturbance to spec es. Th s s pred cted to be a **minor negative** effect, a be t dependent on the outcome of future survey work.
		OPERATION SUDS retent on ponds constructed w th n Cast ema ns and Townhead s tes. New structure p ant ng w th n deve opment s tes a so has the potent a to prov de hab tat for var ous spec es. Permanent deve opment of Phase 1 resu ts n the oss of 19.2ha of sem - mproved grass and and 4.67 ha] of arab e and.	Wherever reasonab y pract cab e, m n m sat on of oss of any and prov d ng support to b od vers ty, f ora and fauna. SUDS ponds to be used on s te for attenuat on of run off and water qua ty shou d be des gned to prov de oca b od vers ty benef t.	Poss b e pos t ve effects on b od vers ty through structure p ant ng, a though th s w rema n the subject of some d sturbance through phases 2 and 3 unt the construct on works are comp ete. In add t on, SUDS ponds w be created and can act as a hab tat for w d fe. In the onger term, the effects of Phase 1 on b od vers ty have the potent a to be **minor negative**, a though th s may be offset to some extent by proposed hab tat creat on.
Cu tura Her tage	■ Known archaeo og ca s tes affected ■ Effects on sett ngs of cu tura her tage s tes and features	CONSTRUCTION Auchterarder Cast e s a SAM ocated west of the Cast ema ns s te. In add t on, St Mackessog s Church s a SAM ocated north of the K rkton s te. These SAMs w not be phys ca y affected, but there may be effects on the r v sua and cu tura sett ngs.	S te- eve protect on measures for T pperwhy We to prevent construct on works from damag ng the feature. Deta ed assessment of ke hood of	The effects of construct on works on the sett ng of cu tura her tage s tes and features, a though short term and temporary, are pred cted to be **minor**

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	■ Effects on h stor c andscapes and the r sett ngs ■ Prov s on of wa k ng routes to h stor c or cu tura s tes and nterpretat ve mater a s	Dur ng construct on these w be short term and temporary. Potent a for construct on works to d sturb NMRS s tes and unknown archaeo og ca rema ns.	unknown archaeo og ca rema ns pr or to any works tak ng p ace.	**negative**. Potent a effects upon und scovered rema ns can be appropr ate y m t gated through assessment and, where requ red, protect ve measures at the deta ed des gn stage.
		OPERATION T pperwhy We s a oca y des gnated s te w th n the K rkton s te. It w be ncorporated nto an area of open space, thereby prov d ng access to t on foot, and protect ng t from any phys ca effects of deve opment. The sett ng of var ous sted bu d ngs genera y ocated on the H gh Street may a so be nd rect y affected. These are a e ther B or C(S) sted. The nearest des gned andscape, G eneag es, s around 1.5km from the Townhead s te. Potent a for permanent nd rect effects on the sett ng of the c osest SAM s tes, n part cu ar Auchterarder Cast e and St Mackessog s Church.	Sens t ve des gn of s te ayouts and bu d ngs to respect the cu tura e ements of the andscape and townscape n ne w th the masterp an. Part cu ar reference to the sett ng of cu tura her tage s tes and features and the opportun ty to prov de nterpretat ve fac t es (eg her tage tra s, s gnpost ng of cu tura her tage s tes on footpaths etc).	There w be no phys ca mpact on any known s tes of cu tura her tage nterest, other than the T pperwhy We , wh ch w be protected and ncorporated nto the des gn of the K rkton s te. However, the sett ng of var ous SAMs and L sted Bu d ngs w be affected, and deta ed des gn w nc ude cons derat on of these effects to ensure the deve opment s sens t ve y ocated w th n the h stor c and cu tura context of the town. The res dua effect of Phase 1 s therefore **not predicted to be significant**.
Popu at on and Human Hea th	■ Proport on of popu at on w th n 500m of recreat ona fac t es ■ Length of new wa kways and cyc eways nk ng hous ng to oca fac t es ■ Deve opment ayouts	CONSTRUCTION D srupt on to the ex st ng popu at on as a resu t of construct on act v t es wh ch may cause some oca sed reduct ons n amen ty and d srupt on.	Carefu cons derat on of oca amen ty to prevent construct on act v t es from caus ng nconven ence to the oca popu at on.	There s the potent a for negat ve effects on the ex st ng popu at on dur ng the construct on of Phase 1 through ncreased traff c and nconven ence re ated to construct on works. However, any such effects mpact ng s gn f cant y upon the ex st ng popu at on may be avo ded through sens t ve construct on pract ces and a son w th the oca

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	to promote safety and pr or t se peop e over cars ■ Spec f c env ronmenta prob ems or nu sances from ex st ng sources and those wh ch cou d be created as a resu t of mp ementat on ■ Veh c e numbers n Auchterarder town			commun ty as appropr ate. Nonethe ess, a degree of d srupt on s nev tab e, and therefore a **minor negative** effect s pred cted.
		OPERATION New pathway nks created between Cast ema ns and K rkton and the town. New paths and cyc eways created. One new synthet c footba p tch created adjacent to the schoo .	Layout of deve opment areas n ne w th nat ona gu dance on safety by des gn – prevent ng cr me and reduc ng fear of cr me through appropr ate des gn measures. Th s w nc ude avo d ng h gh-screen fenced boundar es a ong frontages to greenways and paths to ncrease nter-v s b ty between pub c and pr vate space.	Once operat ona , the mproved commun ty fac t es such as open space, paths and the synthet c footba p tch prov ded as a resu t of Phase 1 are cons dered to be **minor positive** effects.
Mater a Assets	■ New or enhanced recreat on fac t es and open space ■ Susta nab ty of mater a s used n hous ng ■ Waste m n m sat on and recyc ng p an for construct on ■ Des gn ng for recyc ng	CONSTRUCTION Construct on of Phase 1 s not pred cted to mpact on ex st ng mater a assets n the town.	Opportun t es shou d be taken to recover and recyc e as much construct on waste as poss b e and to m n m se the amount of waste requ r ng transportat on and d sposa off s te. A p an for waste management shou d be deve oped to cover a phases of construct on. Construct on mater a s w be sourced oca y wherever poss b e.	**No significant effects.**
		OPERATION No phys ca effects on ex st ng mater a assets, other than some upgrad ng of p ay fac t es (Hunter Street). Open space created n K rkton s te around T pperwhy We and n Caste ma ns s te. One new synthet c footba p tch created adjacent to the schoo .	Deve opment of the Cast ema ns s te mmed ate y adjacent to the schoo shou d be undertaken sens t ve y to ensure that d sturbance s m n m sed throughout construct on. Scheme des gn nc udes var ous upgrad ng and new prov s on of commun ty nfrastructure to accommodate ncreased	No phys ca effects upon mater a assets w resu t from Phase 1. New and upgraded mater a assets (such as the Hunter Street p ay area) w be created, and th s s cons dered to be a **minor positive** effect.

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		Overa , once the houses constructed n Phase 1 are occup ed there may be an ncrease n demand for commun ty nfrastructure.	demand. Houses and ayouts w be des gned to opt m se prov s on for storage and co ect on of recyc ed househo d mater a s and conta ners.	

Table E2 Phase 2

Site(s):	A S tes – Cast ema ns, K rkton and Townhead
Phase and assumed assessment year:	Phase 2 (48 months, 2012-2016)
Assumed changes in baseline:	Pred cted future base ne ncorporat ng Phase 1 of deve opment

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
A r Qua ty & No se	▪ Nu sance from construct on act v t es and traff c ▪ Traff c f ows on key routes ▪ Leve s of roads de no se and oca a r po utant concentrat ons (n part cu ar NO_2 and PM_{10}) ▪ New footways and cyc eways ▪ Pub c transport serv ces ▪ Speed reduc ng measures on new and ex st ng roads	<u>CONSTRUCTION</u> Increased traff c eve s on oca roads as a resu t of a further per od of construct on works, n part cu ar HGVs de ver ng and remov ng mater a s from s tes, and assoc ated no se and amen ty effects. S gn f cant d srupt on effects are pred cted to be m ted to the bus est per ods w th n the overa construct on programme. Westward extens on of Cast ema ns s te w move potent a sources of construct on no se and a r po utants c oser to res dent a propert es west of the schoo than at Phase 1. Poss b e human hea th effects of ncreased oca a r po utants from construct on act v t es and traff c (predom nant y dust and part cu ates) a though these w be temporary and m ted to per ods of dry and w ndy weather. No se and a r qua ty (dust) effects of construct on works at hous ng s tes on adjacent oca res dents and receptors. In part cu ar, houses constructed n Phase 1 w be suscept b e to no se and a r qua ty effects of Phase 2 construct on.	A best pract ce construct on measures for the contro of no se and dust. Measures nc ude, dust suppress on, whee wash ng, no se screen ng, comprehens ve p ant ma ntenance, etc. Mater a s sourced from as c ose as s reasonab y pract cab e to the s te n order to reduce the need for transport and assoc ated em ss ons. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	Assum ng that a best pract ce m t gat on measures are mp emented dur ng construct on, t shou d be poss b e to adequate y contro the no se and a r qua ty effects of construct on works such that no s gn f cant res dua effects are pred cted. Roads de a r qua ty s not pred cted to be s gn f cant y affected by oca ncreases n construct on veh c es. G ven the change from the base ne s tuat on, and n part cu ar the assumed break n construct on works between phases, t s st pred cted that a **<u>minor negative</u>** effect w resu t.
		<u>OPERATION</u> Once operat ona , the ma n traff c effects of Phase 2 deve opment w be on the ma n street through the town at the AM and PM peaks.	Deta ed des gn and ayout of the s tes undertaken w th a v ew to prevent ng no se and a r qua ty effects from traff c on new	The ncrease n traff c as a resu t of the deve opment may ncrease oca eve s of po utant concentrat ons assoc ated w th

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		At K rkton, the ma n d str butor road w be extended n Phase 2 to jo n the A824 at a new roundabout on Feus Road. Potent a for ncrease n oca po utant concentrat ons from traff c us ng new routes. Further potent a for new bus serv ces to use these routes g ven phys ca connect on w th A824. Hous ng n the Townhead s te was assessed as No se Exposure Category (NEC) B from PAN56. Deta ed s te ayout and hous ng des gn w therefore need to be cons dered to ensure that traff c no se from the A9 does not adverse y affect the new dwe ngs. Deve opment may be the cata yst for de very of a town bus serv ce n Auchterarder, wh ch s current y not n p ace due to the s ze of the town and the near nature of the ex st ng sett ement. Poss b e human hea th effects of ncreased oca a r po utants from operat ona traff c. Spec f c operat ona traff c pred ct ons for nd v dua phases have not been undertaken, other than recogn t on of the fact that there w be a further ncrease n car traff c proport ona to the ncrease n popu at on resu t ng from Phase 2 n add t on to that pred cted for Phase 1. Changes n peak hour traff c f ows for the comp eted deve opment have been est mated and are presented n the appra sa tab e for Phase 3.	occupants, and from ater phases of deve opment on occupants of Phase 2. Any traff c ca m ng measures shou d avo d the use of vert ca speed reduc ng so ut ons, so as not to prec ude use by buses. Ser es of new paths and cyc eways mp emented on a s tes and prov de h gh qua ty wa k ng routes from the hous ng areas to the fac t es and amen t es of the town centre.	exhaust em ss ons. However, the road capac ty s cons dered adequate to support the pred cted eve s of traff c growth, and therefore no queu ng traff c s expected. In add t on, the des gn of the scheme s such that pub c transport and wa k ng/cyc ng are encouraged for oca tr ps. At th s eve of assessment s gn f cant ncreases n roads de no se and a r po utant concentrat ons are not pred cted but th s w need to be ver f ed through more deta ed work for each app cat on. Des gn so ut ons for nd v dua p ots shou d enab e the effects of road traff c no se from the A9 on new res dents to be adequate y m t gated, n ne w th PAN 56. Nonethe ess, the pred cted overa ncrease n traff c, and n part cu ar the ke hood of more commuters us ng cars for onger tr ps, t s pred cted that a **minor negative** res dua effect w resu t n terms of roads de no se and a r qua ty a ong the roads n the town wh ch exper ence the greatest ncreases n traff c.
So s and Geo ogy	▪ Area of pr me agr cu tura and affected ▪ Area of brownf e d or dere ct and re-used ▪ Best pract ce construct on	CONSTRUCTION Potent a for m grat on of any ground contam nat on present and the re ease of andf gas from the former refuse t p dent f ed 140m from the Townhead s te and from the sma n-f ed quarry w th n the K rkton s te, wh ch may need to be nvest gated further pr or to deve opment.	Gas protect on, and measures dur ng construct on to prevent m grat on of po utants n accordance w th S te Invest gat ons comm ss oned for Townhead. Measures to prevent so compact on, such	The nature of the under y ng geo ogy suggests that, w th appropr ate cons derat on of the potent a for po utant m grat on, construct on effects upon geo ogy and so s can be prevented, and w therefore not be

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	env ronmenta management	So compact on from construct on p ant and veh c es, and assoc ated ncreases n surface water runoff.	as spread ng heavy oads. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	s gn f cant. Overa the res dua effect of Phase 2 on geo ogy and so s s **not predicted to be significant**.
		OPERATION Once operat ona , t s not cons dered that Phase 2 w resu t n any effects on geo ogy and so s. However, Phase 2 of deve opment w nonethe ess requ re the permanent oss of some pr me qua ty agr cu tura and as fo ows: Cast ema ns – 3.89ha NB assumed to be approx mate y ha f of tota Phase 2 and take as southern ha f of s te s c ass f ed as "Urban". K rkton – 10.87ha. Townhead – zero (c ass f ed as "Urban").	The deve opment footpr nts for the three s tes respect ex st ng f e d boundar es therefore and take does not encroach beyond the areas requ red eg nto ne ghbour ng f e ds/farm un ts.	There w be a oss of 14.76ha pr me qua ty agr cu tura and to the deve opment. However, th s effect n re at on to so s s **not predicted to be significant**.
Aquat c Env ronment	▪ Qua ty of surface watercourses ▪ Insta at on of SUDS measures ▪ Use of permeab e pav ng ▪ Water meter ng, water recyc ng and ow water app ances n new houses	CONSTRUCTION Ruthven Water runs to the south east of a of the s tes, and t s h gh y un ke y that construct on-re ated runoff and re ated po ut on of th s watercourse wou d resu t. Ruthven Water s c ass f ed as good/moderate by SEPA. K rkton Burn s ocated north of the Cast ema ns and K rkton s tes, and there s m ted potent a for runoff from construct on re ated act v t es to affect th s watercourse.	Best pract ce m t gat on measures to prevent surface water runoff and protect a watercourses. Th s nc udes adherence to Po ut on Prevent on Gu de nes pub shed by SEPA. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	Assum ng the mp ementat on of po ut on prevent on measures and appropr ate management of s te dra nage dur ng construct on, the res dua effect of Phase 2 on the aquat c env ronment s **not predicted to be significant**.
		OPERATION There are areas prone to f ood ng wh ch fo ow the course of the Ruthven Water. However, SEPA dent f es that the major ty of Auchterarder s not w th n an area where there s an est mated f ood r sk	Dra nage Impact Assessment to cons der potent a for f ood ng and surface water runoff and to adequate y cater for s te dra nage. Permeab e pav ng to be used n hard surfaced areas (eg dr veways)	Deta ed cons derat on of dra nage and f ood ng w ensure that the scheme can be des gned to prevent res dua env ronmenta effects from the operat ona deve opment on the aquat c

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		of 0.5% (1:200) or greater n any g ven year. SUDS retent on ponds are to be constructed w th n Cast ema ns and Townhead s tes.	wherever pract cab e. SUDS des gn w ncorporate f ood assessment and deta ed p ant ng proposa s. A new houses to be des gned to reduce water usage n ne w th current best pract ces.	env ronment. Therefore, the operat ona effects of Phase 2 on the aquat c env ronment are **not predicted to be significant**.
C mate Change	■ Spec f cat on of ow embod ed energy n bu d ng mater a s ■ Target ng 'Exce ent standard n BREEAM assessment for homes ■ Incorporat on of energy eff c ency and m cro-generat on systems n new homes and bu d ngs ■ Wa k ng and cyc ng routes to oca serv ces wh ch are more d rect than tr ps by car ■ Hous ng des gn wh ch w w thstand greater and more severe weather effects ■ Sourc ng mater a s oca y to he p reduce the overa carbon footpr nt of the	CONSTRUCTION Potent a for short term ncreases n carbon and other greenhouse gas em ss ons from construct on re ated veh c es and processes.	Imp ementat on of a construct on Env ronmenta Management P an (EMP).	G ven ts oca and temporary effects, the mpacts of construct ng Phase 2 on g oba c mate change are **not predicted to be significant.**
		OPERATION D rect wa k ng and cyc ng routes w be prov ded from the areas of new hous ng nto the town, wh ch w make such tr ps more attract ve by these susta nab e modes. For onger d stance tr ps, t s ke y that the car w rema n the most common mode of transport, part cu ar y for commuters. Carbon em ss ons from motor sed transport are therefore ke y to ncrease as a resu t of the Deve opment Framework n ne w th the ncrease n popu at on of the town fo ow ng ts expans on. Carbon and other greenhouse gases w be em tted from energy use of bu d ngs a though the adopt on of BREEAM targets and the use of M crogenerat on offers and opportun ty to make the houses 'best n c ass n re at on to carbon em ss ons.	Mater a s sourced from as c ose as s reasonab y pract cab e to the s te n order to reduce the need for transport and assoc ated em ss ons. Des gn gu de nes nc ude energy eff c ency and susta nab ty requ rements, nc ud ng the use of renewab e energy so ut ons where appropr ate, and the use of env ronmenta y fr end y mater a s from susta nab e sources. Incorporat on of energy eff c ency measures nto the des gn of new hous ng and other bu d ngs. Spec f cat on and use of c mate-proofed/res stant mater a s where pract ca . 1667m of new paths and cyc eways to encourage non motor sed users. The consort um of housebu ders s	G ven the ke hood of hous ng des gn ach ev ng an exce ent BREEAM rat ng, and the ncorporat on of measures to reduce the carbon footpr nt of the deve opment, there s the opportun ty to reduce carbon em ss on from the deve opment compared w th what wou d otherw se be the case. However, t s st cons dered that most peop e w cont nue to use the r cars for trave outs de of the town. Th s w contr bute to carbon em ss ons for Scot and, but at a nat ona and g oba eve t s un ke y that em ss ons from the operat on of Phase 2 wou d represent a tang b e proport on of em ss ons at a nat ona eve and therefore the operat ona effects are **not predicted to be significant**.

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	deve opment		comm tted to ach ev ng a BREEAM rat ng of Exce ent for a new homes.	
Landscape, Townscape & V sua Effects	▪ Landscape character area(s) affected ▪ Landscape and townscape features affected ▪ Key v ews affected ▪ Hous ng des gns ref ect ng vernacu ar arch tecture, mater a s and sett ement ayouts	CONSTRUCTION Dur ng construct on, effects on ex st ng v ews for receptors adjacent to the deve opment s tes w ar se from the operat on of construct on p ant on s te. However, th s w be temporary for the durat on of the construct on. In add t on, ex st ng res dents w be accustomed to the v sua effects of construct on p ant as a resu t of Phase 1. Wh st th s does not reduce the effect t does nonethe ess part a y reduce ts ke y s gn f cance. The effects of the deve opments on andscape and townscape are permanent and have been addressed be ow under 'Operat on .	Construct on programme to be as short as reasonab y pract cab e. Locat on of temporary s te area and p ant to be cons dered n re at on to andscape, townscape and v sua effects.	S gn f cant short term adverse v sua effects are pred cted for propert es c ose to the hous ng s tes wh ch have ex st ng v ews across the s tes. A **moderate negative** effect s pred cted, a though th s w be temporary for the durat on of the construct on works.
		OPERATION Landscape Character and Features K rkton s the most eastern of the s tes, and w contr bute to def n ng the form of the town at ts northern and eastern edge. Phase 2 extends to a greater area of current y undeve oped and f at agr cu tura and wh ch s pred cted to have a moderate effect on oca andscape character. Cast ema ns w be deve oped further to the west n Phase 2 w th potent a effects on the andscape sett ng of Auchterarder Cast e and further chang ng the northern edge of the urban sett ement. No s gn f cant change n andscape effect s pred cted n Phase 2 at Townhead where on y a tt e more nf s proposed. Key V ews and V sua Impact	Des gn gu de nes to m n m se potent a v sua mpacts and reduce change to the andscape sett ng and character of the town. Hous ng des gn must take account of oca vernacu ar and mater a s, as we as sett ement patterns and h stor c p an form n ne w th the Masterp an. Des gned to f t w th both rura edge and ex st ng town. Screen p ant ng w be prov ded between the K rkton s te and ex st ng bus ness on Hunter Street, to prov de v sua and phys ca separat on. V ews reta ned through use of stock proof fenc ng and hedg ng, w th occas ona	Phase 2 of deve opment w oca y change the andscape character at each s te. Tak ng account of the proposa s for structura andscap ng, andscape effects are pred cted to be **minor negative** and therefore not s gn f cant.

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		Operat ona deve opment w be v s b e, n vary ng degrees, from surround ng houses, roads and countrys de. Greatest effects are pred cted to be for users of the A824 and B8062, a though v ews are sporad c due to ex st ng andscape features and bu t deve opment. Where mmed ate y adjacent, the mpact on v ews from roads w be greatest. More ex st ng propert es w exper ence a change n v ew as Phase 2 s comp eted, a though many of the v ews affected are from the rear of houses and s gn f cant effects are not pred cted for the major ty of receptors affected. V sua prom nence of northern edge on the approaches from Strathearn. Longer d stance v ews from the Och H s to the south may be s ght y affected a though the degree of change w be sma .	trees, for garden boundar es front ng the countrys de a ong the northern edge. Structure p ant ng s proposed throughout a three s tes.	V sua mpacts from ex st ng hous ng n Auchterarder (nc ud ng Phase 1 houses) and from users of paths and roads are pred cted to be **minor negative**.
B od vers ty	■ Area of key hab tats ost (part cu ar y LBAP hab tats) ■ Effects on known LBAP spec es popu at ons ■ Measures to protect hab tats adjacent to hous ng areas ■ Proposa s for hab tat creat on (nc ud ng SUDS ponds)	CONSTRUCTION Potent a for construct on works to affect s te- eve b od vers ty, f ora and fauna. There are no des gnat ons ocated on the hous ng s tes, or n c ose prox m ty. SSSIs n the w der s te context are un ke y to be affected by construct on works.	Deta ed s te- eve survey work to determ ne ex stence of any protected spec es, LBAP hab tats and spec es or other b od vers ty nterest. Any cens ng requ rements as a resu t of hab tats or spec es on s te must be str ct y adhered to.	Assum ng that s te eve survey work s undertaken to dent fy and protect any spec es on s te, nc ud ng f ora and fauna, the res dua effect of Phase 2 s ke y to rema n s gn f cant to some extent as t w nvo ve some further oss of hab tat and d sturbance to spec es to that exper enced as a resu t of Phase 1. Th s s pred cted to be a **minor negative** effect, a be t dependent on the resu ts of further survey work.
		OPERATION New structure p ant ng and open space prov s on w th n deve opment s tes has the potent a to prov de	Wherever reasonab y pract cab e, m n m sat on of oss of any and prov d ng	Poss b e pos t ve effects on b od vers ty through structure p ant ng, a though th s w rema n the subject of some

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		hab tat for var ous spec es. Permanent deve opment of Phase 2 resu ts n the oss 11.25ha of sem - mproved grass and and 7.78ha of arab e and.	support to b od vers ty, f ora and fauna. SUDS ponds to be used on s te for attenuat on of run off and water qua ty shou d be des gned to prov de oca b od vers ty benef t.	d sturbance through the f na phase unt the construct on works are comp ete. In add t on, SUDS ponds created n Phase 1 w cont nue to prov de hab tat for w d fe. In the onger term, the effects of Phase 2 on b od vers ty have the potent a to be **minor negative**, a though aga n th s may be offset to some extent by proposed hab tat creat on.
Cu tura Her tage	▪ Known archaeo og ca s tes affected ▪ Effects on sett ngs of cu tura her tage s tes and features ▪ Effects on h stor c andscapes and the r sett ngs ▪ Prov s on of wa k ng routes to h stor c or cu tura s tes and nterpretat ve mater a s	CONSTRUCTION Auchterarder Cast e s a SAM ocated at the north west corner of the Cast ema ns s te. In add t on, St Mackessog s Church s a SAM ocated 500m north of the K rkton s te. These SAMs w not be phys ca y affected, but there may be effects on the r sett ngs from Phase 2 deve opment. Dur ng construct on these w be short term and temporary, a be t that any such effects wou d extend s m ar effects from Phase 1 over an add t ona per od of t me. Construct on of new paths around the rema ns of Auchterarder Cast e SAM and prox m ty of Cast ema ns construct on works to the SAM need to be carefu y managed to prevent any encroachment on the schedu ed area. Potent a for construct on works to d sturb NMRS s tes and unknown archaeo og ca rema ns.	Measures to ensure that construct on works, nc ud ng path creat on, do not encroach onto Auchterarder Cast e. Deta ed assessment of ke hood of unknown archaeo og ca rema ns pr or to any works tak ng p ace.	Phys ca effects upon the rema ns of Auchterarder Cast e w not ar se as a resu t of Phase 2 through mp ement ng measures on s te to protect t. G ven that construct on effects on the sett ng of cu tura her tage features and the h stor c andscape w be extended from those exper enced n Phase 1 of deve opment, t s cons dered that, a though aga n short term and temporary, th s w resu t n a **minor negative effect**. Potent a effects upon und scovered rema ns can be appropr ate y m t gated through assessment and, where requ red, protect ve measures (or record ng) at the deta ed des gn stage.
		OPERATION The sett ng of var ous sted bu d ngs ocated on the H gh Street may be nd rect y affected, a though arguab y the s gn f cance of th s as a resu t of Phase 2 s not pred cted to exceed that from Phase 1 of	Sens t ve des gn of s te ayouts and bu d ngs to respect the cu tura e ements of the andscape and townscape n ne w th the masterp an. Part cu ar reference	There w be no phys ca mpact on any known s tes of cu tura her tage nterest. However, the sett ng of var ous SAMs

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		deve opment. These are a e ther B or C(S) sted. The nearest des gned andscape, G eneag es, s around 1.5km from the Townhead s te. Potent a for permanent nd rect effects on the sett ng of the c osest SAM s tes, Auchterarder Cast e and St Mackessog s Church, n part cu ar the f rst of these due to ts prox m ty to the Cast ema ns s te and proposed footpaths around t.	to the sett ng of cu tura her tage s tes and features and the opportun ty to prov de nterpretat ve fac t es (eg her tage tra s, s gnpost ng of cu tura her tage s tes on footpaths etc).	and L sted Bu d ngs w be affected, and deta ed des gn w nc ude cons derat on of these effects to ensure the deve opment s sens t ve y ocated w th n the h stor c and cu tura context of the town. The res dua effect of Phase 2 s therefore **not predicted to be significant,** other than a **minor negative** nd rect effect upon the sett ng of Auchterarder Cast e SAM.
Popu at on and Human Hea th	▪ Proport on of popu at on w th n 500m of recreat ona fac t es ▪ Length of new wa kways and cyc eways nk ng hous ng to oca fac t es ▪ Deve opment ayouts to promote safety and pr or t se peop e over cars ▪ Spec f c env ronmenta prob ems or nu sances from ex st ng sources and those wh ch cou d be created as a resu t of mp ementat on ▪ Veh c e numbers n	CONSTRUCTION D srupt on to the ex st ng popu at on as a resu t of construct on act v t es wh ch may cause some oca sed reduct ons n amen ty and d srupt on.	Carefu cons derat on of oca amen ty to prevent construct on act v t es from caus ng nconven ence to the oca popu at on.	There s the potent a for negat ve effects on the ex st ng popu at on dur ng the construct on of Phase 2 through ncreased traff c and nconven ence re ated to construct on works. However, any such effects mpact ng s gn f cant y upon the ex st ng popu at on may be avo ded through sens t ve construct on pract ces and a son w th the oca commun ty as appropr ate. Nonethe ess, a degree of d srupt on s nev tab e, and therefore a **minor negative** effect s pred cted.
		OPERATION New pathway nk created between Cast ema ns Farm and the town, and a ong the boundary of the K rkton s te. Path created nk ng Townhead w th V ctor a Road. New paths and cyc eways created. Creat on of one grass footba p tch on and at	Layout of deve opment areas n ne w th nat ona gu dance on safety by des gn – prevent ng cr me and reduc ng fear of cr me through appropr ate des gn measures. Th s w nc ude avo d ng h gh-screen fenced boundar es a ong frontages to greenways and paths to ncrease nter-	Once operat ona , the mproved commun ty fac t es such as open space and paths as a resu t of Phase 2 are cons dered to be **minor positive** effects.

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	Auchterarder town	Cast eton.	v s b ty between pub c and pr vate space.	
Mater a Assets	▪ New or enhanced recreat on fac t es and open space ▪ Susta nab ty of mater a s used n hous ng ▪ Waste m n m sat on and recyc ng p an for construct on ▪ Des gn ng for recyc ng	CONSTRUCTION Construct on of Phase 2 s not pred cted to s gn f cant y mpact on ex st ng mater a assets n the town.	Opportun t es shou d be taken to recover and recyc e as much construct on waste as poss b e and to m n m se the amount of waste requ r ng transportat on and d sposa off s te. A p an for waste management shou d be deve oped to cover a phases of construct on. Construct on mater a s w be sourced oca y wherever poss b e.	**No significant effects.**
		OPERATION Three new p ay areas created to the north of the K rkton s te, west of the Cast ema ns s te and w th n the Townhead s te. Creat on of one grass footba p tch on and at Cast eton. New open space adjacent to Cast ema ns Farm bu d ngs created. New open space prox mate to K rkton and Townhead s tes a so created. Overa , once the houses constructed n Phase 2 are occup ed there may be an ncrease n demand for commun ty nfrastructure.	Deve opment of the Cast ema ns s te mmed ate y adjacent to the schoo shou d be undertaken sens t ve y to ensure that d sturbance s m n m sed throughout construct on. Scheme des gn nc udes var ous upgrad ng and new prov s on of commun ty nfrastructure to accommodate ncreased demand. Houses and ayouts w be des gned to opt m se prov s on for storage and co ect on of recyc ed househo d mater a s and conta ners.	No phys ca effects upon mater a assets are pred cted to resu t from Phase 2. New and upgraded mater a assets (such as the new p ay areas and areas of open space) w be created, and th s s cons dered to be a **minor positive** effect.

Table E3 Phase 3

Site(s):	A S tes – Cast ema ns, K rkton and Townhead
Phase and assumed assessment year:	Phase 3 (48 months, 2017-2021)
Assumed changes in baseline:	Pred cted future base ne ncorporat ng Phased 1 and 2 of deve opment

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
A r Qua ty & No se	▪ Nu sance from construct on act v t es and traff c ▪ Traff c f ows on key routes ▪ Leve s of roads de no se and oca a r po utant concentrat ons (n part cu ar NO_2 and PM_{10}) ▪ New footways and cyc eways ▪ Pub c transport serv ces ▪ Speed reduc ng measures on new and ex st ng roads	<u>CONSTRUCTION</u> Increased traff c eve s on oca roads as a resu t of th s th rd per od of construct on works, n part cu ar HGVs de ver ng and remov ng mater a s from s tes, and assoc ated no se and amen ty effects. S gn f cant d srupt on effects are pred cted to be m ted to the bus est per ods w th n the overa construct on programme. F na phase of works at Cast ema ns s te w move potent a sources of construct on no se and a r po utants mmed ate y adjacent to res dent a propert es west of the schoo . Poss b e human hea th effects of ncreased oca a r po utants from construct on act v t es and traff c (predom nant y dust and part cu ates) a though these w be temporary and m ted to per ods of dry and w ndy weather. No se and a r qua ty (dust) effects of construct on works at hous ng s tes on adjacent oca res dents and receptors. In part cu ar, houses constructed n Phases 1 and 2 w be suscept b e to no se and a r qua ty effects of th s f na phase of construct on.	A best pract ce construct on measures for the contro of no se and dust. Measures nc ude, dust suppress on, whee wash ng, no se screen ng, comprehens ve p ant ma ntenance, etc. Mater a s sourced from as c ose as s reasonab y pract cab e to the s te n order to reduce the need for transport and assoc ated em ss ons. The requ rement for spec f c no se m t gat on s not known at th s stage but shou d be g ven due cons derat on based on a deta ed assessment for the res dent a propert es mmed ate y adjacent to Phase 3 of deve opment. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	Assum ng that a best pract ce m t gat on measures are mp emented dur ng construct on, t shou d be poss b e to adequate y contro the no se and a r qua ty effects of construct on works such that no s gn f cant res dua effects are pred cted. Roads de a r qua ty s not pred cted to be s gn f cant y affected by oca ncreases n construct on veh c es. G ven the change from the base ne s tuat on, and n part cu ar the assumed break n construct on works between phases, t s st pred cted that a **<u>minor negative</u>** effect w resu t.
		<u>OPERATION</u> Once operat ona , the ma n traff c effects of the overa deve opment (Phases 1, 2 and 3) w be on the ma n street through the town at the AM and PM	Deta ed des gn and ayout of the s tes undertaken w th a v ew to prevent ng no se and a r qua ty effects from traff c on a	The ncrease n traff c as a resu t of the overa deve opment may ncrease oca eve s of po utant concentrat ons

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		peaks. The res dent a core road through the Cast ema ns s te s extended n Phase 3 to prov de a nk to the area proposed for p ay ng f e ds, and u t mate y to Cast eton Road. Potent a for ncrease n oca po utant concentrat ons from traff c us ng new routes, part cu ar y for houses constructed n prev ous phases at Cast ema ns where no through road was prev ous y ava ab e. Hous ng at Townhead s te extends further towards the A9. Th s hous ng was assessed as No se Exposure Category (NEC) B from PAN56. Deta ed s te ayout and hous ng des gn w therefore need to be cons dered to ensure that traff c no se from the A9 does not adverse y affect the new dwe ngs. Deve opment may be the cata yst for de very of a town bus serv ce n Auchterarder, wh ch s current y not n p ace due to the s ze of the town and the near nature of the ex st ng sett ement. Poss b e human hea th effects of ncreased oca a r po utants from operat ona traff c. Spec f c operat ona traff c pred ct ons for nd v dua phases have not been undertaken, other than recogn t on of the fact that there w be an overa ncrease n car traff c proport ona to the ncrease n popu at on resu t ng from prev ous phases of deve opment. Changes n peak hour traff c f ows for the comp eted deve opment have been est mated and are presented n the appra sa tab e for Phase 3.	new occupants. Any traff c ca m ng measures shou d avo d the use of vert ca speed reduc ng so ut ons, so as not to prec ude use by buses. Ser es of new paths and cyc eways mp emented on a s tes and prov de h gh qua ty wa k ng routes from the hous ng areas to the fac t es and amen t es of the town centre.	assoc ated w th exhaust em ss ons. However, the road capac ty s cons dered adequate to support the pred cted eve s of traff c growth, and therefore no queu ng traff c s expected. In add t on, the des gn of the scheme s such that pub c transport and wa k ng/cyc ng are encouraged for oca tr ps. At th s eve of assessment s gn f cant ncreases n roads de no se and a r po utant concentrat ons are not pred cted but th s w need to be ver f ed through more deta ed work for each app cat on. Des gn so ut ons for nd v dua p ots shou d enab e the effects of road traff c no se from the A9 on new res dents to be adequate y m t gated, n ne w th PAN 56. Nonethe ess, the pred cted overa ncrease n traff c, and n part cu ar the ke hood of more commuters us ng cars for onger tr ps, t s pred cted that a **<u>moderate negative</u>** res dua effect w resu t n terms of roads de no se and a r qua ty a ong the roads n the town wh ch exper ence the greatest ncreases n traff c. Th s s therefore an area wh ch requ res to be assessed n more deta .
So s and Geo ogy	▪ Area of pr me agr cu tura and affected ▪ Area of brownf e d or	<u>CONSTRUCTION</u> Potent a for m grat on of any ground contam nat on present and the re ease of andf gas from the former refuse t p dent f ed 140m from the Townhead	Gas protect on, and measures dur ng construct on to prevent m grat on of po utants n accordance w th S te	The nature of the under y ng geo ogy suggests that, w th appropr ate cons derat on of the potent a for

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	dere ct and re-used ■ Best pract ce construct on env ronmenta management	s te. So compact on from construct on p ant and veh c es, and assoc ated ncreases n surface water runoff.	Invest gat ons comm ss oned for Townhead. Measures to prevent so compact on, such as spread ng heavy oads. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	po utant m grat on, construct on effects upon geo ogy and so s can be prevented, and w therefore not be s gn f cant. Overa the res dua effect of Phase 1 on geo ogy and so s s **not predicted to be significant**.
		OPERATION Once operat ona , t s not cons dered that the deve opment overa w resu t n any effects on geo ogy and so s. However, Phase 3 of deve opment w nonethe ess requ re the permanent oss of some pr me qua ty agr cu tura and as fo ows: Cast ema ns – 0.78ha NB assumed to be approx mate y ha f of tota Phase 3 and take as southern ha f of s te s c ass f ed as "Urban". K rkton – 3.77ha Townhead – zero (c ass f ed as “Urban”). For the deve opment overa (phases 1, 2 and 3 comb ned) there w be an overa oss of agr cu tura and as fo ows: Cast ema ns – 7ha NB assumed to be approx mate y ha f of tota and take as southern ha f of s te s c ass f ed as "Urban". K rkton – 29.14ha Townhead – zero (c ass f ed as “Urban”).	The deve opment footpr nts for the three s tes respect ex st ng f e d boundar es therefore and take does not encroach beyond the areas requ red eg nto ne ghbour ng f e ds/farm un ts.	Phase 3 w resu t n further oss of 4.55ha of pr me qua ty agr cu tura and to the deve opment. The overa oss for the who e deve opment s 36.14ha of pr me qua ty agr cu tura and. However, th s effect n re at on to so s s **not predicted to be significant**.
Aquat c Env ronment	■ Qua ty of surface watercourses ■ Insta at on of SUDS	CONSTRUCTION Ruthven Water runs to the south east of a of the s tes, and t s h gh y un ke y that construct on-	Best pract ce m t gat on measures to prevent surface water runoff and protect a	Assum ng the mp ementat on of po ut on prevent on measures and appropr ate

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	measures ■ Use of permeab e pav ng ■ Water meter ng, water recyc ng and ow water app ances n new houses	re ated runoff and re ated po ut on of th s watercourse wou d resu t. Ruthven Water s c ass f ed as good/moderate by SEPA. K rkton Burn s ocated north of the Cast ema ns and K rkton s tes, and there s m ted potent a for runoff from construct on re ated act v t es to affect th s watercourse.	watercourses. Th s nc udes adherence to Po ut on Prevent on Gu de nes pub shed by SEPA. Imp ementat on of a construct on Env ronmenta Management P an (EMP).	management of s te dra nage dur ng construct on, the res dua effect of Phase 3 on the aquat c env ronment s **not predicted to be significant**.
		OPERATION There are areas prone to f ood ng wh ch fo ow the course of the Ruthven Water. However, SEPA dent f es that the major ty of Auchterarder s not w th n an area where there s an est mated f ood r sk of 0.5% (1:200) or greater n any g ven year. SUDS retent on ponds are to be constructed w th n Cast ema ns and Townhead s tes.	Dra nage Impact Assessment to cons der potent a for f ood ng and surface water runoff and to adequate y cater for s te dra nage. Permeab e pav ng to be used n hard surfaced areas (eg dr veways) wherever pract cab e. SUDS des gn w ncorporate f ood assessment and deta ed p ant ng proposa s. A new houses to be des gned to reduce water usage n ne w th current best pract ces.	Deta ed cons derat on of dra nage and f ood ng shou d ensure that the scheme can be des gned to prevent res dua env ronmenta effects from the operat ona deve opment on the aquat c env ronment. Therefore, the operat ona effects of Phase 3 on the aquat c env ronment are **not predicted to be significant**.
C mate Change	■ Spec f cat on of ow embod ed energy n bu d ng mater a s ■ Target ng 'Exce ent standard n BREEAM assessment for homes ■ Incorporat on of energy eff c ency and m cro-generat on systems n new homes and bu d ngs	CONSTRUCTION Potent a for short term ncreases n carbon and other greenhouse gas em ss ons from construct on re ated veh c es and processes.	Imp ementat on of a construct on Env ronmenta Management P an (EMP).	G ven ts oca and temporary effects, the mpacts of construct ng Phase 3 on g oba c mate change are **not predicted to be significant.**
		OPERATION D rect wa k ng and cyc ng routes w be prov ded from the areas of new hous ng nto the town, wh ch w make such tr ps more attract ve by these susta nab e modes. For onger d stance tr ps, t s ke y that the car w	Mater a s sourced from as c ose as s reasonab y pract cab e to the s te n order to reduce the need for transport and assoc ated em ss ons. Des gn gu de nes nc ude energy	G ven the ke hood of hous ng des gn ach ev ng an exce ent BREEAM rat ng, and the ncorporat on of measures to reduce the carbon footpr nt of the deve opment, there s the opportun ty to reduce carbon em ss on from the

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	■ Wa k ng and cyc ng routes to oca serv ces wh ch are more d rect than tr ps by car ■ Hous ng des gn wh ch w w thstand greater and more severe weather effects ■ Sourc ng mater a s oca y to he p reduce the overa carbon footpr nt of the deve opment	rema n the most common mode of transport, part cu ar y for commuters. Carbon em ss ons from motor sed transport are therefore ke y to ncrease as a resu t of the Deve opment Framework n ne w th the ncrease n popu at on of the town fo ow ng ts expans on. Carbon and other greenhouse gases w be em tted from energy use of bu d ngs a though the adopt on of BREEAM targets and the use of M crogenerat on offers and opportun ty to make the houses 'best n c ass n re at on to carbon em ss ons.	eff c ency and susta nab ty requ rements, nc ud ng the use of renewab e energy so ut ons where appropr ate, and the use of env ronmenta y fr end y mater a s from susta nab e sources. Incorporat on of energy eff c ency measures nto the des gn of new hous ng and other bu d ngs. Spec f cat on and use of c mate-proofed/res stant mater a s where pract ca . New paths and cyc eways to encourage non-motor sed transport. The consort um of housebu ders s comm tted to ach ev ng a BREEAM rat ng of Exce ent for a new homes.	deve opment compared w th what wou d otherw se be the case. However, t s st cons dered that most peop e w cont nue to use the r cars for trave outs de of the town. Th s w contr bute to carbon em ss ons for Scot and, but at a nat ona and g oba eve t s un ke y that em ss ons from the operat ona deve opment wou d represent a tang b e proport on of em ss ons. However, the ncrease n traff c re ated greenhouse gas em ss ons as a resu t of the Deve opment Framework as a who e s pred cted to resu t n a **minor negative** effect n re at on to c mate change.
Landscape, Townscape & V sua Effects	■ Landscape character area(s) affected ■ Landscape and townscape features affected ■ Key v ews affected ■ Hous ng des gns ref ect ng vernacu ar arch tecture, mater a s and sett ement ayouts	CONSTRUCTION Dur ng construct on, effects on ex st ng v ews for receptors adjacent to the deve opment s tes w ar se from the operat on of construct on p ant on s te. However, th s w be temporary for the durat on of the construct on. In add t on, ex st ng res dents w be accustomed to the v sua effects of construct on p ant as a resu t of prev ous phases of deve opment. Wh st th s does not reduce the effect t does nonethe ess part a y reduce ts ke y s gn f cance. The effects of the deve opments on andscape and townscape are permanent and have been addressed be ow under 'Operat on .	Construct on programme to be as short as reasonab y pract cab e. Locat on of temporary s te area and p ant to be cons dered n re at on to andscape, townscape and v sua effects.	S gn f cant short term adverse v sua effects are pred cted for propert es c ose to the hous ng s tes wh ch have ex st ng v ews across the s tes. A **moderate negative** effect s pred cted, a though th s w be temporary for the durat on of the construct on works.
		OPERATION Landscape Character and Features K rkton s the most eastern of the s tes, and w contr bute to def n ng the form of the town at ts	Des gn gu de nes to m n m se potent a v sua mpacts and reduce change to the	The ear er phases of deve opment w oca y change the andscape character

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		northern and eastern edge. Phase 3 extends to a greater area of current y undeve oped and f at agr cu tura and wh ch s pred cted to have a moderate effect on oca andscape character. Cast ema ns w be deve oped further to the west n Phase 3 w th potent a effects on the andscape sett ng of Auchterarder Cast e and further chang ng the northern edge of the urban sett ement. Phase 3 of the Townhead s te w prov de the f na southern edge of the deve opment s te where s meets Provosts Wa k mmed ate y north of the A9. <u>Key V ews and V sua Impact</u> Operat ona deve opment w be v s b e, n vary ng degrees, from surround ng houses, roads and countrys de. Greatest effects are pred cted to be for users of the A824 and B8062, a though v ews are sporad c due to ex st ng andscape features and bu t deve opment. Where mmed ate y adjacent, the mpact on v ews from roads w be greatest. More ex st ng propert es w exper ence a change n v ew as Phase 3 (and therefore the overa deve opment) s comp eted, a though many of the v ews affected are from the rear of houses and s gn f cant effects are not pred cted for the major ty of receptors affected. V sua prom nence of northern edge on the approaches from Strathearn. Longer d stance v ews from the Och H s to the south may be s ght y affected a though the degree of change w be sma .	andscape sett ng and character of the town. Hous ng des gn must take account of oca vernacu ar and mater a s, as we as sett ement patterns and h stor c p an form n ne w th the Masterp an. Des gned to f t w th both rura edge and ex st ng town. Screen p ant ng w be prov ded between the K rkton s te and ex st ng bus ness on Hunter Street, to prov de v sua and phys ca separat on. V ews reta ned through use of stock proof fenc ng and hedg ng, w th occas ona trees, for garden boundar es front ng the countrys de a ong the northern edge. Structure p ant ng s proposed throughout a three s tes and at the new footba p tches at Cast eton.	at each s te. Tak ng account of the proposa s for structura andscap ng, andscape effects are pred cted to be **<u>minor negative</u>** and therefore not s gn f cant. V sua mpacts from ex st ng hous ng n Auchterarder (nc ud ng Phase 1 and 2 houses) and from users of paths and roads are pred cted to be **<u>minor negative</u>**.
B od vers ty	▪ Area of key hab tats ost (part cu ar y LBAP	<u>CONSTRUCTION</u> Potent a for construct on works to affect s te- eve	Deta ed s te- eve survey work to	Assum ng that s te eve survey work s

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	hab tats) ■ Effects on known LBAP spec es popu at ons ■ Measures to protect hab tats adjacent to hous ng areas ■ Proposa s for hab tat creat on (nc ud ng SUDS ponds)	b od vers ty, f ora and fauna. There are no des gnat ons ocated on the hous ng s tes, or n c ose prox m ty. SSSIs n the w der s te context are un ke y to be affected by construct on works.	determ ne ex stence of any protected spec es, LBAP hab tats and spec es or other b od vers ty nterest. Any cens ng requ rements as a resu t of hab tats or spec es on s te must be str ct y adhered to.	undertaken to dent fy and protect any spec es on s te, nc ud ng f ora and fauna, the res dua effect of Phase 3 s ke y to rema n s gn f cant to some extent as t w nvo ve some further oss of hab tat and d sturbance to spec es to that exper enced as a resu t of ear er phases. Th s s pred cted to be a **minor negative** effect.
		OPERATION New structure p ant ng and open space prov s on w th n deve opment s tes has the potent a to prov de hab tat for var ous spec es. Permanent deve opment of Phase 3 resu ts n the oss of 5.77ha of sem - mproved grass and and 1.55ha of arab e and. Deve opment of the scheme overa resu ts n the oss of 39.84ha of sem - mproved grass and and 14ha of arab e and.	Wherever reasonab y pract cab e, m n m sat on of oss of any and prov d ng support to b od vers ty, f ora and fauna. SUDS ponds to be used on s te for attenuat on of run off and water qua ty shou d be des gned to prov de oca b od vers ty benef t.	Poss b e pos t ve effects on b od vers ty through structure p ant ng, a though th s w rema n the subject of some d sturbance through the f na phase unt the construct on works are comp ete. In add t on, SUDS ponds w cont nue to prov de hab tat for w d fe. In the onger term, the effects of the overa deve opment on b od vers ty have the potent a to be **minor negative**, a though aga n th s may be offset to some extent by proposed hab tat creat on and b od vers ty benef ts prov ded by the des gn of SUDS ponds.
Cu tura Her tage	■ Known archaeo og ca s tes affected ■ Effects on sett ngs of cu tura her tage s tes and features ■ Effects on h stor c andscapes and the r sett ngs ■ Prov s on of wa k ng	CONSTRUCTION Auchterarder Cast e s a SAM ocated at the north west corner of the Cast ema ns s te. In add t on, St Mackessog s Church s a SAM ocated 500m north of the K rkton s te. These SAMs w not be phys ca y affected, but there may be effects on the r sett ngs from the deve opment. Dur ng construct on these w be short term and temporary, a be t that any such effects wou d extend s m ar effects from	Measures to ensure that construct on works, nc ud ng path creat on, do not encroach onto Auchterarder Cast e. Deta ed assessment of ke hood of unknown archaeo og ca rema ns pr or to any works tak ng p ace.	Phys ca effects upon the rema ns of Auchterarder Cast e w not ar se as a resu t of Phase 3 through mp ement ng measures on s te to protect t. G ven that construct on effects on the sett ng of cu tura her tage features and the h stor c andscape w be extended from those exper enced n ear er phases

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	routes to h stor c or cu tura s tes and nterpretat ve mater a s	prev ous phases over an add t ona per od of t me. Construct on of new paths around the rema ns of Auchterarder Cast e SAM and prox m ty of Cast ema ns construct on works to the SAM need to be carefu y managed to prevent any encroachment on the schedu ed area. Potent a for construct on works to d sturb NMRS s tes and unknown archaeo og ca rema ns.		of deve opment, t s cons dered that, a though aga n short term and temporary, th s w resu t n a **minor negative** effect. Potent a effects upon und scovered rema ns can be appropr ate y m t gated through assessment and, where requ red, protect ve measures (or record ng) at the deta ed des gn stage.
		OPERATION The sett ng of var ous sted bu d ngs ocated on the H gh Street may be nd rect y affected These are a e ther B or C(S) sted. The nearest des gned andscape, G eneag es, s around 1.5km from the Townhead s te. Potent a for permanent nd rect effects on the sett ng of the c osest SAM s tes, Auchterarder Cast e and St Mackessog s Church, n part cu ar the f rst of these due to ts prox m ty to the Cast ema ns s te and proposed footpaths around t.	Sens t ve des gn of s te ayouts and bu d ngs to respect the cu tura e ements of the andscape and townscape n ne w th the masterp an. Part cu ar reference to the sett ng of cu tura her tage s tes and features and the opportun ty to prov de nterpretat ve fac t es (eg her tage tra s, s gnpost ng of cu tura her tage s tes on footpaths etc).	There w be no phys ca mpact on any known s tes of cu tura her tage nterest. However, the sett ng of var ous SAMs and L sted Bu d ngs w be affected, and deta ed des gn w nc ude cons derat on of these effects to ensure the deve opment s sens t ve y ocated w th n the h stor c and cu tura context of the town. The res dua effect of the deve opment overa s therefore **not predicted to be significant,** other than a **minor negative** mpact upon the sett ng of Auchterarder Cast e SAM.
Popu at on and Human Hea th	■ Proport on of popu at on w th n 500m of recreat ona fac t es ■ Length of new wa kways and cyc eways nk ng hous ng to oca	CONSTRUCTION D srupt on to the ex st ng popu at on as a resu t of construct on act v t es wh ch may cause some oca sed reduct ons n amen ty and d srupt on.	Carefu cons derat on of oca amen ty to prevent construct on act v t es from caus ng nconven ence to the oca popu at on.	There s the potent a for negat ve effects on the ex st ng popu at on dur ng the construct on of the f na phase of deve opment through ncreased traff c and nconven ence re ated to construct on works. However, any such effects mpact ng s gn f cant y upon the ex st ng popu at on may be avo dab e

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
	fac t es ■ Deve opment ayouts to promote safety and pr or t se peop e over cars ■ Spec f c env ronmenta prob ems or nu sances from ex st ng sources and those wh ch cou d be created as a resu t of mp ementat on ■ Veh c e numbers n Auchterarder town			through sens t ve construct on pract ces and carefu a son w th the oca commun ty as appropr ate. Nonethe ess, a degree of d srupt on s nev tab e, and therefore a **minor negative** effect s pred cted.
		OPERATION Overa , var ous new pathway nks w th n and between new areas of hous ng, recreat ona fac t es and the ex st ng town. New paths and cyc eways created. Prov s on of one further grass footba p tch and chang ng fac t es on and at Cast eton.	Layout of deve opment areas n ne w th nat ona gu dance on safety by des gn – prevent ng cr me and reduc ng fear of cr me through appropr ate des gn measures. Th s w nc ude avo d ng h gh-screen fenced boundar es a ong frontages to greenways and paths to ncrease nter-v s b ty between pub c and pr vate space.	Once operat ona , the mproved commun ty fac t es such as open space, paths and the sports p tches and chang ng fac t es are cons dered to be **moderate positive** effects.
Mater a Assets	■ New or enhanced recreat on fac t es and open space ■ Susta nab ty of mater a s used n hous ng ■ Waste m n m sat on and recyc ng p an for construct on ■ Des gn ng for recyc ng	CONSTRUCTION Construct on of Phase 3 s not pred cted to s gn f cant y mpact on ex st ng mater a assets n the town.	Opportun t es shou d be taken to recover and recyc e as much construct on waste as poss b e and to m n m se the amount of waste requ r ng transportat on and d sposa off s te. A p an for waste management shou d be deve oped to cover a phases of construct on. Construct on mater a s w be sourced oca y wherever poss b e.	**No significant effects.**
		OPERATION Su te of new and upgraded p ay areas created n Auchterarder. New open space created throughout the town. One further grass footba p tch and chang ng fac t es prov ded north west of Cast ema ns.	Deve opment of the Cast ema ns s te mmed ate y adjacent to the schoo shou d be undertaken sens t ve y to ensure that d sturbance s m n m sed throughout construct on. Scheme des gn nc udes var ous	No phys ca effects upon mater a assets are pred cted to resu t from the deve opment overa . New and upgraded mater a assets (such as the new p ay areas and areas of open space) w be created, and th s s cons dered to be a

Topic	Criteria	Assessment of Effects	Assumed Mitigation	Residual Effect Significance
		Overa , once a new houses are occup ed there may be an ncrease n demand for commun ty nfrastructure.	upgrad ng and new prov s on of commun ty nfrastructure to accommodate ncreased demand. Houses and ayouts w be des gned to opt m se prov s on for storage and co ect on of recyc ed househo d mater a s and conta ners.	**moderate positive** effect.

Appendix F Responses to Comments On Scoping Report

Appendix F Responses to Comments on Scoping Report

This appendix presents a table of the key issues and suggestions raised by the Consultation Authorities' review of the SEA Scoping Report for the Development Framework. In addition the table identifies the actions / responses undertaken by WSP Environmental and how, if relevant, these comments have been addressed in the ER.

Table F.1 Scoping Consultation Responses

CA	Key Points Raised	Response
HS	..I expect the environmental assessment to take cognisance of these features, both in the collection of baseline data and in considering the likely impact of the Development Framework on the historic environment.	The baseline data include relevant designated and non-designated sites. The appraisal of the Framework assesses direct and indirect effects as suggested by HS.
	…you may find that some impacts are uncertain at the strategic level. Where this is the case it is important to identify these issues and to be clear how they will be taken into account at the lower level…	A section has been included in the ER to address uncertainty to deal with these issues.
	You may also wish to consider reviewing … Scottish Historic Environment Policy 2, Passed to the Future.	Noted. Both documents have been included in the review of strategies and plans (see Appendices to the ER).
	..The setting of historic environment features is a key environmental issue and should be added to the first two issues ie designated sites and their setting, archaeological sites and monuments and their settings.	The importance of setting of sites has been reflected in the baseline data (Appendix D) and in the assessment of the effects of implementation of the Development Framework.
	..one SAM missing from Figure D8: the monument known as “St Bean’s Church, Kinkell” (index no. 5952, NN938162).	Noted. The monument has been added to Figure D8.
	B-listed Coll-Ear Lodge, Hunter Street (HBNUM21359) and B-listed Mansefield, High Street (HBNUM 21344) are missing from the table.	Noted. These listed buildings have been added to Table D7.
	Table 3.3 summarises the environmental baseline and should include the nearby garden and designed landscape at Gleneagles Hotel.	The landscape has been added to Table 3.3.
	I suggest that the overarching SEA objective for the historic environment should be “to protect and where appropriate enhance the historic environment”…	The objective has been amended to include the phrase “..where appropriate enhance..” which was not previously included.
	..The Environmental Report should specify what is meant by “designated sites”.. …the third SEA sub-objective should explicitly	These points have been explained (or added) in Table 4.2 of the ER.

	include archaeological sites as well as buildings and landscapes.	
	…I suggest that it would be useful to clearly set out the proposed mitigation measures in the ER along with who will be responsible for ensuring their delivery…	A table as suggested has been included in the ER.
SEPA	..SEPA would also welcome detailed consideration of the Water Framework Directive..	This document has been included in the review of strategies and plans (Appendix A & B).
	The Council may also wish to consider whether the following SEPA policies .. are relevant to the strategy: Policy and Supporting Guidance on Provision of Waste Water Drainage in Settlements (Policy 55), Groundwater Protection Policy for Scotland (Policy 19) and Policy on the Culverting of Watercourses (Policy 26) …	Noted. However the approach for the SEA has been to undertake a strategic assessment of the implementation of the Development Framework as Council policy. The guidelines listed are necessarily of a detailed nature and do not add to the context and objectives for the SEA.
	... It would have been useful to provide baseline data on the sewerage network and water supply network for the area, especially in relation to waste water treatment capacity to deal with the development proposed under the Framework.	We did not view utilities such as water supply and wastewater networks as being environmental topics for the baseline or SEA. A comment has been added on WWTW capacity which has been resolved between the utility (Scottish Water) and the developers.
	Additional baseline information sources were suggested by SEPA including SNIFFER's recently published handbook of climate trends across Scotland and data on SEPA's website on Scottish Local Authority waste management.	Noted with thanks. Relevant information has been incorporated into the baseline data in Appendix D.
	..The objective and sub-objectives could therefore reflect the requirement to consider the impact of the proposals on the overall waterbody status rather than just water quality.	Noted. The objective has been amended accordingly.
	It would be extremely helpful to set out all mitigation measures 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…	A table following the format suggested has been included in the mitigation and monitoring section of the ER.
SNH	..We suggest that the landscape guidelines for Tayside Landscape	Both documents have been reviewed in Appendix B and

	Character Assessment (LCA) are relevant, and should be included in Table 3.1.. We also suggest NPPG14 is included in Table 3.1.	included in the relevant table in the ER (Table 2.1).
	You may also wish to consider "Designing Places: a policy statement for Scotland" and 'European Protected Species, Development Sites and the Planning System; interim guidance for local authorities on licensing arrangements' (October 2001).	Noted. Designing Places has been included in the document reviews (Appendix B). However, the approach to the SEA is around the implementation of the Development Framework as planning policy/guidance. Detailed ecological surveys are not appropriate to this level of detail (as discussed in Chapter 3 of the ER) but would be appropriate to later stages of planning associated with detailed applications for development sites.
	Further details on designations and others within the area can be obtained by accessing SNH's "Natural Spaces" system on our website.	Noted. Information has been added to the environmental baseline (Appendix D) where relevant.
	We refer to Table 3.4 and Appendix D and recommend that attention should be given to protected species, designated sites and nationally protected areas…	Presence and effects of designated areas and sites, key habitat areas and loss of habitat have been considered in the baseline and in the assessment frameworks. As explained above the approach is strategic therefore habitat and species surveys have not been undertaken at this stage. The level of detail of the baseline data is commensurate with what could usefully be used in the strategic assessment of the Development Framework.
	We also recommend that reference is made to the Scottish Biodiversity List and to the statutory duty on all public bodies to further the conservation of biodiversity.	Noted. Reference has been included to the Scottish Biodiversity list in the baseline appendix. The statutory duty is a procedural requirement rather than an SEA specific one.
	We recommend specific reference to European Protected Species such as bats, to maintaining links between features and to national and local BAP species and habitats.	Noted. Reference has been made to these in the mitigation section of the ER as it relates more specifically to detailed implementation of the Development Framework.
	Effects on Natura species…	No Natura sites are predicted to be affected by the

		Development Framework's implementation.
	We refer to the Tayside LCA (Broad Valley Lowlands) regional landscape guidelines …	Reference to the LCA is made in the baseline (Appendix D) and in the mitigation for detailed implementation of the Development Framework
	Landscape – we recommend that the last sub objective is amended to 'promote a high quality of layout and design which reflects and enhances the local distinctiveness and vernacular of the Auchterarder area'.	The objective has been amended as proposed.
	Biodiversity – we recommend the formulation of a more positive indicator rather than 'Areas of key habitats lost' and suggest baseline data on habitat type is needed to help formulate a relevant indicator for protection and enhancement of semi-natural habitat.	Noted. However for reasons stated above, we consider this to be too detailed an approach for the SEA of implementing high level policy. As detailed baseline data are not appropriate to the level of assessment being used for the SEA, it is not considered appropriate to develop objectives as proposed.
	We suggest another indicator is developed .. for example number of integrated nesting places for swifts and hirundines in new houses/native trees planted in new gardens.	As above, this level of detail for the housing proposals is not specified in the Development Framework therefore it is impractical to use the indicator suggested.
	A more specific objective could also be devised for EPS such as "maintain and enhance the populations of European Protected Species, including protection of their resting places"	Noted. However for reasons stated above, we consider this to be too detailed an approach for the SEA of implementing high level policy. As detailed baseline data are not appropriate to the level of assessment being used for the SEA, it is not considered appropriate to develop objectives as proposed.