

EA Environmental Report – Cover Note – Section 1

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SEA Environmental Report – Cover Note – Section 2

An environmental report is attached for the Ayrshire Local Biodiversity Action Plan

The Responsible Authorities are: East Ayrshire Council, North Ayrshire Council & South Ayrshire Council via Ayrshire Joint Structure Plan

SEA Environmental Report – Cover Note – Section 3

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SEA Environmental Report – Cover Note – Section

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Environmental Report – Ayrshire Local Biodiversity Action Plan

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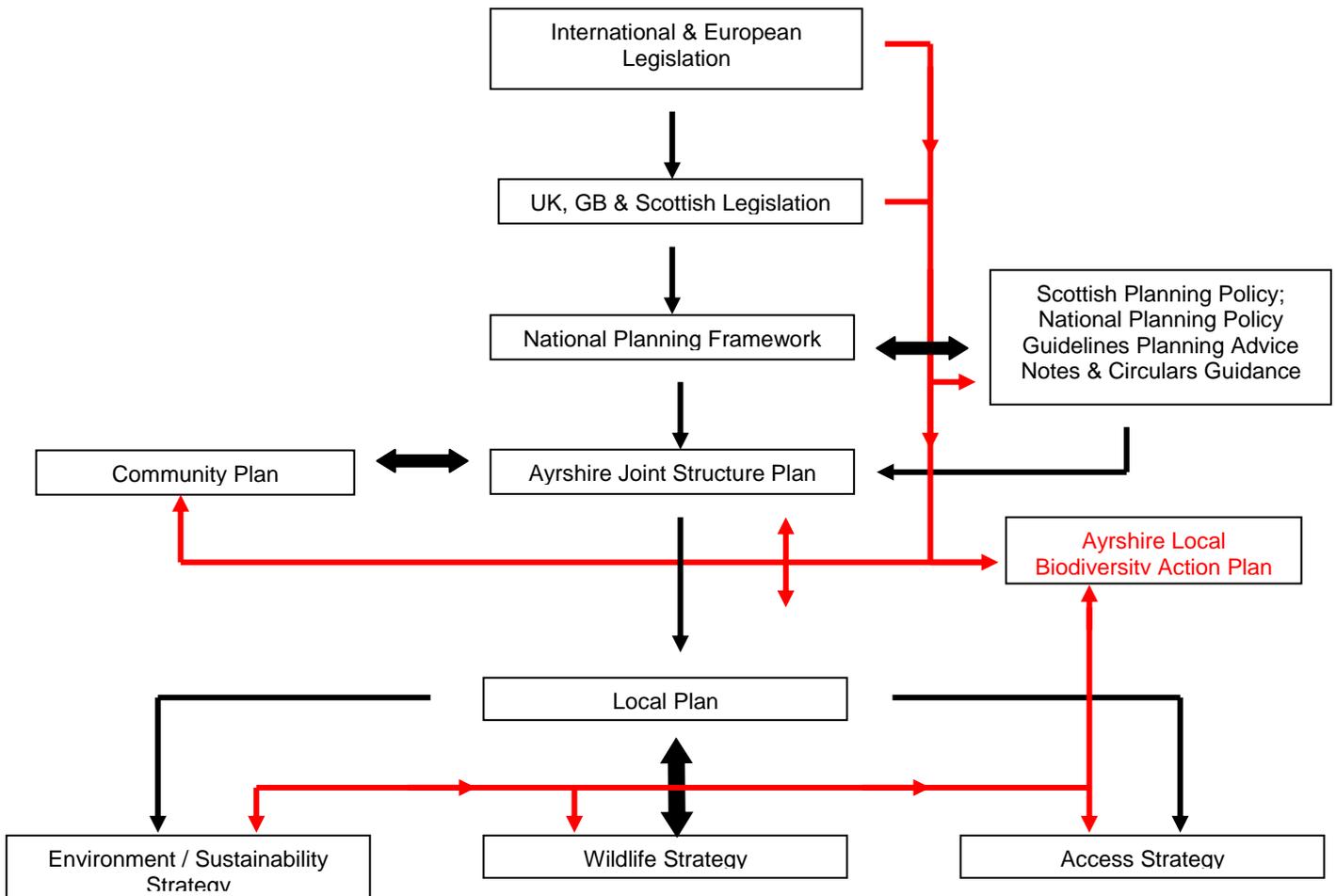
1. NON TECHNICAL SUMMARY

Background

In 2002 the first Ayrshire Biodiversity Action Plan (ALBAP) was published, pertaining to the local of North, East and South Ayrshire, and provided local action plans for 7 habitats and 11 species. In the 6 years that have passed there have been significant changes in the sphere of biodiversity from the international level right down to the local level. As such the ALBAP Steering Group, comprising representation of Local Authority, Joint Structure Plan, SEPA, SNH & RSPB, commissioned an ALBAP Review.

1.1.2 The purpose of the ALBAP Review is to assist in the delivery, at a local level, of the conservation and enhancement of flora and fauna; to relate to higher-level policy, plans and programmes which also aim to protect the bio diversity and to work with other groups, agencies, NGO's and / or interested individuals to deliver a co-ordinated approach to the conservation of biodiversity. The two main objectives of which are the - prioritisation of the habitats and species for Ayrshire and to develop plans for selected priority habitat and species and any relevant generic action plans.

1.1.3 The ALBAP Review is, in the main, related in a hierarchical way to a number of other Policy Plans and Programmes (PPP's). Below is a diagram of the relationship of the ALBAP Review to other PPP's.



1.1.4 As part of the development of this Review / Plan a Strategic Environmental Assessment (SEA) is being undertaken as per the Environmental Assessment (Scotland) Act 2005. The execution of an SEA in the relation to a Policy, Plan or Programme is an important component of assessing the likely significant impact of the implementation of the “plan” on the environment, to assess alternatives, develop mitigation methods and to consult i.e. NGO’s, special interest groups and the general public. There are five key aspects to the SEA process:-

- Screening Determining whether the plan / programme is likely to have significant environmental effect
- Scoping Deciding on the scope & level of detail of the environmental report, and the consultation period for the report – this is done in consultation with Scottish Natural Heritage the Scottish Ministers (Historic Scotland) and the Scottish Environment Protection Agency
- Environmental Report Publishing an environmental report on the plan or programme and its environmental effects, and consulting on that report.
- Adoption Providing information on:- the adoption plan/programme; how consultation comments have been taken into account and; methods for monitoring the significant environmental effects of the implementation of the plan/ programme
- Monitoring Monitoring significant environmental effects and taking appropriate remedial action for any unforeseen significant environmental effects.

Report

The purpose of the SEA Environmental Report is to assess the ALBAP Review in respect of SEA environmental issues which are likely to be significantly affected by the implementation of this plan; to consider alternatives, mitigation and the methodology for future monitoring.

Initially, via the Scoping process, it was felt that there was the potential for a direct significant effect to the following:- Biodiversity, Flora, Fauna, Soil, Water, Landscape, Cultural Heritage and a potential synergistic and or cumulative effect on Air, Human Health & Climatic Factors. However through the development of the plan it became clear that a number of these issues could be scoped out, namely Cultural Heritage, Human Health, Climatic Factors, Air, Material Assets. 3.2.4 provides the reasoning for these issues being scoped out.

1.2.3 In order to accurately assess the potential impact an environmental baseline of the local was required. During the process of collating the baseline data the diversity of Ayrshire’s landscape was reaffirmed, there are some 8 Regional Character Areas each of which provide a range of habitats for an array of species. From which we have a significant number of sites which are either of local, national or international importance for either geological or biological interest.

1.2.4 The development of the environmental baseline helped to identify areas of concern, highlight areas where there is insufficient data, data that it is out of date or in incompatible format. The baseline audit centred on 4 main issues – Biodiversity, Flora & Fauna; Landscape, Soil and Water. The following data related problems were emphasised:-

- Incomplete Phase 1 habitat plans
- Lack of a Biological Records Centre
- Accurate recording of pollution incidents (SEPA are continuing to improve the recording process)
- Soil data was considered to be the weakest e.g. Macauley Landuse Research Institute records some 20yrs old ; changes in the soil due to intensive farming and or forestry do not appear to be well recorded.

1.2.5 Ayrshire's current environmental problems, as they relate to the aforementioned issues centre on the following areas and are fully considered in 3.4.3

- Lack of Data
- Habitat Fragmentation
- Reduction of Habitats
- Loss of Species Diversity
- Water Quality

1.2.6 A function of this report is to develop SEA objectives from which the environmental performance of the ALBAP can be measured. Their development relates to the information previously gathered from the consideration of the environmental issues, the environmental baseline & the current environmental problems. Each objective has set criteria and most importantly, indicators through which the effect of the implementation of the plan upon the environment can be measured. Details of which can be read in 3.6.1

1.2.7 As part of the SEA process three main alternatives were considered, 1. do nothing, 2. develop an ALBAP similar to the first or 3. to develop an ALBAP that was much more focused on specific priorities. Number 1 was dismissed by the ALBAP steering group as the existing ALBAP did not reflect current data and or legislation, did not have sufficient focus and that Ayrshire required a document such as an LBAP to assist in a co-ordinated & focused approach to biodiversity within Ayrshire. Option 2 was dismissed as it was recognised that while the original ALBAP was a worthy document it was too ambitious with somewhat unrealistic objectives. Therefore option 3 was the favoured alternative, it was felt that a document which focused on a small number of habitat & species action plans with SMART targets in a format that could be progressed and updated regularly would be an effective document.

1.2.8 The draft ALBAP was developed by Biological Solutions on behalf the Ayrshire Biological Steering Group. Habitats and species were chosen by using a ranking system. This method identified those species and habitats that were currently locally in need of attention; that were of special conservation significance and that required active conservation measures to sustain them. This data was then cross referenced against habitats and species on priority listings either EU or UK and which if any were already subject to some form of programme of conservation. Lack of data significantly influenced the objectives and actions of the Plan.

1.2.9 Following the above assessment the steering group decided that the ALBAP should focus on 2 Core Theme Action Plans 2 Habitat Action Plans and 2 Species Action Plans each with specific objectives, actions and targets (incl timescales); each plan identifies the lead partner and other agents that would be able to assist in the delivery of the objectives and actions.

1.2.10 So that the likely environmental effects of the implementation of this plan could be accurately assessed the ALBAP action plans were gauged in relation to the SEA objectives and criteria, the following is a summarised table of the findings for a comprehensive analysis please see appendix D. Overall the ALBAP action plans were considered to have a neutral to positive effect on the SEA environmental issues scoped.

		LBAP Plan Objectives					
		Lowland Raised Bogs	Coastal Habitats	Water Voles	Farmland Birds	Implementation & Reporting & Monitoring	Data & Information
SEA Topic							
Biodiversity Flora & Fauna		++	++	++	++	+	+
Soil		++	0	0/+	+	0/+	?
Water		+	0	0/+ +	0/+	0/+	?
Landscape		++	+	+	++	0/+	0/+
Legend							
+	Positive environmental effect (+ = minor; ++ = major)						
-	Negative environmental effect						
0	Neutral environmental effect						
?	Unknown / Uncertain						

1.2.11 To further enhance the plan a number of mitigation measures were identified the majority of which involve working with land owners, land managers and the general public while others require working with other organisations and their policy plans and programmes to maximise the potential for biodiversity conservation and enhancement.

1.2.12 The final component of the SEA process is to monitor the effect of the implementation of the ALBAP on the environment, spotting any positive & / or negative effects early and undertaking appropriate action. In relation to this plan the table below details the proposed monitoring.

What is being Monitored	Data source, frequency of monitoring	Summary of proposed remedial action (if information is available)	Timescale & responsibility
Reports of breeding Barn Owl in Ayrshire	RSPB, BTO, FWAG Annual		RSPB 2009 / 10
Monitor & report on the known water vole population in the Stinchar catchment both within any improved areas and out with such areas	Ayrshire Rivers Trust Annual		Ayrshire Rivers Trust 2008/9
Identify the relative value of the raised bogs based on their invertebrate importance using water beetle communities as indicators	External Consultant To be decided		Lowland Raised Bogs – Bruce Phillip 2009
Condition & number of designated sites e.g. SAP, SAC, SSSI etc	SNH		SNH ; Steering Group 2009/10
Changes in number / area of LBAP species / habitat	Ayrshire Local Biodiversity Action Group Steering Group		Steering Group On going
Number of Ayrshire LBAP actions completed	Ayrshire Local Biodiversity Action Group Steering Group -Ongoing		Steering Group On going
Habitat type/ distribution – Phase 1 Habitat survey	SNH Ongoing	May require to be updated	Steering Group On going
Bathing Water Quality	SEPA June – Sep		Steering Group On going
River water quality	SEPA		Steering Group On Going

1.2.13 In order to be as inclusive as possible and to comply with the Environmental Assessment (Scotland) Act 2005 a period of consultation is required now that both the ALBAP and the associated SEA environmental report have been produced. Consultation will be with the Consultation Authorities (SNH, SEPA, Historic Scotland), interested groups and the general public via a range of media. This consultation period will end on the 31st March, responses considered by 14th March with the finalised ALBAP and SEA adoption statement published and launched

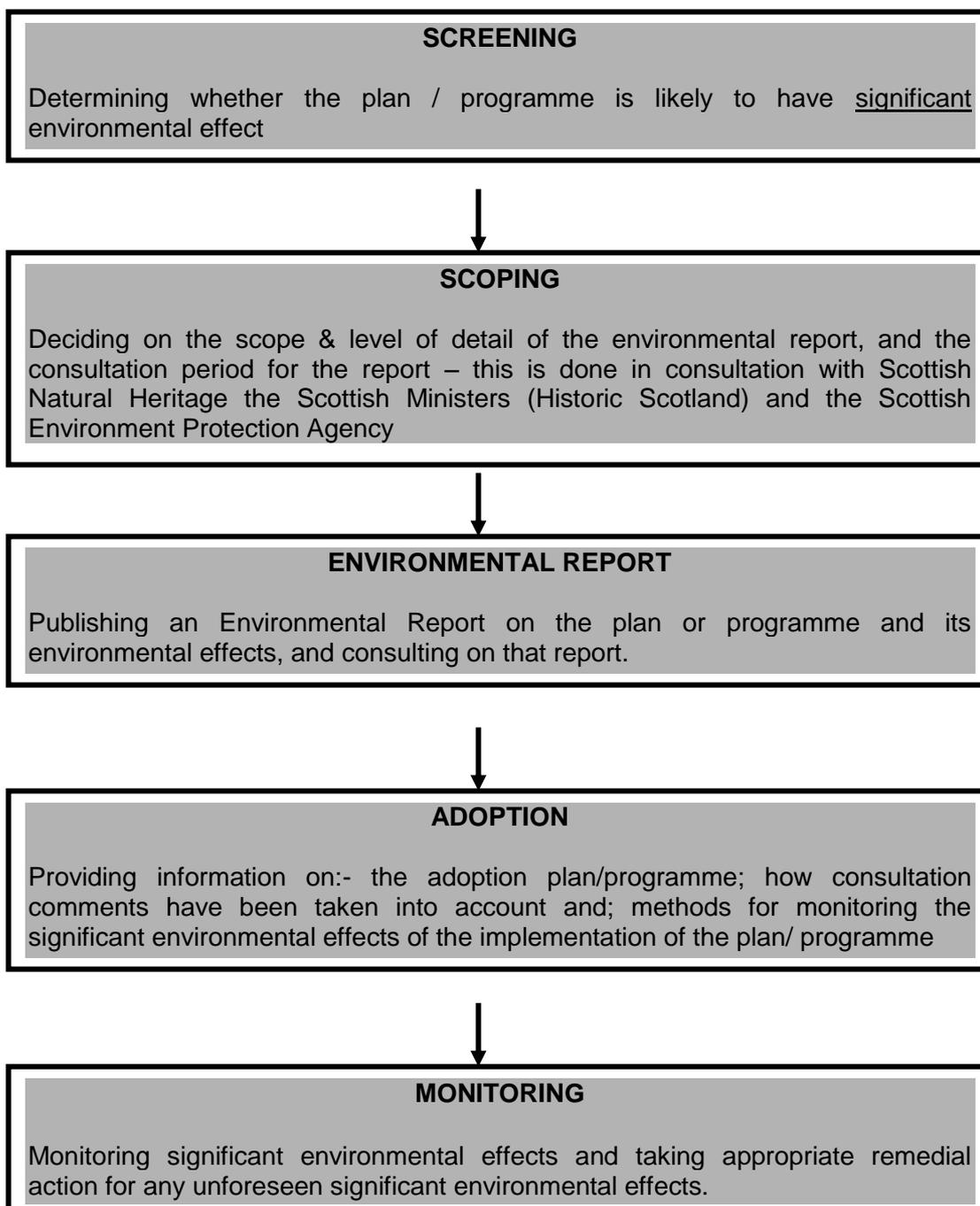
2. INTRODUCTION

2.1 Purpose of this Environmental Report & Key Facts

2.1.1 As part of the preparation of the Ayrshire Local Biodiversity Action Plan the three Ayrshire Local Authorities are carrying out a strategic environmental assessment of the plan. Strategic environmental assessment (SEA) is a systematic method for considering the likely environmental effects of certain plans and programmes. SEA aims to:-

- Integrate environmental decision making into plan / programme preparation and decision making;
- Improve plans and programmes and enhance environmental protection; and
- Increase public participation in environmental decision making

2.1.2 SEA is required under the Environmental Assessment (Scotland) Act 2005, the key stages of which are:-



2.1.3 The purpose of this environmental report is to:-

- Provide information on the Ayrshire Local Biodiversity Action Plan
- Identify, describe and evaluate the likely significant effects of the plan or programme and reasonable alternatives
- Provide an early and effective opportunity for the Consultation Authorities and the public to offer views on any aspect of this environmental report.

2.1.4 The key facts relating to the Ayrshire Local Biodiversity Action Plan are set out in the table below.

Name of Responsible Authorities	East Ayrshire; North Ayrshire and South Ayrshire local authority via Ayrshire Joint Structure Plan
Title of plan / programme	Review of the Ayrshire Local Biodiversity Action Plan
What prompted the plan	The initial prompt was the signing of the Convention on Biological Diversity at the Earth Summit in Rio de Janeiro, Brazil. This was subsequently followed up by the development of a number of national plans, which resulted in each local authority developing its own Biodiversity Action Plan. In 2002 Ayrshire produced its first Action Plan, since then many things have changed – laws, priority species, research, data. As such it was felt that a review of the Ayrshire Local Biodiversity Action Plan was required...
Plan subject	Biodiversity
Frequency of updates	Full review every 5 yrs.
Plan area	3500 Km sq
Plan purpose and / or objective	<p>Purpose</p> <ul style="list-style-type: none"> • To assist in the delivery, at a local level, of the conservation and enhancement of flora and fauna. • To relate to higher-level policy, plans and programmes which also aim to protect the bio diversity. • To work with other groups, agencies, NGO's and / or interested individuals to deliver a co-ordinated approach to the conservation of biodiversity <p>Objectives</p> <ul style="list-style-type: none"> • Prioritisation of the habitats and species for Ayrshire • plans for selected priority habitat and species and any relevant generic action plans.
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2.2 SEA ACTIVITIES TO DATE

2.2.1 The table below summarises the SEA activities to date in relation to the Ayrshire Local Biodiversity Action Plan

SEA Action / Activity	When Carried Out	Notes (e.g. comment on data availability, particular issues or any advice from the Consultation Authorities that has now been taken into account)
Screening to determine whether the plan is likely to have significant environmental effects		
Scoping the consultation periods and the level of detail to be included in the environmental report	January 2007	Formed part of the Scoping Report
Outline and objectives of the plan	January 2007	Formed part of the Scoping Report
Relationship with other plans, programmes and environmental objectives	January 2007	Formed part of the Scoping Report
Environmental baseline established	January 2007 (in part) October 2007	This was first looked at via the Scoping Report and was honed in this report to relate specifically to those environmental areas that are likely to be significantly affected by the development and implementation of this plan
Environmental problems identified	January 2007	Formed part of the Scoping Report
Likely future of the area without the plan assessed	January 2007	Formed part of the Scoping Report
Alternatives considered	Jan 07 – Sep 07	Alternatives were considered while the Ayrshire Local Biodiversity Action Plan was being developed
Environmental Assessment methods established	Jan 07 – Sep 07	
Selection of plan alternatives to be included in the environmental assessment	Jan 07 – Sep 07	
Identification of environmental problems that may persist after implementation and mitigation methods	October 2007	See Environmental Report
Monitoring methods proposed		Form part of this report
Consultation timescales <ul style="list-style-type: none"> • Timescale for Consultation Authorities • Timescale for the General Public 		
Notification / publicity action		

3. AYRSHIRE LOCAL BIODIVERSITY ACTION PLAN

3.1 Outline & Objectives of the Ayrshire Local Biodiversity Action Plan

- 3.1.1 The development of the Ayrshire Biodiversity Action Plan has been carried out by East, North & South Ayrshire Local Authorities. And the plan will refer to the land area of the three unitary authorities including a number of islands e.g. islands of Arran, Greater Cumbrae, Little Cumbrae and Ailsa Craig. For the purpose of the ALBAP review Ayrshire refers to the area on the mainland and the islands, which are under the jurisdiction of the three authorities.
- 3.1.2 The 3 authorities via the Ayrshire Joint Structure Plan have worked with a variety of NGOs e.g. SHN, RSPB, SEPA, special interest groups and interested parties to develop both the initial Action Plan and this subsequent document.
- 3.1.3 Schedule 2 of the Act requires that the environmental report include “an outline of the contents and main objectives of the plan or programme”. The purpose of this section is to explain the nature, contents and timescale of the Ayrshire Biodiversity Action Plan.
- 3.1.4 In February 2006 the Environment Assessment (Scotland) Act 2005 came into force, and transposed European Directive, 2001/42/EC (The Assessment of the Effects of Certain Plans and Programmes on the Environment), into Scots law. The Act requires that certain policy, plans & strategies (P.P.S.) require to complete an assessment of the environmental effects of the implementation of the PPS.
- 3.1.5 In recognition of the need to protect and conserve the earth’s biodiversity the United Kingdom Government, in 1992, signed the Convention on Biological Diversity at the Earth Summit in Rio de Janeiro, Brazil. Subsequently in 1994 the UK Action Plan for Biodiversity was published and local areas were encouraged to produce Local Biodiversity Action Plans, which related to the habitats and species in their local. By 1997 the Scottish Biodiversity Group had published “Biodiversity in Scotland: the way forward” and in 2000 the Scottish Executive had published “Action for Scotland’s Biodiversity”.
- 3.1.6 The Ayrshire Local Biodiversity Action Plan (ALBAP) was launched in January 2002 and detailed action plans for 7 local habitat and 11 species. A wide range of partners contributed to the development of this plan, with all three local authorities, East, South and North Ayrshire Council signing up to endorse the plan and the actions contained therein. Since the publication of the ALBAP a further review of priority species and habitats has taken place at a UK level.
- 3.1.7 Since the ALBAP was written the context of biodiversity conservation in Scotland has changed, with the publication of the Scottish Biodiversity Strategy and the Nature Conservation (Scotland) Act in 2004. The Scottish Biodiversity Strategy sets out the framework for biodiversity conservation over the next 25 years, while the Act places a duty on all local authorities and public bodies to further the conservation of biodiversity in carrying out their functions. The ALBAP Review should be seen as a key document for guiding future actions and contributing towards the fulfilment of this duty within Ayrshire for the next five years.
- 3.1.8 In April 2006 a study by independent consultants Biological Solutions was undertaken which highlighted the need to review the ALBAP. It identified:- Lack of prioritisation; over ambitious targets with little distinction between local and Scottish targets; lack of SMART (specific, measurable, achievable, relevant, time-based targets). Experience has also been gained in writing and progressing Action Plans, which will be beneficial in producing targeted deliverable plans.

- 3.1.9 The first stage of the ALBAP Review was to provide a framework for the document, which would include: -
- Identification of generic actions
 - Prioritisation of the habitats and species for Ayrshire
 - Provide a list of partner organisations who would be able to carry out actions and identify, in consultation with them, the role/commitment they are able to make
 - Identify a structure for the revised plan
 - Provide a draft implementation plan, which identifies a clear reporting procedure, including the use of BARS

- 3.1.10 From this initial work three key outputs were developed:-
- A full project report covering work completed, findings and recommendations will be produced.
 - A draft review LBAP implementation plan will include outline plans for selected priority habitat and species and any relevant generic action plans.
 - All data collected on habitats and species will be presented in a database in either an Access or Excel format.

3.2 Relationship with Other Plans, Programmes and Environmental Objectives

3.2.1 Schedule 3 of the Act requires that the Environmental Report includes an outline of the plan's relationships with other relevant plans and programmes, and how environmental protection objectives have been taken into account in the plan's preparation. This section aims to describe the policy context within which the plan operates, and the constraints and targets that this plan imposes on the plan.

3.2.2 The table below summarises how the Ayrshire Local Biodiversity Action Plan is affected by, other relevant plans, programmes and environmental objectives at a regional and local level. Appendix A provides wider analysis of international PPSs.

Name of plan/programme/objective	Title of legislation and main requirements of plan/programme/objective	How it affects, or is affected by the Ayrshire Local Biodiversity Action Plan in terms of SEA issues at Schedule 3 ,para6(a) of the Act *
INTERNATIONAL		
Bern Convention – Convention on the Conservation on European Wildlife & Natural Habitats 1979 (1982)	Convention came into force in 1982 and imposes legal obligations on those nations who signed the convention. The principal aims of the Convention are to:- <ul style="list-style-type: none"> • ensure conservation and protection of wild plant and animal species and their natural habitats • to increase cooperation between contracting parties, • and to regulate the exploitation of certain species Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1000 wild animal species. The convention aims to protect over 500 wild plant species and more than 1000 wild animal species.	International convention which sets for future national, regional and local PPS's . Puts documents in a hierarchical system / relationship i.e. not with legal documents but also to e.g. UK Biodiversity Action Plan, Water Environment & Water Services (Scotland) Act 2003

	There are a number of EU directives that assist in the implementation of the Convention. In the UK the convention was transposed into the law via the Wildlife and Countryside Act (1981 and as amended).	
Birds Directive (79/409/EEC Convention of Wild Birds) 1979	In 1979, the EU adopted this Directive in response to the 1979 Bern Convention and sets a framework for the conservation and management of, and human interactions with, wild birds in Europe. Setting broad objectives for a wide range of activities – the legal mechanisms to achieve the objectives are left to each individual party to develop	EU Directive which scene sets for future national, regional and local PPS's . Puts documents in a hierarchical system / relationship
Habitats Directive (92/43/EEC Convention of Natural Habitats & of Wild Flora & Fauna)	In 1992 the EU adopted this Directive in response to the 1979 Bern Convention. The Directive specifies 169 habitats and 623 species which are to be protected by a network of sites (Natura 2000) & each EU state must compile a national list of sites Member states are required to establish measures to ensure the protection of specific species & habitats to include surveying and reporting (every 6 yrs) on progress implementing the Directive	EU Directive which scene sets for future national, regional and local PPS's . Puts documents in a hierarchical system / relationship
Convention on Biological Diversity 1992	Article 1. of the Convention states: Objectives The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.	International convention which scene sets for future national, regional and local PPS's . Puts documents in a hierarchical system / relationship
Water Framework Directive 2000 (2000/60/EC A Framework for the Community Action in the field of Water Policy)	This Directive sets a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. It will ensure all aquatic ecosystems meet 'good status' by 2015. Member States will be required to establish river basin districts and for each of these a river basin management plan. The Directive envisages a cyclical process where river basin management plans are prepared, implemented and reviewed every six years. There are four distinct elements to the river basin planning cycle: • characterisation and assessment of	EU Directive which scene sets for future national, regional and local PPS's . Puts documents in a hierarchical system / relationship Attention should be given to this document – how it relates to UK law and enforcement and how it may affect the Water Vole Species Action Plan, Coastal and Raised Lowland Bog Habitat Action Plans.

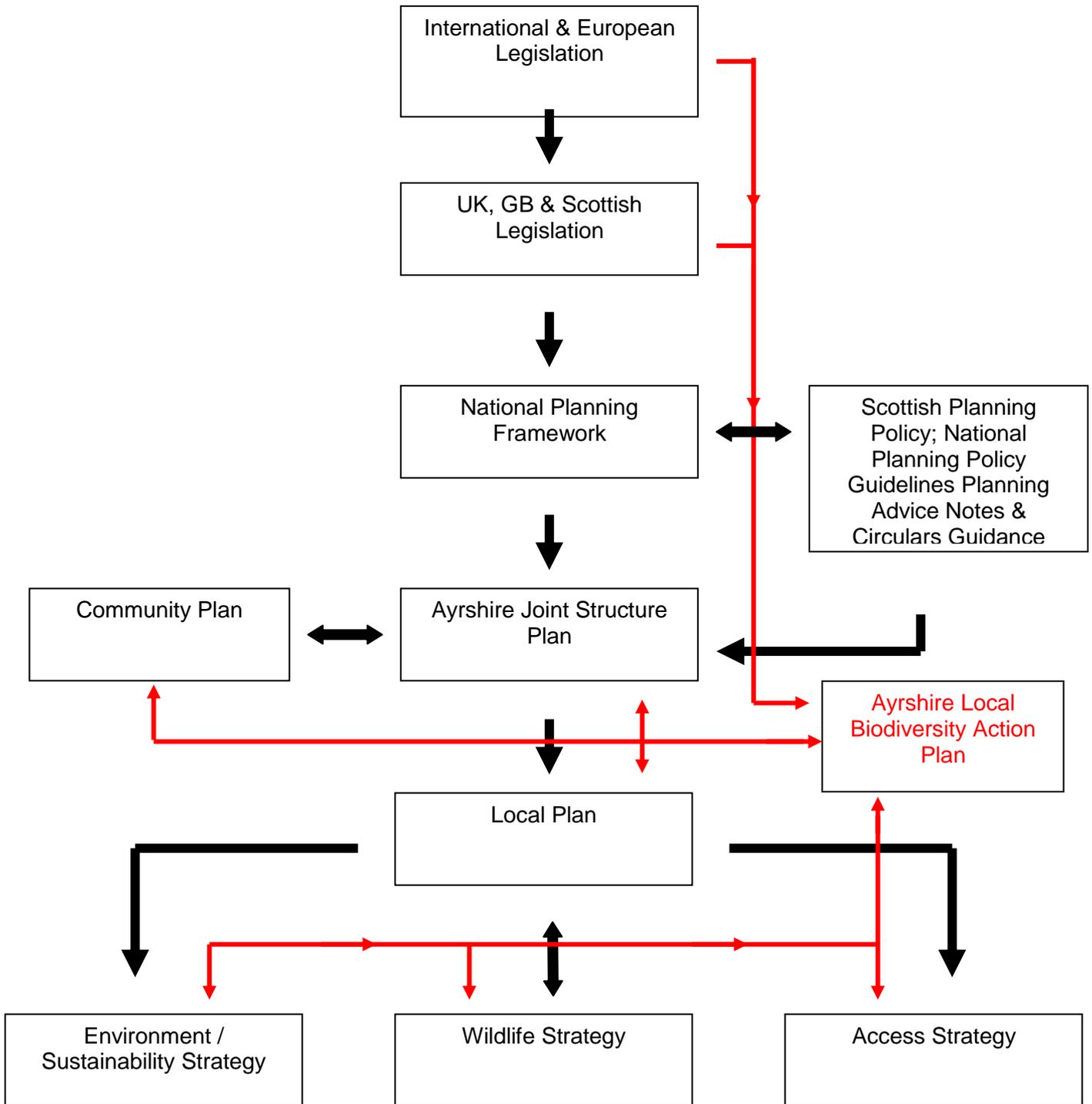
	<p>impacts on river basin districts;</p> <ul style="list-style-type: none"> • environmental monitoring; • the setting of environmental objectives; • the design and implementation of the programme of measures needed to achieve them. 	
REGIONAL		
Ayrshire Joint Structure Plan	Town & Country Planning (Scotland) Act 1997 required Ayrshire to develop and deliver a joint structure plan. The plan provides a strategic land use framework up to 2025 and sets regional priorities. The anticipated outcomes of which are 1. strong and vibrant communities 2. a sustainable and growing economy 3. a good quality of life and a healthy environment.	The role that the Ayrshire Joint S. Plan plays in the protection of the natural environment through policy and by establishing guiding principles for sustainable development in Ayrshire
LOCAL		
South Ayrshire Community Plan	Local Government in Scotland Act 2003 required that every local authority initiate and subsequently maintain a Community Plan. South Ayrshire Council's Community Plan has 5 themes – Prosperous; Safe; Clean & Attractive; Healthy & Caring and Learning & Achieving	<p><u>Actions from Healthy & Caring:</u> 1. Increase the opportunity for children and adults to take part in physical activity, whether sports or simple recreational activities like walking and cycling, especially in more disadvantaged communities 2. Increase the accessibility to sports activity for people with disability, including young people</p> <p><u>Action from Learning & Achieving:</u> 1. Promote sports activities as a way of building the self-confidence of young people</p> <p><u>Action from Clean & Attractive</u> 1. Encourage less polluting forms of transport 2. Promote cycling and walking, linked with an improvement in cycle paths and footpaths in both urban and rural areas</p>
North Ayrshire Community Plan	Local Government in Scotland Act 2003 required that every local authority initiate and subsequently maintain a Community Plan.	The Plan is based on the Vision of 'North Ayrshire – A Better Life', and it identifies 7 Priorities for the next 10 years. One of the strands being Clean and Green Our goal: • Protect and enhance North Ayrshire's towns and countryside.
East Ayrshire Community Plan	Local Government in Scotland Act 2003 required that every local authority initiate and subsequently maintain a Community Plan.	The Community Plan is recognised by all Partners as the sovereign strategic planning document for the delivery of public services in East Ayrshire over the 12 years from 2003 to 2015 and sets out the overall vision for the local area, Under its Improving the Environment theme 2 key aspirations are expressed. Of

		greatest relevance is – promoting sustainability by protecting, conserving and enhancing the character, appearance and amenity of the natural and built environment.
East Ayrshire Local Plan	The plan, (which has been adopted but currently undergoing the alteration & consultative process) sets out the policies, proposals and recommendations of the East Ayrshire Council (subsequently referred to as "the Council") as the local planning authority, for the development and other use of land, the protection of environmental resources and for the management of transport and traffic within the administrative area of East Ayrshire Council.	There are a range of policies that relate to environmental issues from the protection of designated sites, environmental features and open space to the consideration of development on the landscape.
North Ayrshire Local Plan	The plan sets out the policies, proposals and recommendations of the North Ayrshire Council (subsequently referred to as "the Council") as the local planning authority, for the development and other use of land, the protection of environmental resources and for the management of transport and traffic within the administrative area of North Ayrshire Council.	There are a range of policies that relate to environmental issues from the protection of designated sites, environmental features and open space to the consideration of development on the landscape.
South Ayrshire Local Plan	Town & Country Planning (Scotland) Act 1997 required South Ayrshire to develop and deliver an Ayrshire Local Plan. The plan sets out the policies, proposals and recommendations of the South Ayrshire Council (subsequently referred to as "the Council") as the local planning authority, for the development and other use of land, the protection of environmental resources and for the management of transport and traffic within the administrative area of South Ayrshire Council.	There are a range of policies that relate to environmental issues from the protection of designated sites, environmental features and open space to the consideration of development on the landscape.
South Ayrshire Council Wildlife Strategy	The purpose of the strategy is to provide the Council with a policy framework for benefiting biodiversity: <ul style="list-style-type: none"> • Seeking to protect & promote the proper management of sites of nature conservation importance • Seeking to provide for the enhancement & creation of habitats for wildlife • Seeking to develop & protect a network of "green corridors" through the Council area. • Seeking to raise awareness of, and provide opportunities for involvement in, biodiversity conservation 	This strategy has the same overarching aims & objectives to the LBAP – to conserve, protect & enhance; to raise awareness
South Ayrshire Environment Strategy	The development of an environment strategy was via South Ayrshire Council's commitment to the environment. The objective of which was to articulate the Council's approach to the "Green Agenda", and in particular to environmental pollution, waste management, energy efficiency and sustainable resource use.	<u>Key Action</u> : Support a healthy lifestyle through promotion of healthy diet and indoor and outdoor leisure activities. <u>Indicator</u> : Investment in paths and cycleways
East Ayrshire Env./ Sustainable Development Strategy	Currently under development	

North Ayrshire Access Strategy	Sets out the local authorities strategic framework for the future development of access in the area.	The strategy has 3 main themes: Links to Economic Prosperity, Promoting Quality of Life; Routes to Environmental Regeneration. The main linkages relate to promoting access to the coast and open hills, land management associated to development & regeneration projects and safeguarding the natural environment and awareness raising and interpretation
East Ayrshire Access Strategy	Sets out the local authorities strategic framework for the future development of access in the area.	The strategy has 4 main themes Sustainability & Healthy Communities; Expanding the potential for tourism; supporting Economic & Environmental Regeneration; Access & Sustainable Transport. The strongest potential impacts are from land management where access and tourism is being promoted.
South Ayrshire Access Strategy	Sets out the local authority's strategic framework for the future development of access in the area.	The strategy has 4 main themes: Sustainable Transport; Access & Sustainable Land Management; Tourism and Business Development Health. The main areas of linkage are access & sustainable land management together with tourism.

* Biodiversity, flora, fauna, population, human health, soil, water, air, climatic factors, material assets, cultural heritage, landscape, inter-relationship between these issues; secondary & cumulative effects

Diagram depicting the relationship of the Ayrshire Local Biodiversity Action Plan & other PPSs



The Ayrshire Local Biodiversity Action Plan is a non material document in relation to planning and planning considerations, none the less it is still a document that is often referred to when considering the impact of a development on the local biodiversity. The plan is thought to be an unbiased assessment of the local biodiversity highlighting species & habitats of local concern; as such helps to inform the development of other local authority PPS's e.g Core Path Plan, Access Strategy, Local Transport Strategy, Local Plan.

3.2.3. In the initial Scoping Report the following environmental issues were scoped in as it was felt that they had the potential to be significantly effected by the Ayrshire Local Biodiversity Action Plan; Biodiversity, Flora, Fauna, Soil, Water, Landscape, Cultural Heritage while Air, Climatic Factors & Human Health had the potential to have a synergistic and or cumulative relationship with those detailed previously.

3.2.4. However during the drafting stage of the Ayrshire Biodiversity Action Plan it became clear that the plan would become a framework for action consisting:

- 2 Core Theme Action Plans
 - Ayrshire Local Biodiversity Action Plan implementation, reporting and monitoring
 - Data & information
- 2 Habitat Action Plans
 - Lowland Raised Bog
 - Coastal Habitats
- 2 Species Action Plans
 - Water Vole
 - Farmland Birds

As such the environmental issues that are likely to be significantly affected by the development of this plan have reduced in number. The environmental assessment will now focus on the issues as tabled below: -

SEA Issues	Scoped In	Scoped Out	If Scoped Out Why
Biodiversity, Flora & Fauna	X		
Soil	X		
Water	X		
Landscape	X		
Cultural Heritage		X	It is unlikely that the objectives and or actions of any and or all of the Action Plans will have a significant impact either positive or negative on the cultural heritage of Ayrshire
Human Health		X	It is unlikely that the objectives and or actions of any and or all of the Action Plans will have a significant impact either positive or negative on the human health of Ayrshire
Climatic Factors		X	It is unlikely that the objectives and or actions of any and or all of the Action Plans will have a significant impact either positive or negative on the climatic factors of Ayrshire
Air		X	It is unlikely that the objectives and or actions of any and or all of the Action Plans will have a significant impact either positive or negative on the air of Ayrshire
Material Assets		X	It is unlikely that the objectives and or actions of any and or all of the Action Plans will have a significant impact either positive or negative on the material assets of Ayrshire

3.2.5 Key point arising from the analysis of the various PPS's is that there is a strong commitment to the enhancement and conservation of the world's biodiversity through a plethora of PPS's and that both the UK and Scottish governments have made commitment to its conservation. Additionally there are a number of PPS's that while not directly related to the protection of flora & fauna do impact on the issues surrounding this topic.

3.2.6 As a result of examining these documents it became clear that the Ayrshire Local Biodiversity Action Plan should relate its work to: -

- the species and habitats that are of national concern;
- to assist in the delivery of the aims and objectives of the higher level documents at a local level;
- to maximise the potential to increase peoples awareness of biodiversity and the need to safeguard its integrity.

When reading the Revised Ayrshire Local Biodiversity Action Plan you will note that it identifies the key wildlife elements in Ayrshire and develops specific action plans for nature conservation. The selection of the species and habitats of these action plans was informed by national priorities and developed to suit local needs. It recognises the need for a biological records centre for the collection and analysis of data which will not only assist in assessing Ayrshire's current biodiversity and its future needs, but will help provide, along with other biological record centres, a more complete picture of Scotland's biodiversity. It is hoped that The Ayrshire Biodiversity Action Plan will be used to guide and influence those who are involved in issues of biodiversity from local authorities planning officers to voluntary organisations, from land owners / managers to fishermen and those with marine interests.

3.3 Environmental Baseline

3.3.1 Schedule 3 of the Act requires that the environmental report include a description of “the relevant aspects of the current state of the environment and the likely evolution thereof without the implementation of the plan or programme”, and “the environmental characteristics of areas likely to be significantly affected”. This section aims to describe the environmental context within which the Ayrshire Biodiversity Action Plan operates, and the constraints and targets that this context imposes on the plan.

3.3.2 The table below summarises the data collected and the source.

Environment al Issue	Baseline Information	Data	Source
Biodiversity, Flora & Fauna	Tree Preservation Orders	Currently Ayrshire has 331 confirmed Tree Preservation Orders. These Orders have been issued due either to their biological, historical or landscape importance	Local Authority
	SSSI Sites	Ayrshire currently 83 Sites of Special Scientific Interest, which have been so, designated for their plant, animal or habitats ; rocks or landforms or a combination.	Local Authority SNH
	Wildlife Sites	Ayrshire currently has 97 Wildlife sites & 277 Provisional Wildlife Sites. These are areas that Scottish Wildlife Trust considers to be of local importance in terms of their biodiversity.	Local Authority SWT

Environmental Issue	Baseline Information	Data	Source
	Special Protection Areas	Ayrshire currently has 5 SPA's. These sites are classified under the EC Directive commonly known as the Birds Directive. The intention is to safeguard the habitats of the species for which they are selected and to protect the birds from significant disturbance.	Local Authority SNH
	Local Nature Reserve	Ayrshire has 2 Local Nature Reserves namely Stevenston Beach and Catrine Voes. These are areas that are of local interest that should be protected so that people can enjoy the local biodiversity.	Local Authority; SNH
	National Scenic Area	The Isle of Arran is the only location that has been classified as a National Scenic Area within Ayrshire	Local Authority; SNH
	NVC	National Vegetation Classification (though only partial sites and mainly for designated sites)	SNH
	Inventory of GB Lowland Raised Bogs	Inventory provides an assessment of the condition, coverage and conservation of lowland raised peat bog sites. Used to assist in locating and assessing Lowland Raised Bogs in Ayrshire	SNH - Lowland Raised Bog Inventory (LRBI) in GB
	Inventory of Scottish Blanket Bogs	Characterising the blanket bogs of Scotland (in map format) to determine the extent, condition and composition of the Scottish Blanket Bogs	SNH – Scottish Blanket Bog Inventory
	Woodland	A significant area of Ayrshire is covered by woodland incl. Commercial - 78491 Ha. This figure can be further broken down into Total Native Species = 4331Ha; Total Semi- Natural = 2720Ha Total Conifer = 69158 Ha	East Ayrshire Woodlands
	Forest Park	The Galloway Forrest Park extends into the southern part of Ayrshire area	Local Authority Forestry Commission
	Country / Regional Park	Ayrshire is lucky enough to have 4 Country Parks. Culzean in South Ayrshire, Dean Park with Clydemuirshield & Eglington in North Ayrshire	Local Authority National Trust for Scotland
	Coastal	Coastal Processes & Development Troon - Salcoats	SNH
	Scottish Biodiversity Trends	Scottish Biodiversity Indicators Trends in Broad Habitats: Scotland 1990-1998. This listing was used to help assess the importance of local species & habitats	Scottish Biodiversity Forum SNH
	Species & Habitats of Scottish Importance	List of habitats & species of "principle importance" in Scotland. This listing was used to help assess the importance of local species & habitats	The Scottish Biodiversity List 2005
	Habitat type / distribution	Phase I Habitat Survey help to ascertain and assess habitat(s) within Ayrshire	SNH
	RSPB Important Bird Areas & Reserves	There are a number of Important Ayrshire bird areas within Ayrshire – some of which are of International & European importance	RSPB
Landscape	Coastal	The western boundary of Ayrshire is coastal and is shared between North & South Ayrshire Local Authorities. The total length of the coastline is 240 Km and provides a range of habitats from Dune & maritime cliff & heath to rocky shores & estuaries. The coastline is synonymous with Ayrshire not only in terms of its landscape character, flora & fauna but also the part that it has played in the areas social history	Local Authority

Environmental Issue	Baseline Information	Data	Source
	Designated Sites	As detailed above in biodiversity, flora & fauna but looking at and assessing how the designated i.e. SSSI's, SPA's; SAC's relates to the landscape character	Local Authority
	Landscape Character / Type	Ayrshire is defined by 8 Regional Character Areas, which can be further categorised into 22 Landscape Character Types. See appendix B for further details	Ayrshire Landscape Assessment – Local Authorities; SNH
	Land use, water ways & topography	Maps provide a classification of the agricultural capacity of the soils of Ayrshire. A large % of which is grade 3.1 and 3.2 land – “land capable of producing a moderate range of crops” Location of main water areas and rivers. Topography of the area	Local Authorities; SNH; Macaulay Land-Use Research Institute (MLURI) OS Maps
	Land Development	Allocation of lands for future development housing and / or industrial	Local Authorities
Soil	Soil Capability	Maps provide a classification of the agricultural capacity of the soils of Ayrshire. A large % of which is grade 3.1 and 3.2 land – “land capable of producing a moderate range of crops”	Macaulay Land-Use Research Institute (MLURI) ; Local Authorities
	Contaminated Land	Ayrshire has a number of contaminated land sites. Contamination ranging from causes such as Land fill Sites, Heavy Industry, Gas Works etc. Each local authority retains a register of these sites and the categorisation of each.	Local Authority
Water	Bathing Water Quality	SEPA regularly tests the bathing quality at specific locations throughout the summer season June – September. The 9 designated areas within Ayrshire passed in both 2005 and 2006	SEPA
	Rivers,	The general river water quality in southwest Scotland has continued to improve. Though there are still issues of pollution in relation to agriculture / diffuse pollution, contaminated surface water run off from industrial sites / urban areas.	SEPA
	Pollution Incidents	SEPA holds a register of reported pollution incidents.	SEPA
	Groundwater quality	Quality of groundwater – likely to be limited data	SEPA
	Water Abstraction	Location & No of listed abstraction sites – This is a register that is currently under development therefore Information will be limited	SEPA
	Sewage Outfall	Location & Nos of outfalls incl. Amount of sewage discharged	Scottish Water
	Flood Risk	Risk of coastal flooding	Firth of Clyde Flooding System
	Flood Risk	Each local authority has a Flood Register – This is a record of areas that have flooded	Local Authorities

- 3.3.3 The following paragraphs describe the area both in generally, and more specifically in relation to the scoped in environmental assessment issues, to which the Ayrshire Biodiversity Action Plan will refer.

LANDSCAPE, BIODIVERSITY, FLORA & FAUNA

- 3.3.4 Ayrshire, which covers some 3500Km, is developing and changing - the 3 main areas of change being Economy, Transport and Communities all of which impact on the use of land. In relation to communities and specifically future demands, it is anticipated that by 2025 Ayrshire will require over 37,000 new houses, which places pressure on local authorities to release land for development. Transport for Ayrshire has become an important concern both in relation to major connectors such as the A77 with its continued improvement / development; the continuing expansion of Glasgow Prestwick International which places pressure to deliver sufficient secondary requirements e.g. parking; transport links such as rail & bus.; ports such as Ardrossan, Wemyss Bay, Stranraer & Cairnryan; Rail – ; the west coast rail-line, currently running at capacity And the Kilmarnock – Dumfries route While the more localised neighbourhood connectors where issues surrounding congestion, parking safety and green travel prevail. To ensure that Ayrshire has a thriving economy the issues surrounding community and transport are vital though all three impact greatly on the environment.
- 3.3.5 Ayrshire, with the exception of Arran, lies to the south of the Highland Boundary fault. Its character is a result of lying within the rift valley (Midland Valley) bounded by the Highland Boundary Fault to the north and the Southern Upland Fault to the south. It covers the entire western seaboard of the midland valley and extends beyond the Southern Upland Fault to include parts of the Southern Uplands. While Most of Ayrshire is lowland in character it does have areas of strong relief that give dramatic contrasts. These include the remains of volcanic plugs such as Loudoun Hill and Ailsa Craig. Even more dramatic are the rugged peaks of Arran and the Loch Doon Mountains. While the islands, which range from small islands such as Little Cumbrae, Holy Island and Ailsa Craig to the larger islands such as Greater Cumbrae and Arran, comprise of important landscapes and habitats in their own right.
- 3.3.6. The geological formation of the Ayrshire area has resulted in an array of varied landscape types in a relatively small area. The majority of the populated Ayrshire area is to be found to the north of the Southern Upland Fault where the Ayrshire Basin is bounded by the Galloway Uplands to the south, the Renfrewshire Heights to the north and the Galloway Uplands to the east. The Southern Upland Fault has assisted in shaping the southern valleys of Girvan & Stinchar, while south of the fault glacial movement has helped produce the smooth gentle hills of the area. In contrast in south east Ayrshire the craggy peaks of the Merrick Range can be seen. The Ayrshire Landscape Assessment of 1998 written by Land Use Consultants identified 8 Regional Character Areas, those being: Arran, Inner Firth of Clyde, Renfrewshire Heights, Ayrshire Basin, Ayrshire Rim, Southern Uplands, Carrick Hills & Valleys and the Galloway Uplands, these were further assessed into 22 Landscape Character Types. This more detailed assessment is based on landform, cover and use together with geology and soil. Appendix B provides more detail on the Regional Character Areas together with a full listing of the landscape types.
- 3.3.7 The majority of Ayrshire is described as being lowland pastoral, which is characterised by its field networks, bounded by hedges and hedgerow trees and is predominantly used for dairy farming. To date this landscape is generally in good condition, however there are some signs of degradation – hedges becoming gappy and hedgerow trees not being replaced. To the south and east of the region moorland and coniferous forestry predominates. Within the moorland areas internationally important mosses are found. Over the years land improvement practices, have placed these habitats under threat.

Consequently many moss areas have been afforded protection by specific designation. The coniferous forest is, in the main, commercial in nature and was originally planted to maximise timber production. Little consideration was given to designing plantations that complement the surrounding landscape, incorporate open spaces or maximise the potential for biodiversity. However as the industry has developed so have design techniques – There is greater awareness of landform, to the need to incorporate transitional zones, and to maximise the habitats potential for both recreation & biodiversity. In contrast to the large expanses of monoculture commercial forestry, Ayrshire has very little native and / or semi-natural woodland. Areas that do remain are small in nature and are distributed throughout the region often in remote and difficult to reach locations. This particular habitat is of great importance due to the range of flora and fauna that it gives refuge to and, as with the mosses, many of these areas have been afforded a protected status. A significant element of Ayrshire's landscape is that of its coastline with its range of individual habitats such as dunes, estuaries, coastal heath, coastal woodland. The coastline is an important feature in respect of habitats and species and it is important to note that it is constantly under threat e.g. development, coastal erosion, pollution.

- 3.3.8 Ayrshire's natural heritage resource is made up of a range of habitats, some of which have been detailed above, containing many species of plants and animals. The importance of which, both nationally and internationally, can be assessed by the range of protection that it has been afforded. Protection through European and United Kingdom legislation and by a variety of non-statutory designations. In many cases protection of specific species is achieved through protection of habitats. Nationally, protection is given to sites through designation as a National Nature Reserve (NNR) or as a Site of Special Scientific Interest (SSSI) and there is a requirement through legislation to protect such sites from adverse development. In addition, the European Union also offers protection to sites through Special Protection Areas (SPA) under the Birds Directive and Special Areas of Conservation (SAC) under the Habitats Directive. These sites are collectively known as Natura 2000 sites. Appendix C details all protected sites within Ayrshire.

WATER

- 3.3.9 The key rivers are the Ayr, Irvine, Water of Irvine, Doon, Garnock, Stinchar, Nith and rivers on the Isle of Arran. The longest is the river Ayr 63km from source to mouth – there are a number of tributaries which feed these rivers and a number of smaller rivers which drain directly into the Firth of Clyde – Noddesdale, Gogo, Pow, Pinbain and Milton Burn. Ayrshire rivers have varying habitats due to different geological and climatic factors, which influence catchment topography, water chemistry, hydrology and channel morphology. There are a number of riverine habitat types, from steep, rocky and relatively unproductive waters of the southern uplands to deeper, sluggish, meandering and biologically richer waters of the lowlands.
- 3.3.10 Within Ayrshire the aquatic invertebrate community indicates that water quality is generally high. In some areas of Ayrshire (Arran, upper reaches of Girvan, Stinchar, Doon catchments), acidification is a problem resulting in reduced number and diversity of aquatic invertebrates. A number of streams in south Ayrshire and south Arran flow over ultrabasic rock – these support rare beetles (one red data book 3 species).
- 3.3.11 Many rivers have been designated as salmonid rivers defined in the Freshwater Fisheries Directive. Sea trout are also in all the main rivers. Brown trout, eels, sticklebacks, minnows and stone loaches are also very common. Introduced species – Grayling – have also become well established in the river Ayr catchment.

- 3.3.12 The main standing waters are lochs Doon, Bogton, Martnaham, Ashgrove, Glen buck, Kilbirnie, Bradan, Fergus, Tarbolton, Lochlea, Riecawr, Macaterick, Finlas. Several of the lochs are designated as SSSIs. Loch Doon is designated a SSSI for fish – the only site in Ayrshire with viable population of arctic char (distinct population from other populations in Scotland). Martnaham loch is probably the most botanically diverse in Ayrshire, with spearwort, which is rare in Ayrshire. Ashgrove loch also supports locally rare and nationally uncommon species – tufted loosestrife, cowbane, bladderwort, water sedge.
- 3.3.13 SEPA can provide details in relation to river water quality in the whole of the south-west, including Ayrshire. In general the river water quality in south-west Scotland has continued to improve, with the main sources of pollution being agriculture / diffuse pollution, contaminated surface water run off from industrial sites and urban areas.
- 3.3.14 In Ayrshire and Arran coastal waters, sewerage improvements in the town of Millport (Isle of Cumbrae) have resulted in the removal of several public septic tanks in this area. While on the mainland, Maidens sewerage improvements resulted in the removal of the public sewage outfall at Maidens with all sewage now pumped to Turnberry for onward pumping to Girvan sewage treatment works. Aesthetics at Prestwick and Saltcoats also showed improvement and, there was a marked improvement in aesthetic quality recorded at several areas in 2006 on the Isle of Arran; at Blackwaterfoot, Lamlash and Brodick new sewerage systems have been installed and old septic tanks or crude outfalls removed.
- 3.3.15 In 2006, for the first time ever, all of Scotland's 63 designated waters passed the current European Bathing Water Directive mandatory standard. Nine of the designated areas are within the Ayrshire area (Millport, Saltcoats, Irvine, Troon (South), Prestwick, Ayr (South), Turnberry, Largs (a newly identified site in 2006), and Girvan. To reach the new tighter bathing water quality standards prescribed within the new directive, current levels of pollution from both sewage and diffuse agricultural sources must be further reduced at many bathing water sites. SEPA will continue to work with and through a wide range of stakeholders to deliver the improvements required. As diffuse pollution is still the main source of quality threats and problems at numerous bathing waters, further improvement will be required in tackling diffuse pollution through cooperation and the adoption of a wide range of methods and initiatives.

SOIL

- 3.3.16 Soil provides six functions: food and fibre production; environmental interaction, habitat support and biodiversity; platform for infrastructure and buildings; supply of raw materials and cultural heritage. Soil supports a higher biodiversity than above ground habitats. However little is known about species, communities, food web relations and their connection with supporting above ground biodiversity. Above ground biodiversity highly depends on the soil. It provides substrate for plants, food building material and shelter for animals. Any changes in soil properties e.g. nutrient status, soil acidity, water content, carbon content due to land use, pollution and or climate change will affect above ground biodiversity. Soils also act as a form as an environmental protector by acting as a buffer protecting e.g. water or as a "sink" e.g. carbon so protecting the air quality and potential alterations to Greenhouse Gases. When looking at Ayrshire the main issues in relation to soil, and protecting this finite recourse, are agriculture, forestry, industry.
- 3.3.17 One of the most recognised formats for soil classification is the agricultural land classification developed by the Macauley Land Use Research Institute. Land is classified from 1- 7; 1 being Land Capable Of Producing A Very Wide Range Of Crops to 7 that is Land Of Very Limited Agricultural Value. In South Ayrshire, in general terms, most of the

high quality agricultural land is to be found in the northern part of South Ayrshire, immediately to the east of Ayr, Prestwick and Troon; this is where most of the grade 2 land – “land capable of producing a wide range of crops” can be found. There is however a much larger supply of grade 3(1) and 3(2) and – “land capable of producing a moderate range of crops” Some of which is to be found to the east of Ayr, Prestwick and Troon in addition there is also an extensive supply of this land around Maybole, extending down towards Girvan. Most of the grade 4,5 and 6 land within South Ayrshire is located to the south and south east of Girvan. These areas of land are designated as “land capable of producing a narrow range of crops” (grade 4) and “land suited only to improved grassland and rough grazings” (5, 6 and 7). When looking at East Ayrshire, 97% of the land area is described as rural, with 62.8Ha as grade 2; 1,297.8Ha of grade 3(1) and 10,463.4 Ha of grade 3(2). Within North Ayrshire most of the high quality agricultural land is generally to be found in the southern part of authority, immediately to the east of Irvine bay”

3.3.18 The Contaminated Land (Scotland) Regulations of 2000 define contaminated land “as any land which appears to the Local Authority in whose area it is situated, to be in such a condition, by reason of the substances in, on or under the land that:

- Significant harm is being caused, or there is significant possibility of such harm being caused or
- Pollution of controlled waters is, or is likely to be caused”

East Ayrshire is described as having 2,533 areas that have the potential for soil contamination, while in south Ayrshire there are 2752 sites. These range from, potential low level contamination, such as, a well that has been in filled with an unknown substrate, to a potentially high level contamination of a former landfill site. In North Ayrshire there are 3,411 listed former uses, (to clarify, this number does not refer to the number of sites but to the number of uses). In north and east Ayrshire the majority of the concerns centre around old gas works, heavy industry, former chemical factories and the mining industry, while in south Ayrshire former petrol filling stations, landfill sites and gas works are major issues.

As soil is such a key element to ecosystems and the role that it plays not only to flora and fauna but to man, it is important that we ensure as little damage as possible is incurred. Issues such as development, erosion, agricultural practices, loss of bogs (not just as habitats but also carbon sinks) all require to be considered. Though it should be recognised that any site protection will also protect soils.

3.3.19 In relation to the other SEA environmental issues it was felt that the Local Biodiversity Action Plan would not significantly effect any of the following issues :

CULTURAL HERITAGE:

When reading the objectives and the action points you will note that they will not impact on cultural heritage. A high proportion of the work is data collection where there are actions to undertake work on the ground there is little likelihood that it will impinge on any historic or archaeological sites. If a site(s) were to be affected in relation to the number of sites in Ayrshire as a whole the number the level of significance would be extremely low.

HUMAN HEALTH:

As with cultural heritage the objectives and actions are unlikely to impact on human health. There is the potential through developing people’s awareness and appreciation of their environment and biodiversity that more people will participate in outdoor activities. However, when measuring this potential increase to the population as a whole the level of significance was thought to be negligible.

**CLIMATIC FACTORS:
& AIR**

In the scoping report climatic factors were identified as having the potential to have a synergistic and or cumulative relationship with those topics that continue to be scoped in and the aforementioned topics that have now been scoped out. Now that the Local Biodiversity Plan has been developed it has become clear that, with the exception of the raised blanket bog action plan, the action plans will not impact appreciably on the range of climatic factors. As mentioned previously the majority of the actions relate to survey work with small-scale projects. The only concern would be if the area(s) of bog were damaged or destroyed thereby releasing CO₂ into the atmosphere, however the majority, if not all, the bog areas benefit from some form of designation.

MATERIAL ASSETS

Once again after assessing the proposed ALBAP objectives & action points it was considered that there would not be any significant effect on any material assets within Ayrshire.

3.3.20 The following summarises the likely gaps and or unreliability of the SEA baseline data, and how they were minimised.

**LANDSCAPE, BIODIVERSITY,
FLORA & FAUNA**

In terms of data relating to habitat we do not have complete records of the area, for instance SNH do not have complete Phase 1 habitat mapping for Ayrshire. As with habitat data, so species data is weak. Unlike many areas Ayrshire does not have an up to date and active Biological Records Centre. Information that has been collated is fragmented. Many groups may hold a small amount of information and recorded using different methods. There is a particular weakness in data relating to terrestrial invertebrates.

WATER

The majority of baseline data for water will be sourced from SEPA. SEPA are developing their monitoring and recording all the time. The biggest potential problem in this area is accurate recording of pollution incidents, however SEPA are continually improving the accurate records of pollution incidents

SOIL

This section is probably the weakest in relation to baseline data. Contaminated land is well recorded, as is the agricultural capacity of the soil The Macauley Landuse Research Institute, survey was undertaken over 20 years ago and it recognises that due to changes in climate, pollution and agricultural practices a new survey maybe necessary. Little is recorded regarding the changes / alterations that forestry and or agriculture causes to the soil e.g. nutrient status, acidification.

3.4 Environmental Problems

3.4.1 Schedule 3 of the Act requires that the environmental report includes a description of existing environmental problems, in particular those relating to any areas of particular environmental importance. The purpose of this section is to explain how existing environmental problems will affect or be affected by the Ayrshire Local Biodiversity Action Plan, and whether the plan is likely to aggravate, reduce or otherwise impact on existing environmental problems.

3.4.2 Environmental problems were identified through discussion with the Ayrshire biodiversity steering group, which comprises representative of each of the local authorities together with representatives from a number of other environmental groups, and an analysis of the baseline data detailed in section 3.3.

3.4.3 The relevant environmental problems pertaining to the Ayrshire Local Biodiversity Action Plan are summarised below.

Problem	Supporting Data	Implications
Lack of Data	<p>Due to:</p> <ul style="list-style-type: none"> Under recording & lack of record centre <p>Evidence Source</p> <ul style="list-style-type: none"> No comprehensive and or standardised records 	<p>To Ayrshire:</p> <ul style="list-style-type: none"> Difficult to build biodiversity into strategic planning framework <p>To the Plan:</p> <ul style="list-style-type: none"> Development of two core themes relating to reporting & monitoring & data & information Incomplete data sets might miss important species / habitats
Habitat Fragmentation	<p>Due to:</p> <ul style="list-style-type: none"> Land development Lack of appropriate management Agricultural intensification <p>Evidence Source</p> <ul style="list-style-type: none"> Phase 1 surveys Old OS maps 	<p>To Ayrshire:</p> <ul style="list-style-type: none"> Lack of habitat connectivity <p>To the Plan:</p> <ul style="list-style-type: none"> Recognition of small areas of “good” habitats that require to be protected, conserved and whenever possible enhanced
Reduction of Habitats	<p>Due to:</p> <ul style="list-style-type: none"> climatic factors land development, housing, industry farming techniques <p>Evidence Source</p> <ul style="list-style-type: none"> Old OS maps SNH survey re: climatic change & habitats Reduction in species nos due to habitat loss e.g. Barn Owl; Corncrake - RSPB 	<p>To Ayrshire:</p> <ul style="list-style-type: none"> Lack of habitat connectivity Poor habitat quality Reduced range of species Reduced numbers of any one species <p>To the Plan:</p> <ul style="list-style-type: none"> Recognition of the importance of habitats to ensure species diversity and that habitats require to be protected, conserved and whenever possible enhanced
Loss of Species Diversity	<p>Due to:</p> <ul style="list-style-type: none"> Loss of habitat & quality climatic changes <p>Evidence Source</p> <ul style="list-style-type: none"> RSPB re: loss or reduction of species / numbers Anecdotal local information 	<p>To Ayrshire:</p> <ul style="list-style-type: none"> Impoverished biodiversity <p>To the Plan:</p> <ul style="list-style-type: none"> Small, possible non – variable populations Species numbers / diversity may not be improved unless habitat structures are improved
Water Quality	<p>Due to:</p> <ul style="list-style-type: none"> diffuse fresh water pollution point source pollution salt water pollution <p>Evidence Source:</p> <ul style="list-style-type: none"> SEPA & West of Scotland Agricultural College 	<p>To Ayrshire:</p> <ul style="list-style-type: none"> Eutrophication of water bodies and adjacent habitats Public health <p>To the Plan:</p> <ul style="list-style-type: none"> Reduced biodiversity Increase in “generalist” species

3.5. Likely Evolution of the Environment Without The Ayrshire Biodiversity Action Plan

3.5.1 If the ALBAP review were not to be produced it would result in an unfocused and ill-defined approach to biodiversity at a strategic level and an inefficient use of resources by the various organisations involved in conserving, protecting and enhancing biodiversity within Ayrshire.

3.5.2 The problems that affect biodiversity within Ayrshire are, in the main, the same problems that affect Scotland's biodiversity. There are such challenges as climate change, pollution, transport, loss of habitat from development, SSSI's and other protected sites in unfavourable conditions and invasive species. Some of these issues require to be tackled at an international and or national level while others can be considered at a local level. It is anticipated that the Ayrshire Local Biodiversity Action Plan will consider these issues and how they can be tackled.

3.6. SEA Objectives

3.6.1 The following table provides the SEA Objectives from which the environmental performance of the Ayrshire Local Biodiversity Action Plan will be measured.

SEA Topic	SEA Objective	Criteria	Indicators
Biodiversity; Flora; Fauna	To conserve, protect & enhance biodiversity, flora & fauna at all levels and accord to the protection of statutory nature conservation sites.	<ul style="list-style-type: none"> • To conserve & enhance the integrity of ecosystems • To conserve & enhance habitats • To conserve & enhance species • Ensure protection of designated sites • Avoid damage to protected species • Provide appropriate opportunities for people to come into contact with and appreciate wildlife & wild places 	<ul style="list-style-type: none"> • No. of protected sites e.g. SPA, SSSI within Ayrshire • Condition of protected sites (incl. Any reports of damage) • Changes in No. of BAP Species within Ayrshire • Changes in area of BAP priority habitats within Ayrshire • Alteration of habitat areas within Ayrshire
Soil	To safeguard the quality & quantity of the soil resource	<ul style="list-style-type: none"> • To safeguard soil quality • To reduce soil contamination • To protect and enhance protected sites particularly relating to soils and geology 	<ul style="list-style-type: none"> • Increase / decrease of number of protected sites e.g. SPA, SSSI (by protecting sites we protect soils) • Achieving biodiversity action plan objectives that relate to soil

Water	To conserve, protect & enhance the water courses	<ul style="list-style-type: none"> • Limit water pollution to levels that do not damage natural systems • Protect & where possible improve the water quality of fresh water • Protect and where possible improve the quality of salt water • Reduce / manage flood risk • Protect & conserve water processes that are key to certain eco systems e.g. bog systems 	<ul style="list-style-type: none"> • Quality of freshwater incl. rivers • Quality of sea water • No of protected sites with water courses • Nitrate levels in water courses • Compliance with EC bathing water directive
Landscape	To safeguard and where possible enhance the character, diversity and unique qualities of the landscape	<ul style="list-style-type: none"> • Protect & enhance the landscape everywhere & particularly in designated areas • Value & protect diversity & local distinctiveness • Improve the quality & quantity of publicly accessible open space 	<ul style="list-style-type: none"> • No. of protected sites e.g. SPA, SSSI within Ayrshire • No. Area of sites designated for their international, national or local landscape importance • No. / Area of Country Parks within Ayrshire • No. / Area of urban parks & open spaces of landscape importance • Area & type of woodland

4. ASSESSMENT OF ENVIRONMENTAL EFFECTS & PROPOSED MITIGATION METHODS

4.1 Alternatives to which SEA was applied

4.1.1 The following methods were used to determine the alternatives considered as part of this strategic environmental assessment:

Alternative	Rational	Conclusion
Do nothing	The first alternative to the ALBAP steering group would be to do nothing. This would mean that no additional or progress work would be undertaken. No need for additional resources.	This is not an option that the ALBAG wished to pursue. The existing ALBAP does not reflect the updated publications and legislation pertaining to biodiversity. The original document was a far reaching document & did not have achievable targets. Without an up to date, relevant document from which partner organisations could work from or relate works to, Ayrshire would not develop a co-ordinated and focused approach to biodiversity within Ayrshire.
Develop an ALBAP similar to the first	This would be similar to the first plan and would develop from the previous SAP & HAP. It would be wide ranging and ambitious. It would involve a broader number of people as the SAPs and HAPs would have a breadth of interest.	The ALBAP steering group did not feel that this was a viable option. Learning from the lessons of the first ALBAP it was felt that the plan while being very informative was too ambitious with some unrealistic objectives – as such it did not deliver its full potential
Develop an ALBAP that was much more focused on specific priorities	Such a plan would focus on specific priorities within the international, national and local context. All actions / targets would be SMART. This form of plan would be more of a “rolling “ programme once the actions of the specific HAP / SAP were completed new HAP / SAPs would be developed.	The ALBAP steering group felt that this plan format would be the most beneficial. Focusing on a small number of HAPs SAPs that have SMART targets while meshing with national and international perspective would be extremely beneficial. Groups would feel that they were making a contribution toward an overall goal, targets being achievable. The fact that it would be written as a working document that would be updated regularly and progressing rather than the more “reference” document of the first ALBAP

4.2 Assessment Methods

- 4.2.1 The reasonable alternatives described at section 4.1 have been assessed against a range of environmental issues set out in the Environmental Assessment (Scotland) Act 2005 (schedule 3). Comments from the Consultation Authorities (SNH, SEPA, & The Scottish Ministers (Historic Scotland)) have been taken into account regarding the methods, scope and level of detail in this environmental report.
- 4.2.2 The Ayrshire Local Biodiversity was prepared by Biological Solutions on behalf of the Ayrshire Steering Group. The consultants worked closely with the steering group to develop a plan that was much more focused than the original, that would meet local needs, would work in conjunction with national and international policy and would provide SMART targets.
- 4.2.3 Habitats and species were chosen by using a ranking system. This method identified those species and habitats that were currently locally in need of attention; that were of special conservation significance and that required active conservation measures to sustain them. When undertaking this process of assessment it was straight forward to see which habitats and species, found locally, were on priority listings either EU or UK. It was again fairly straightforward to ascertain which of these species were already subject to some form of programme of conservation. The biggest constraint was the lack of local records and survey data. As a result this has significantly influenced the objectives and actions of the Plan, A specific objective of establishing a Local Biodiversity Records Centre and you will note that many of the HAP and SAP actions include survey work.
- 4.2.4 Following the above assessment the steering group decided that The Ayrshire Biodiversity Action Plan should currently focused on 2 Core Theme Action Plans 2 Habitat Action Plans and 2 Species Action Plans each has specific objectives, actions and targets (incl timescales); each plan identifies the lead partner and other agents that would be able to assist in the delivery of the objectives and actions.
- 4.2.5 In relation to Strategic Environmental Assessment the plans Core Theme Action Plans, HAPs & SAPs objectives were assessed in relation to the SEA objectives. The table below summarises the findings of the assessment while appendix D provides the complete assessment details.

	LBAP Plan Objectives					
	Lowland Raised Bogs	Coastal Habitats	Water Voles	Farmland Birds	Implementation & Reporting & Monitoring	Data & Information
SEA Topic						
Biodiversity Flora & Fauna	++	++	++	++	+	+
Soil	++	0	0/+	+	0/+	?
Water	+	0	0/+ +	0/+	0/+	?
Landscape	++	+	+	++	0/+	0/+
Legend						
+	Positive environmental effect (+ = minor; ++ = major)					
-	Negative environmental effect					
0	Neutral environmental effect					
?	Unknown / Uncertain					

- 4.2.6 After assessing the Plan objectives in relation to the SEA objectives the Revised Ayrshire Local Biodiversity Action Plan is found to have a neutral to positive effect on the environmental SEA topics which had been scoped in due to their potential to be significantly affected by the plan. As you can see from the table above all plans are deemed to have a positive effect on the biodiversity, flora and fauna while for landscape each of the HAPs & SAPs is judged to provide a favourable result. The plan objectives in relation to water and soil however were only able to deliver a neutral to minor positive effect.
- 4.2.7 The Core Theme Action Plans are a vital aspect of delivering both the revised Ayrshire biodiversity action plan and biodiversity in Ayrshire. However in relation to the assessment of the objectives of these plans both were deemed to be generally neutral in respect of the SEA objectives. When looking in detail at the assessment of the HAPs & SAPs it is interesting to note that the objectives for the lowland raised bogs & farmland birds action plans were considered overall to be positive to significantly positive on the SEA topics, while the coastal and water voles, when looked at in terms of their overall impact, are considered to be neutral to minor positive.
- 4.2.8 When looking at the results of the assessment it is important to remember that a major component of each of the HAPs & SAPs is survey, assessment and advice / guidance work. This may explain why the plan does not provide a greater level of significantly positive results. It was also noted that when assessing each plans objectives all were weak in encouraging people to come into contact with flora & fauna and in the improvement of publicly accessible open space. As such the revised Ayrshire biodiversity action plan would benefit from either a statement within the main body of the document or to add an objective to each of the action plans that would indicate, whenever possible, a level of commitment to increase peoples awareness of their biodiversity and encouraging people to participate in biodiversity improvement schemes.

4.3 Proposed Mitigation Measures

- 4.3.1 Schedule 3 of the Environmental Assessment (Scotland) Act 2005 requires an explanation of “the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme”. While there were no negative or significantly negative impacts identified during the assessment of the plan objectives, the table below sets out the environmental problems / issues where mitigation measures could be implemented to improve the situation

SEA Issue	Existing Problem?	Plan Impact	Proposed Mitigation
Soil	Safeguarding soil quality	Largely positive with particular reference to the HAPs. While SAPs may well have to consider agricultural farming methods and how to protect soils	Actions and targets highlight the need for soil / substrate protection. Working with landowners to increase their knowledge and awareness of issues. To develop best practice information packs for all of those involved e.g. landowners, land managers
Water	Diffuse pollution	Plan recognises that this is an environmental issue in some areas	Through The Water Vole & Lowland Raised Bog Action Plans in particular the issue of water quality and so pollution levels is important. Establishing habitat condition and threats is part of the actions included – this will lead to working with land owners / managers for potential management action and best

			<p>practice</p> <p>SEPA is working in partnership with the NFU Scotland, Macaulay Institute and others to look at a range of water quality issues in two catchments representative of land uses in Scotland. One of these catchments is the Cessnock in Ayrshire, chosen because its land use is representative of livestock production in Scotland. By carrying out an in depth study of the sources of pollution and identifying what risks they pose to water quality, the project will be able to suggest measures to help prevent or reduce the risks of these pollutants entering surrounding waters.</p>
Water	Reduce / manage flood risk. Ayrshire does suffer to some degree to coastal flooding, more likely coastal erosion. Some river flooding	Minimal impact on tackling this problem	The Action Plans do not directly tackle this issue. However through the Coastal plan there is the potential to reduce the impact of coastal erosion, which would then lead to coastal flooding.
Biodiversity, Flora & Fauna	Raising peoples interest in matters surrounding biodiversity	One of the general aspects of developing this plan was to engage and raise peoples awareness of biodiversity	Whenever possible the intention is to involve the general public. To inform the general public of works and to work with special interest groups to develop the sense of ownership of the area and project(s)

5. MONITORING

5.1.1 Section 19 of the Environmental Assessment (Scotland) Act 2005 requires the Responsible Authority to monitor significant environmental effects of the implementation of the Ayrshire Local Biodiversity Action Plan in order to identify unforeseen adverse effects and to take appropriate remedial action.

5.1.2 To ensure that the monitoring measures were relevant to the Ayrshire Local Biodiversity Action Plan links have been made to the baseline data in 3.3, SEA Objectives 3.6 and to the actions of the HAPs and SAPs. The following table outlines the proposed SEA monitoring activities that the Ayrshire LBAP Steering Group developed.

What is being Monitored	Data source, frequency of monitoring	Summary of proposed remedial action (if information is available)	Timescale & responsibility
Reports of breeding Barn Owl in Ayrshire	RSPB, BTO, FWAG Annual		RSPB 2009 / 10
Monitor & report on the known water vole population in the Stinchar catchment both within any improved areas and out with such areas	Ayrshire Rivers Trust Annual		Ayrshire Rivers Trust 2008/9
Identify the relative value of the raised bogs based on their invertebrate importance using water beetle communities as indicators	External Consultant To be decided		Lowland Raised Bogs – Bruce Phillip 2009
Condition & number of designated sites e.g. SAP, SAC, SSSI etc	SNH		SNH ; Steering Group 2009/10
Changes in number / area of LBAP species / habitat	Ayrshire Local Biodiversity Action Group Steering Group		Steering Group On going
Number of Ayrshire LBAP actions completed	Ayrshire Local Biodiversity Action Group Steering Group Ongoing		Steering Group On going
Habitat type/ distribution – Phase 1 Habitat survey	SNH Ongoing	May require to be updated	Steering Group On going
Bathing Water Quality	SEPA June – Sep		Steering Group On going
River water quality	SEPA		Steering Group On Going

6. NEXT STEPS

6.1.1 Below, in table format, are the future development of the Ayrshire Local Biodiversity Action Plan and its SEA, and the dates when these are expected to be completed.

Expected Date	Milestone
23rd January 2008 to 31 st March 2008	Consultation of finalised Ayrshire Local Biodiversity Action Plan & SEA Environmental Report
1 st – 14 th April 2008	Evaluation of responses received via consultation process incl. CA responses. Incorporate any changes that are considered relevant
May 2008	Publication & Launch of finalised Ayrshire Local Biodiversity Action Plan