



# Ayrshire Shoreline Management Plan

## Habitats Regulation Appraisal Record

Jan 2018 / IBE1107Rp0004





# Quality Management

Prepared by:	Louise Donohue, Danielle King
Reviewed by:	Richard Bingham
Authorised by:	Malcolm Brian
Date:	6 <sup>th</sup> October 2017
Proj No. / Doc Ref:	IBE1107Rp0004



## CONTENTS

<b>1. INTRODUCTION AND BACKGROUND .....</b>	<b>1</b>
1.1 Introduction.....	1
<b>2. THE PROCEDURE OF HABITATS REGULATIONS APPRAISAL (HRA).....</b>	<b>2</b>
2.1 Legislative Context .....	2
2.2 The process of HRA.....	3
2.2.1 The stages of HRA .....	3
2.2.2 Screening.....	4
2.2.3 Appropriate Assessment.....	4
2.2.4 Mitigation .....	5
2.2.3 Approach.....	5
<b>3. THE AYRSHIRE SHORELINE MANAGEMENT PLAN .....</b>	<b>6</b>
3.1 Description of the Plan .....	6
3.2 SMP Policy Options.....	6
3.2 SMP Preferred policies to implement the plan .....	7
<b>4. HABITATS REGULATIONS APPRAISAL SCREENING.....</b>	<b>10</b>
4.1 Whether plan is subject to HRA.....	10
4.2 Background information about Natura sites .....	10
4.2.1 Relevant Natura sites.....	10
4.3 Screening the SMP for Likely Significant Effects .....	22
4.3.1 Establishing an impact pathway.....	22
4.3.2 Summary of impacts .....	43
4.4 In-combination with other plans and projects .....	44
4.4.1 Assessment of in-combination effects .....	44
4.5 Conclusion of the Screening Assessment .....	46
<b>5. APPROPRIATE ASSESSMENT .....</b>	<b>47</b>
5.1 Assessment of adverse effects on the integrity of Natura sites.....	47
<b>6. CONCLUSIONS .....</b>	<b>53</b>
<b>7. REFERENCES .....</b>	<b>54</b>



# 1. INTRODUCTION AND BACKGROUND

---

## 1.1 Introduction

This Habitats Regulations Appraisal Record has been prepared by RPS Consulting Engineers (RPS) on behalf of North Ayrshire Council and South Ayrshire Council.

The need for the Ayrshire Shoreline Management Plan (the Plan/SMP) was identified by the Scottish Environment Protection Agency (SEPA), North Ayrshire Council and South Ayrshire Council, through the development of the Regional Flood Risk Management Strategy. The Plan aims to provide guidance to operating authorities and regulatory bodies as to future sustainable flood and coastal erosion risk management; essentially providing an agreed high level approach, intent and framework for management. In addition, the Ayrshire SMP aims to provide guidance to planners, and to individuals and organisations, with interests in the coast; setting out an understanding of coastal behaviour, the pressures, constraints and opportunities for the sustainable use of the coastal zone, to guide others in developing their own planning.

RPS has prepared this record to provide Scottish Natural Heritage (SNH) with information on the Ayrshire Shoreline Management Plan, and the process of Habitats Regulations Appraisal (HRA), to establish whether or not the Ayrshire SMP is likely to have a significant effect upon any European sites(s).

## 2. THE PROCEDURE OF HABITATS REGULATIONS APPRAISAL (HRA)

---

### 2.1 Legislative Context

The 'Habitats Directive' (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) provides legal protection for habitats and species of European importance. The main aim of the Habitats Directive is "to contribute towards ensuring biodiversity through the conservation of natural habitats of wild fauna and flora in the European territory of the Member States to which the treaty applies". Actions taken in order to fulfil the Directive must be designed to "maintain or restore, at a favourable conservation status, natural habitats and species of wild fauna and flora of Community interest".

A key outcome of the Habitats Directive is the establishment of Natura 2000, an ecological infrastructure developed throughout Europe for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species. In Scotland, Special Areas of Conservation (SACs), together with Special Protection Areas (SPAs) designated under the 'Birds Directive' (Council Directive 2009/147/EC – codified version of Directive 79/409/EEC on the Conservation of Wild Birds, as amended), are included in the Natura 2000<sup>1</sup> network, and are hereafter referred to as 'European sites'.

A Central protection mechanism of the Habitats Directive is the requirement of competent authorities to undertake Appropriate Assessment<sup>2</sup> (AA), to consider the possible nature conservation implications of any plan or project on European sites before any decision is made to allow the plan or project to proceed.

**Article 6(3)** of the Habitats Directive states: *"Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and if appropriate, after having obtained the opinion of the general public."*

Article 6(4) is the procedure for allowing derogation from this strict protection, in certain restricted circumstances:

**Article 6(4)** of the Habitats Directive states: *"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory*

---

<sup>1</sup> Natura 2000 sites are protected by Article 6(3) of the Habitats Directive. Protection is given to SACs from the point at which the European Commission and the Government agree the site as a 'Site of Community Importance' (SCI). Article 6(3) of the Habitats Directive and Article 4(4) of the Birds Directive also apply (respectively) to any other site or area that the Commission believed should be considered as an SAC or SPA, until their status is determined. Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) the term 'European site' applied to any designated SAC or SPA; any SCI; any candidate SCI (cSCI); any candidate SAC (cSAC); and any candidate or proposed SPA (pSPA).

<sup>2</sup> 'Appropriate Assessment' has been historically used as an umbrella term to describe the process of assessment in its entirety from screening to IROPI (Imperative Reasons of Overriding Public Interest). The assessment process is now more commonly divided into distinct stages, one of which (Stage 2) is the 'appropriate assessment' stage. The overall process is often referred to as an 'Article 6 Assessment' or 'Habitats Directive Assessment' for convenience, although these terms are not included within the legislation.



*measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted."*

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensation measures. First, the plan should aim to avoid any impacts on Natura sites by identifying possible impacts early in the plan-making process and writing the plan in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the plan is still likely to result in impacts on Natura sites, and no further practicable mitigation is possible, then it must be rejected. If no alternative solutions are identified and the plan is required for imperative reasons of overriding public interest (IROPI) under Article 6(4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

In Scotland, the requirements of the Habitats Directive and Birds Directive have been transposed into domestic legislation through the Habitats Regulations<sup>3</sup>. Habitats Regulations Appraisal (HRA), incorporating Appropriate Assessment, must be undertaken when any plan, either alone or in-combination with other plans or projects, could have an adverse effect on the integrity of designated or candidate European Sites. Following the direction of Scottish Natural Heritage's Guidance for Plan Making Bodies on HRA of Plans (SNH 2015), Ramsar sites are included in the assessment under the umbrella term of 'Natura Sites'.

## 2.2 The process of HRA

### 2.2.1 The stages of HRA

SNH recommend an approach to methodology and reporting of HRA, following a series of (potentially) 13 stages (SNH 2015). These stages are outlined in Table 2.1.

**Table 2.1** Stages of HRA recommended by SNH (2015)

Stage in HRA process	Description
1	Decide whether plan is subject to Habitats Regulations Appraisal
2	If plan is subject to appraisal, identify European sites that should be considered in the appraisal
3	Gather information about the European sites
4	Discretionary consultation on the method and scope of the appraisal
5	Screen the plan for likely significant effects on a European site
6	Apply mitigation measures
7	Re-screen the plan after mitigation measures applied
8	If significant effects still likely, Undertake an appropriate assessment in view of conservation objectives
9	Apply mitigation measures until there is no adverse effect on site integrity
10	Prepare a draft record of the HRA
11	Consult SNH (& other stakeholders and the public if appropriate) on draft HRA Record
12	Screen any amendments for likelihood of significant effects and carry out appropriate assessment if required, re-consult SNH if necessary on amendments
13	Modify HRA Record in light of SNH representations and any amendments to the plan and complete and publish final / revised HRA Record with clear conclusions

<sup>3</sup> In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats, &c) Regulations (1994).

### 2.2.2 Screening

Screening is the process of deciding whether or not an Appropriate Assessment is required for a plan or project. It addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the Habitats Directive, i.e.

- Whether a plan or project is directly connected to or necessary for the management of the site; and
- Whether a plan or project, alone or in-combination with other plans and projects, is likely to have significant effects on a European site in view of its Qualifying Interest Features and their corresponding Conservation Objectives.

The assessment of likely significant effects is based on the likelihood and significance of any effects of the proposed variation on each European site's qualifying interests, particularly with reference to the relevant conservation objectives. In this context, the likelihood depends on whether there is the opportunity and pathway for the effect to occur, and the significance is regarded as the effect on the susceptible qualifying interests of the site(s). If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 Appropriate Assessment. The threshold for a likely significant effect is treated in the screening exercise as being above a *de minimis* level. A *de minimis* effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects. As recommended by SNH (2015), mitigation measures should be applied at the screening stage if they can remove or reduce likely significant effects.

The most up-to-date Conservation Objectives available have been applied to the analysis documented in this report and are clearly identified by their date of publication (or otherwise) on a site-by-site basis.

The Screening Stage includes:

- Site location and description of the plan or project;
- Identification and initial screening of European sites for potential negative effects;
- Screening conclusion.

### 2.2.3 Appropriate Assessment

Should the screening stage of a HRA determine that a plan or project has the potential to result in likely significant effects on a European site, it is necessary to undertake an Appropriate Assessment. The likely significant effects are assessed with regard to the Conservation Objectives of the site, in order to determine whether adverse effects on site integrity will occur as a result of the plan or project.

### 2.2.4 Mitigation

In relation to mitigation measures, the EC (2001) Guidance states that “project and plan proponents are often encouraged to design mitigation measures into their proposals at the outset. However, it is important to recognise that the screening assessment should be carried out in the absence of any consideration of mitigation measures that form part of a project or plan and are designed to avoid or reduce the impact of a project or plan on a Natura 2000 site”. This direction in the European Commission’s guidance document is unambiguous.

Following SNH (2015) guidance, mitigation measures should be applied both at the screening stage and during the Appropriate Assessment process, wherever they enable management of predicted likely significant effects.

### 2.2.3 Approach

In addition to the SNH (2015) guidance relating to the Habitats Regulations appraisal of plans, the European Commission has published a number of documents which provide a significant body of guidance on the requirements of Appropriate Assessment, most notably including; ‘*Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*’ (EC, 2001), which sets out the principles of how to approach decision making during the process. This guideline has been followed in the preparation of this appraisal. The following list identifies these and other pertinent guidance documents:

- Communication from the Commission on the Precautionary Principle., Office for Official Publications of the European Communities, Luxembourg (EC, 2000a);
- Managing Natura 2000 Sites: the provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (EC, 2000b);
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001);
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; (EC, 2007);
- Habitats Regulations Appraisal of Plans: Guidance for Plan-making Bodies in Scotland. Scottish Natural Heritage, Edinburgh (SNH, 2015);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013).

EC (2000a) notes that the implementation of an approach based on the precautionary principle should start with a scientific evaluation, as complete as possible, and where possible, identifying at each stage the degree of scientific uncertainty, and also that decisions taken based on the precautionary principle should be maintained so long as scientific information is incomplete or inconclusive. EC (2001) notes also that predicting the response of a receptor to a disturbance effect can be difficult and, in the absence of firm scientific information, requires a precautionary approach.

## 3. THE AYRSHIRE SHORELINE MANAGEMENT PLAN

---

### 3.1 Description of the Plan

The Ayrshire Shoreline Management Plan aims to provide guidance to operating authorities and regulatory bodies as to future sustainable flood and coastal erosion risk management; essentially providing an agreed high level approach, intent and framework for management. In addition, the Ayrshire SMP aims to provide guidance to planners, and to individuals and organisations, with interests in the coast; setting out an understanding of coastal behaviour, the pressures, constraints and opportunities for the sustainable use of the coastal zone, to guide others in developing their own planning.

The area of the coast to be considered within the Ayrshire SMP includes the shoreline from the northern boundary of North Ayrshire to the southern limit of South Ayrshire at Galloway Burn. The SMP also includes the shorelines of Great Cumbrae and the Isle of Arran but excludes the smaller islands of Little Cumbrae and Ailsa Craig. Within this boundary lie a number of large towns settled amongst the region's distinct rural landscapes. The northern aspect of the mainland coast is heavily populated, with many of the local settlements having expanded beyond their original sites. They now often take the form of ribbon settlements along coastal roads which has the effect of extending their urban influence and thus weakening the distinctive character of the raised beach landscapes which define the Ayrshire shoreline.

The Plan is likely to cover the period from 2017 to 2117, split into 3 epochs of short term 0 - 20 years, medium term 20 – 50 years and long term 50 – 100 years. The Plan will be reviewed periodically for updates and to monitor progress and impacts.

### 3.2 SMP Policy Options

The objectives of the Ayrshire SMP are:

- To identify and map the existing, and potential future, condition of the Ayrshire shoreline;
- To identify considered management objectives for the various aspects of the Ayrshire shoreline;
- To identify structural and non-structural measures for the effective and sustainable management of the shoreline within each sub-cell and within the Plan area as a whole; and
- To prepare an SMP for the Plan area that sets out policies, strategies, measures and actions which should be pursued by the appropriate bodies to achieve the most cost-effective and sustainable management of the Ayrshire shoreline, both at present and in the future, taking into account environmental plans, objectives and legislative requirements.

The objectives of the Ayrshire SMP will be dependent upon the issues identified at various locations along the Ayrshire coastline. Such issues include the risk of flooding or coastal erosion to people, property and infrastructure. Four generic policy options were considered as part of the SMP and these are summarised in Table 3.1.

**Table 3.1** Summary of Ayrshire SMP Policy Options

Policy Option	Description
<b>Do Nothing</b>	No action is taken and the natural coastal processes of erosion and accretion are allowed to continue with no intervention.
<b>Hold the Line</b>	The shoreline is proposed to be held as the current day. This objective is likely to require active management and construction.
<b>Managed Realignment</b>	The shoreline is proposed to be advanced to reclaim land for development. This objective will require active management and construction.
<b>No Active Intervention</b>	Any active management of the shoreline will cease and the natural coastal processes of erosion and accretion will be allowed to continue with no intervention.

## 3.2 SMP Preferred policies to implement the plan

It is not an objective of the Ayrshire SMP to develop detailed designs for individual shoreline management measures. With that being said, outline options and scenarios to meet the proposed objectives will be identified and assessed. Preferred policies for the Ayrshire SMP were selected based on technical, environmental and economic appraisal of options. These are outlined in Table 3.2.

**Table 3.2** Preferred policies for the Ayrshire SMP coastline

Policy unit	Preferred policy	Potentially feasible actions
6b1.1 Skelmorlie to Largs	Hold the Line	Hard protection measures: seawalls, embankments, maintenance of existing hard defences.
6b1.2 Largs and Fairlie	Hold the Line	Hard protection measures: seawalls, embankments, maintenance of existing hard defences; possibly revetments.  Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, coves.  Soft protection measures: nourishment; possibly beach drain.
6b2.1 Hunterston	Advance the Line	Hard protection measures: seawalls; possibly revetments, embankments, maintenance of existing hard defences.  Soft protection measures: possibly nourishment in conjunction with hard defences.
6b2.2 Hunterston to Farland Head	Hold the Line	Hard protection measures: maintenance of existing hard defences.
6c1.1 Farland Head to Ardrossan	Hold the Line	Hard protection measures: seawalls, embankments, maintenance of existing hard defences.  Soft protection measures: dune stabilisation and nourishment possibly at one location.
6c2.1 Ardrossan to Stevenston	Hold the Line	Hard protection measures: seawalls, maintenance of existing hard defences; possibly revetments and embankments.  Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, coves.  Soft protection measures: dune stabilisation, nourishment; possibly beach drain.
6c2.2 Stevenston to Irvine Bay	Hold the Line	Hard protection measures: seawalls, maintenance of existing hard defences; possibly revetments and embankments.

		<p>Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, coves.</p> <p>Soft protection measures: dune stabilisation, nourishment; possibly beach drain.</p>
6c2.3 Irvine Bay to Galies Burn	Hold the Line	<p>Hard protection measures: seawalls, maintenance of existing hard defences; possibly revetments and embankments.</p> <p>Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, coves.</p> <p>Soft protection measures: dune stabilisation, nourishment; possibly beach drain.</p>
6c2.4 Galies Burn to Troon	Hold the Line	<p>Hard protection measures: seawalls, maintenance of existing hard defences; possibly revetments and embankments.</p> <p>Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, coves.</p> <p>Soft protection measures: dune stabilisation, nourishment; possibly beach drain.</p>
6c3.1 Troon to Ayr	Hold the Line	Hard protection measures: seawalls, embankments, maintenance of existing hard defences.
6c4.1 Ayr to Grenan Castle	Hold the Line	<p>Hard protection measures: seawalls, embankments, maintenance of existing hard defences.</p> <p>Soft protection measures: dune stabilisation, nourishment in one location.</p>
6c4.2 Grenan Castle to Dunure	No Active Intervention	None
6c5.1 Dunure to Turnberry	No Active Intervention	None
6c6.1 Turnberry to north Girvan	No Active Intervention	None
6c6.2 Girvan	Hold the Line	<p>Hard protection measures: seawalls, embankments, maintenance of existing hard defences.</p> <p>Soft protection measures: dune stabilisation, nourishment in one location.</p>
6c6.3 South Girvan to Bennane Head	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	<p>Hard protection measures: seawalls, embankments, maintenance of existing hard defences.</p> <p>Soft protection measures: possibly dune stabilisation, nourishment.</p>
6d1.1 Bennane Head to Ballantrae	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	<p>Hard protection measures: seawalls, revetments, embankments, maintenance of existing hard defences.</p> <p>Mixed protection measures: groynes, detached breakwaters, headlands, perched beaches, coves.</p> <p>Soft protection measures: dune stabilisation, nourishment, beach drain.</p>
6d1.2 Ballantrae to Currarie Port	No Active Intervention	None
6d2.1 Currarie Port to Galloway Burn	No Active Intervention	None
A1.1 Lochranza	Hold the Line	Hard protection measures: seawalls, embankments, maintenance of existing hard defences.

		Soft protection measures: nourishment.
A1.2 Lochranza to Sannox	No Active Intervention	None
A1.3 Sannox to Brodick	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Hard protection measures: seawalls, embankments, maintenance of existing hard defences.  Soft protection measures: possibly nourishment.
A1.4 Brodick	Hold the Line Advance the Line	Hard protection measures: seawalls; possibly revetments, embankments, maintenance of existing hard defences.  Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, cove.  Soft protection measures: possibly dune stabilisation, nourishment in conjunction with hard protection measures.
A1.5 Brodick to Clachlands Point	No Active Intervention	None
A2.1 Clachlands Point to Lamlash	No Active Intervention	None
A2.2 Lamlash	Hold the Line	Hard protection measures: seawalls, maintenance of existing hard defences; possibly revetments, embankments.  Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, cove.  Soft protection measures: nourishment; possibly beach drain.
A2.3 Lamlash to Kingscross Point	No Active Intervention	None
A3.1 Whiting Bay	Hold the Line	Hard protection measures: seawalls, embankments, maintenance of existing hard defences.  Soft protection measures: nourishment.
A3.2 Largymore to Drumadoon Point	No Active Intervention	None
A4.1 Drumadoon Point to Tormore	No Active Intervention	None
A4.2 Machrie Bay to Lochranza	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Hard protection measures: seawalls, maintenance of existing hard defences; possibly revetments, embankments.  Mixed protection measures: possibly groynes, detached breakwaters, headlands, perched beaches, coves.  Soft protection measures: nourishment; possibly beach drain.
Great Cumbrae	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Hard protection measures: seawalls, maintenance of existing hard defences; possibly revetments, embankments.  Soft protection measures: nourishment.

## 4. HABITATS REGULATIONS APPRAISAL SCREENING

---

### 4.1 Whether the Plan is subject to a HRA

The first aspect of screening is to establish whether or not the proposed plan is directly connected with or necessary to the management of any European site. The proposal to adopt a decision to employ this Ayrshire SMP is not directly connected with or necessary to the management of any site as a European site. The project will therefore be subject to Habitats Regulations Appraisal to assess, in view of best scientific knowledge and in view of the conservation objectives of those European sites considered, whether or not the Plan, individually or in combination with other plans or projects, is likely to have a significant effect on any European site.

### 4.2 Background information about Natura sites

#### 4.2.1 Relevant Natura sites

European sites within the potential zone of influence of the Ayrshire SMP were considered as part of the HRA screening process. As a starting point, a 15km buffer was used to identify any European sites in the proximity of the coastline encompassed by the SMP, and each of these was assessed for potential likely significant effects. European sites at a greater distance were considered on the basis of a source-pathway-receptor approach, and included in the assessment if any potential for likely significant effects was possible. The proposed Plan area is located within 15km of 10 SAC sites, 7 SPA sites and 2 Ramsar sites.

- Bankhead Moss SAC
- Cockinhead Moss SAC
- Dykeneuk Moss SAC
- Flow of Dergoals SAC
- Kilhern Moss SAC
- Kirkcowan Flow SAC
- Lendalfoot Hills Complex SAC
- Luce Bay and Sands SAC
- River Bladnoch SAC
- Tarbert Woods SAC
- Ailsa Craig SPA
- Arran Moors SPA
- Glen App and Galloway Moors SPA
- Inner Clyde SPA and Ramsar site
- Kintyre Goose Roosts SPA
- Loch of Inch and Torrs Warren SPA and Ramsar site
- Renfrewshire Heights SPA

The location of these sites is presented in Figure 1. Details of these sites, including Qualifying Interests/Special Conservation Interests, and their distance from the study area are found in Table 4.1.



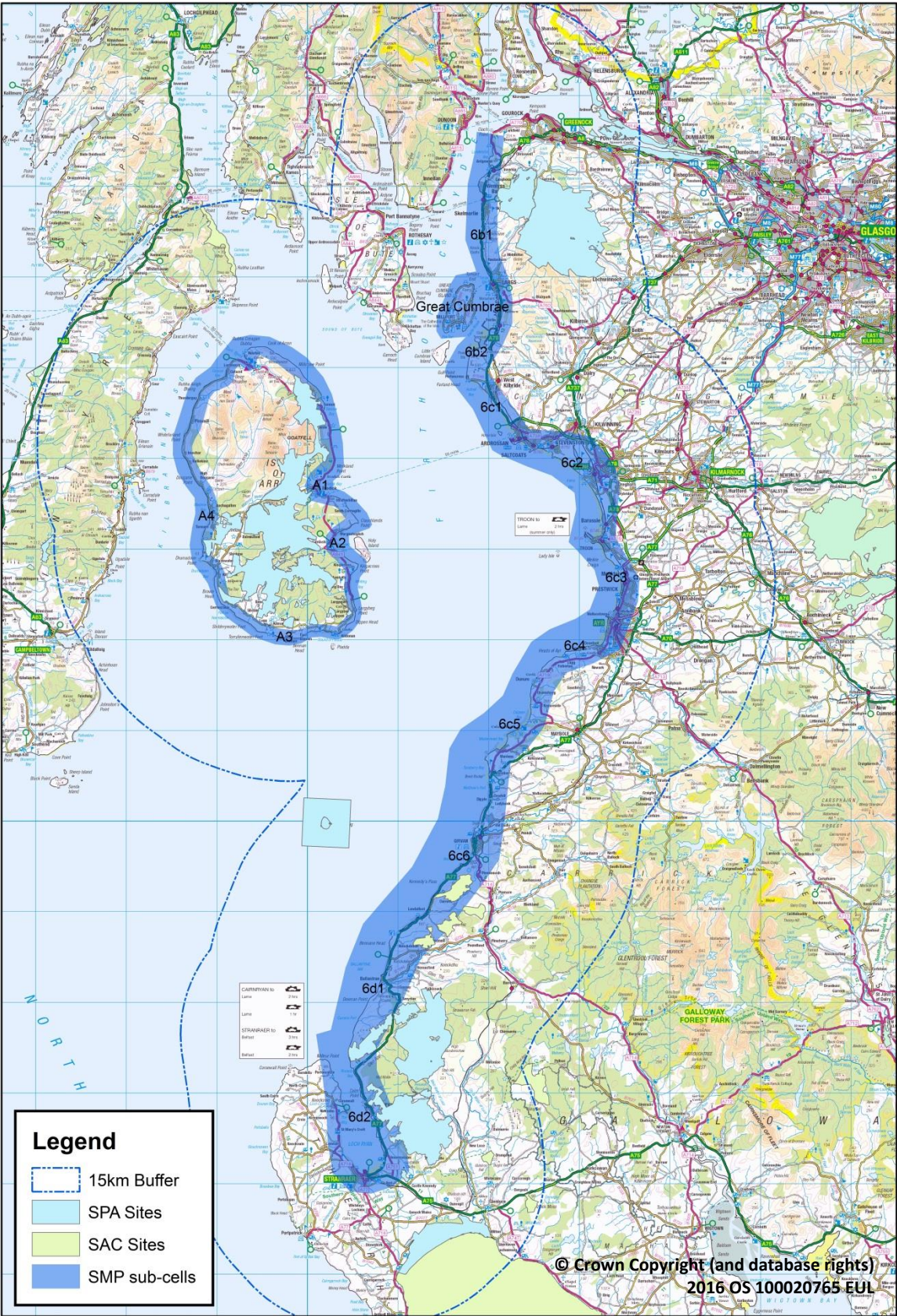


Figure 4.1 Natura sites within the zone of influence of the Ayrshire SMP

**Table 4.1** Natura sites within 15 km of the boundary of the proposed Ayrshire SMP

SAC/SPA	Qualifying Interest	Distance from SMP
Bankhead Moss SAC (8195)	<ul style="list-style-type: none"> <li>Active raised bog</li> </ul>	Approx. 9.1km
Cockinhead Moss SAC (8226)	<ul style="list-style-type: none"> <li>Active raised bog</li> <li>Degraded raised bog</li> </ul>	Approx. 7.4km
Dykeneuk Moss SAC (8247)	<ul style="list-style-type: none"> <li>Active raised bog</li> <li>Degraded raised bog</li> </ul>	Approx. 5.6km
Flow of Dergoals SAC (8259)	<ul style="list-style-type: none"> <li>Blanket bog</li> <li>Depressions on peat substrates</li> </ul>	Approx. 13.1km
Kilhern Moss SAC (8281)	<ul style="list-style-type: none"> <li>Blanket bog</li> <li>Depressions on peat substrates</li> </ul>	Approx. 8.1km
Kirkcowan Flow SAC (8285)	<ul style="list-style-type: none"> <li>Blanket bog</li> <li>Depressions on peat substrates</li> </ul>	Approx. 13.7km
Lendalfoot Hills Complex SAC (8288)	<ul style="list-style-type: none"> <li>Base-rich fens</li> <li>Dry heaths</li> <li>Grasslands on soils rich in heavy metals</li> <li>Species-rich grassland with mat-grass in upland areas</li> <li>Very wet mires often identified by an unstable 'quaking' surface</li> <li>Wet heathland with cross-leaved heath</li> </ul>	0km
Luce Bay and Sands SAC (8641)	<ul style="list-style-type: none"> <li>Coastal dune heathland</li> <li>Dune grassland</li> <li>Great crested newt</li> <li>Intertidal mudflats and sandflats</li> <li>Reefs</li> <li>Shallow inlets and bays</li> <li>Shifting dunes</li> <li>Shifting dunes with marram and sub-tidal sandbanks</li> </ul>	Approx. 5.6km
River Bladnoch SAC (8355)	<ul style="list-style-type: none"> <li>Atlantic salmon</li> </ul>	Approx. 10.7km
Tarbert Woods SAC (8390)	<ul style="list-style-type: none"> <li>Western acidic oak woodland.</li> </ul>	Approx. 14.9km
Ailsa Craig SPA (8463)	<ul style="list-style-type: none"> <li>Breeding gannet</li> <li>Breeding guillemot</li> <li>Breeding herring gull</li> <li>Breeding kittiwake</li> <li>Breeding lesser black-backed gull</li> <li>Breeding seabird assemblage</li> </ul>	Approx. 6.9km
Arran Moors SPA (8614)	<ul style="list-style-type: none"> <li>Breeding hen harrier</li> </ul>	0km
Glen App and Galloway Moors SPA (8615)	<ul style="list-style-type: none"> <li>Breeding hen harrier.</li> </ul>	0km
Inner Clyde SPA (8615) and Ramsar site (8429)	<u>SPA and RAMSAR</u> <ul style="list-style-type: none"> <li>Non-breeding redshank</li> </ul>	Approx. 14.9km
Kintyre Goose Roosts SPA (8518)	<ul style="list-style-type: none"> <li>Non-breeding Greenland white-fronted goose</li> </ul>	Approx. 11.2km
Loch of Inch and Torrs Warren SPA (8533) and Ramsar site (8439)	<u>SPA</u> <ul style="list-style-type: none"> <li>Non-breeding Greenland white-fronted goose</li> <li>Non-breeding hen harrier</li> </ul> <u>RAMSAR</u> <ul style="list-style-type: none"> <li>Greenland white-fronted goose</li> <li>Sand dune (Ramsar site feature)</li> </ul>	0km
Renfrewshire Heights SPA (8667)	<ul style="list-style-type: none"> <li>Breeding hen harrier.</li> </ul>	0km



#### 4.2.1.1 Bankhead Moss SAC

Bankhead Moss SAC is a raised bog site covering an area of 32ha. It is designated for active raised bog, a priority Annex I habitat, and is considered to be one of the best areas in the UK representing this habitat (JNCC 2015a). It has a largely intact structure, having suffered only marginal encroachment by domestic peat-cutting. The current condition of active raised bog at the site is 'Favourable Maintained'. The main pressures on this site relate to human-induced alterations of hydrological conditions; grazing, fire, air pollution and changes in abiotic conditions (JNCC 2015a).

The conservation objectives for the site are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.2 Cockinhead Moss SAC

Cockinhead Moss SAC is a raised bog site covering an area of 48ha. It is designated for active raised bog, a priority Annex I habitat, and degraded raised bog. The current condition of active raised bog is 'Unfavourable Recovering' and of degraded raised bog is 'Unfavourable Declining'. The main pressures on this site relate to human-induced alterations of hydrological conditions; grazing, fire, air pollution and changes in abiotic conditions (JNCC 2015b).

The conservation objectives for the site are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.3 Dykeneuk Moss SAC

Dykeneuk Moss SAC is a raised bog site covering an area of 62ha. It is designated for active raised bog, a priority Annex I habitat, and degraded raised bog. The current condition of active raised bog is 'Favourable Maintained' and of degraded raised bog is 'Favourable Recovered'. The main pressures on this site relate to human-induced alterations of hydrological conditions; grazing, fire, air pollution and changes in abiotic conditions (JNCC 2015c).

The conservation objectives for the site are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.4 Flow of Dergoals SAC

The Flow of Dergoals SAC is a blanket bog site covering an area of 170ha. It is designated for blanket bog and depressions on peat substrates of the Rhynchosporion. The current condition of both habitats is 'Favourable Maintained'. The main pressures on this site relate to human-induced alterations of hydrological conditions; grazing, fire, air pollution and hunting and collection of wild animals (JNCC 2015d).

The conservation objectives for the site are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.4 Kilhern Moss SAC

Kilhern Moss SAC is a blanket bog site covering an area of 124ha. It is designated for blanket bog and depressions on peat substrates of the Rhynchosporion. The current condition of both habitats is 'Favourable Maintained'. The main pressures on this site relate to human-induced alterations of hydrological conditions; grazing, fire, air pollution and hunting and collection of wild animals (JNCC 2015e).

The conservation objectives for the site are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.5 Kirkcowan Flow SAC

Kirkcowan Flow SAC is a large blanket bog site covering an area of 775ha. It is designated for blanket bog and depressions on peat substrates of the Rhynchosporion. The current condition of blanket bog is 'Unfavourable Declining', whilst that of depressions on peat substrates of the Rhynchosporion is 'Favourable Maintained'. The main pressures on this site relate to human-induced alterations of hydrological conditions; grazing, fire, air pollution and hunting and collection of wild animals (JNCC 2015f).

The conservation objectives for the site are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.6 Lendalfoot Hills Complex SAC

Lendalfoot Hills Complex SAC is a series of upland fen, heath and grassland sites covering a combined area of 1308ha. The Annex I habitats upon which site designation were primarily based are species-rich grassland with mat-grass in upland areas and base-rich fens. The current condition of designated habitats is shown in Table 4.2. The main pressures on this site relate to grazing, air pollution, pollution to surface waters and forest planting on open ground (JNCC 2015g).

**Table 4.2** Condition of Qualifying Interests of the Lendalfoot Hills Complex SAC

Qualifying Interest	Latest Assessed Condition
Base-rich fens	Unfavourable Recovering
Dry heaths	Unfavourable Declining
Grasslands on soils rich in heavy metals	Unfavourable Declining
Species-rich grassland with mat-grass in upland areas	Unfavourable No Change
Very wet mires often identified by an unstable 'quaking' surface	Unfavourable Declining
Wet heathland with cross-leaved heath	Unfavourable No Change

The conservation objectives for the site are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.7 Luce Bay and Sands SAC

Luce Bay and Sands SAC is an extensive coastal and marine site covering an area of 48,753ha. The current condition of designated habitats is shown in Table 4.3. The main pressures on this site relate to grazing, air pollution, pollution to surface waters and forest planting on open ground (JNCC 2015h).

**Table 4.3** Condition of Qualifying Interests of Luce Bay and Sands SAC

Qualifying Interest	Latest Assessed Condition
Coastal dune heathland	Unfavourable Declining
Dune grassland	Unfavourable No Change
Great crested newt ( <i>Triturus cristatus</i> )	Unfavourable Declining
Intertidal mudflats and sandflats	Not Assessed
Reefs	Not Assessed
Shallow inlets and bays	Not Assessed
Shifting dunes	Unfavourable Declining
Shifting dunes with Marram	Unfavourable Declining
Subtidal sandbanks	Not Assessed

The conservation objectives for the Annex I habitats are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

The conservation objectives for the Annex II species great-crested newt are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 4.2.1.8 River Bladnoch SAC

River Bladnoch SAC covers an area of 273ha and is designated for the presence of a high-quality population of Atlantic salmon *Salmo salar*. The current condition of this species is 'Unfavourable Recovering'. The main pressures on this site relate to changes in biotic conditions, changes in abiotic conditions, human-induced changes in hydraulic conditions, pollution to surface waters, and marine and freshwater aquaculture (JNCC 2015i).

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 4.2.1.9 Tarbert Woods SAC

Tarbert Woods covers an area of 1576ha on the Kintyre peninsula and is designated for the Annex I habitat Western acidic oak woodland. The current condition of this habitat is 'Unfavourable Recovering'. The main pressures on this site relate to air pollution, grazing in forests/woodland and invasive non-native species (JNCC 2015j).

The conservation objectives for the Annex I habitat are as follows:

- To avoid deterioration of the qualifying habitat, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying habitat that the following are maintained in the long term:
  - Extent of the habitat on site
  - Distribution of the habitat within site
  - Structure and function of the habitat
  - Processes supporting the habitat
  - Distribution of typical species of the habitat
  - Viability of typical species as components of the habitat
  - No significant disturbance of typical species of the habitat.

#### 4.2.1.10 Ailsa Craig SPA

Ailsa Craig SPA is an island site covering an area of 2760ha, including a seaward extension of approximately 2km into the marine environment to include the seabed, water column and surface. Cliffs of up to 100m in height encircle the island, providing nesting habitat for seabirds. The current condition of designated Annex II species is shown in Table



4.4. The main pressures on this site relate to renewable abiotic energy use, changes in biotic conditions, fishing and harvesting aquatic resources, interspecific faunal relations and invasive non-native species (JNCC 2015k).

Table 4.4 Condition of Qualifying Interests of Ailsa Craig SPA

Qualifying Interest	Latest Assessed Condition
Gannet ( <i>Morus bassanus</i> ), breeding	Favourable Maintained
Guillemot ( <i>Uria aalge</i> ), breeding	Favourable Maintained
Herring gull ( <i>Larus argentatus</i> ), breeding	Unfavourable Declining
Kittiwake ( <i>Rissa tridactyla</i> ), breeding	Unfavourable Declining
Lesser black-backed gull ( <i>Larus fuscus</i> ), breeding	Unfavourable Declining
Seabird assemblage, breeding	Favourable Maintained

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 4.2.1.11 Arran Moors SPA

Arran Moors SPA is an extensive area of moorland (10,737ha) covering the majority of the southern half of the Isle of Arran and extending along the northeast coast. The predominant habitats include extensive areas of wet and dry heath, wet and dry blanket bogs and unimproved acid grassland. Site designation is based on the presence of a breeding population of hen harrier *Circus cyaneus*. The current condition of this species is 'Favourable Maintained'. The main pressures on this site relate to interspecific faunal relations, grazing, hunting or collection of wild animals, and other ecosystem modifications (JNCC 2015l).

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species

- No significant disturbance of the species

#### 4.2.1.12 Glen App and Galloway Moors SPA

Glen App and Galloway Moors SPA comprises a large upland area of 8942ha, mainly covered by heather moorland and rough grassland. Site designation is based on the presence of a breeding population of hen harrier *Circus cyaneus*. The current condition of hen harrier is 'Favourable Maintained'. The main pressures on this site relate to interspecific faunal relations, grazing, hunting or collection of wild animals, and other ecosystem modifications (JNCC 2015m).

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 4.2.1.13 Inner Clyde SPA (8615) and Ramsar site

The Inner Clyde Estuary is located to the west of Glasgow. It is important for a range of wintering waterbirds, and is designated for the presence of a population of wintering Redshank *Tringa totanus*. The SPA covers an area of 1814ha, while the Ramsar site comprises 1825ha. The current condition of the species is 'Favourable Maintained'. The main pressure on this site relates to changes in abiotic conditions (JNCC 2015n).

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 4.2.1.14 Kintyre Goose Roosts SPA

The Kintyre Goose Roosts SPA comprises a series of hill lochs and an area of grassland and heath on the Kintyre peninsula, covering an area of 412ha. It is designated for the presence of a wintering population of Greenland white-fronted goose *Anser albifrons*. The current condition of the species is 'Favourable Maintained'. The main pressures on

this site relate to interspecific faunal relations, hunting or collection of wild animals, changes in biotic conditions and changes in abiotic conditions (JNCC 2015o).

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 4.2.1.15 Loch of Inch and Torrs Warren SPA and Ramsar site

The Loch of Inch and Torrs Warren SPA is comprised of a large eutrophic freshwater loch (Loch of Inch or White Loch) and a nearby area of foreshore and dunes (Torrs Warren), and covers a combined area of 2111ha. Site designation is based on the presence of an internationally important wintering population of Greenland white-fronted goose *Anser albifrons flavirostris* and a nationally important population of hen harrier *Circus cyaneus*. The current condition of both species is 'Favourable Maintained'. The main pressures on this site relate to interspecific faunal relations, grazing, hunting or collection of wild animals, changes in biotic conditions and changes in abiotic conditions (JNCC 2015p).

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 4.2.1.16 Renfrewshire Heights SPA

Renfrewshire Heights SPA comprises a large area (8943ha) of upland moorland mainly covered by blanket mire, wet and dry heaths, and rough grassland. Site designation is based on the presence of a breeding population of hen harrier *Circus cyaneus*. The current condition of the species is 'Unfavourable Declining'. The main pressures on this site relate to interspecific faunal relations, grazing, hunting or collection of wild animals, and other ecosystem modifications (JNCC 2015q).

The conservation objectives for the Annex II species are as follows:

- To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

## 4.3 Screening the SMP for Likely Significant Effects

### 4.3.1 Establishing an impact pathway

Each European site was individually reviewed to identify whether there were potential impact pathways evident from the SMP. The assessment reviewed the potential for:

- Direct Impacts, examples of which include (but are not limited to):
  - A construction footprint within the boundary of a European site;
  - A construction footprint outside a European site but which may obstruct the passage of a qualifying feature in accessing a European site;
  - Disturbance of species during construction or maintenance.
- Indirect Impacts, examples of which include (but are not limited to):
  - Short-term water quality impacts associated with construction works, for example, suspended sediment and sedimentation impacts;
  - Changes to existing hydrological and morphological regimes.

The likely significance of effects on any European site from the proposed Ayrshire SMP was assessed using the source-pathway-receptor model. The 'source' is defined as the individual element of the proposed works that has the potential to impact on a Natura site, its qualifying interests and its conservation objectives. The 'pathway' is defined as the means or route by which a source can affect the ecological receptor. The 'receptor' is defined as the Special Conservation Interest (SPAs), Qualifying Interest (SACs) or feature (Ramsar sites) for which conservation objectives have been set for the Natura sites being screened. Each element can exist independently, however an effect is created when there is a linkage between the source, pathway and receptor.

An assessment of the likely significant effects of the Ayrshire SMP policies on European sites has been described in Tables 4.5 to 4.21.

**Table 4.5** Assessment of Likely Significant Effects on Bankhead Moss SAC

Natura site	Bankhead Moss SAC (8195)			
Location	This site is located within 15km of policy units 6b1.2, 6b2.1, 6b2.2, 6c1.1, 6c2.1, 6c2.2, 6c2.3 and 6c2.4.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6b1.2 Largs and Fairlie	Hold the Line	Active raised bog	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6b2.1 Hunterston	Advance the Line	Active raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of advance the line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6b2.2 Hunterston to Farland Head	Hold the Line	Active raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of H has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c1.1 Farland Head to Ardrossan	Hold the Line	Active raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c2.1 Ardrossan to Stevenston	Hold the Line	Active raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.

6c2.2 Stevenston to Irvine Bay	Hold the Line	Active raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c2.3 Irvine Bay to Galies Burn	Hold the Line	Active raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c2.4 Galies Burn to Troon	Hold the Line	Active raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>9km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.

**Table 4.6** Assessment of Likely Significant Effects on Cockinhead Moss SAC

Natura site	Cockinhead Moss SAC (8226)			
Location	This site is located within 15km of policy units 6b1.2, 6b2.1, 6b2.2, 6c1.1, 6c2.1, 6c2.2, 6c2.3 and 6c2.4.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6b1.2 Largs and Fairlie	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
6b2.1 Hunterston	Advane the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Advane the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP.

				<b>No significant impacts</b> expected on designated habitats.
6b2.2 Hunterston to Farland Head	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
6c1.1 Farland Head to Ardrossan	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
6c2.1 Ardrossan to Stevenston	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
6c2.2 Stevenston to Irvine Bay	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
6c2.3 Irvine Bay to Galies Burn	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
6c2.4 Galies Burn to Troon	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy

				unit will be distant (>7km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
--	--	--	--	--

**Table 4.7** Assessment of Likely Significant Effects on Dykeneuk Moss SAC

Natura site		Dykeneuk Moss SAC (8247)		
Location		This site is located within 15km of policy units 6b1.2, 6b2.1, 6b2.2, 6c1.1, 6c2.1, 6c2.2, 6c2.3 and 6c2.4.		
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6b1.2 Largs and Fairlie	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6b2.1 Hunterston	Advane the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Advane the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6b2.2 Hunterston to Farland Head	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c1.1 Farland Head to Ardrossan	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c2.1 Ardrossan to Stevenston	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint



			evident.	of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c2.2 Stevenston to Irvine Bay	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c2.3 Irvine Bay to Galies Burn	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.
6c2.4 Galies Burn to Troon	Hold the Line	Active raised bog Degraded raised bog	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be distant (>5km) to the boundaries of this site; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitat.

**Table 4.8** Assessment of Likely Significant Effects on Flow of Dergoals SAC

Natura site	Flow of Dergoals SAC (8259)			
Location	This site is located within 15km of policy unit 6d2.1.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6d2.1 Currarie Port to Galloway Burn	No Active Intervention	Blanket bog Depressions on peat substrates	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP. Furthermore, any works undertaken in this policy unit will be distant (>13km) to the boundaries of this site, and no pathways to impact are evident. <b>No significant impacts</b> expected on designated habitat.

**Table 4.9** Assessment of Likely Significant Effects on Kilhern Moss SAC

Natura site	Kilhern Moss SAC (8281)			
Location	This site is located within 15km of policy unit 6d2.1.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6d2.1 Currarie Port to Galloway Burn	No Active Intervention	Blanket bog Depressions on peat substrates	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP. Furthermore, any works undertaken in this policy unit will be distant (>8km) to the boundaries of this site, and no pathways to impact are evident.  <b>No significant impacts</b> expected on designated habitat.

**Table 4.10** Assessment of Likely Significant Effects on Kirkcowan Flow SAC

Natura site	Kirkcowan Flow SAC (8285)			
Location	This site is located within 15km of policy unit 6d2.1.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6d2.1 Currarie Port to Galloway Burn	No Active Intervention	Blanket bog Depressions on peat substrates	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP. Furthermore, any works undertaken in this policy unit will be distant (>13km) to the boundaries of this site, and no pathways to impact are evident.  <b>No significant impacts</b> expected on designated habitat.

**Table 4.11** Assessment of Likely Significant Effects on Lendalfoot Hills Complex SAC

Natura site	Lendalfoot Hills Complex SAC (8288)			
Location	This SAC is located within 15km of policy units 6c5.1, 6c6.1, 6c6.2, 6c6.3, 6d1.1, 6d1.2 and 6c2.1.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6c5.1 Dunure to Turnberry	No Active Intervention	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on designated habitats.

		Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath		
6c6.1 Turnberry to north Girvan	No Active Intervention	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on designated habitats.
6c6.2 Girvan	Hold the Line	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath	No impacts are identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will not be located within or close to the boundaries of this site, therefore no impacts to designated habitats will occur as a result of the SMP.  <b>No significant impacts</b> expected on designated habitats.
6c6.3 South Girvan to Bennane Head	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas	Habitat may be lost during construction and/or in the footprint of shoreline defences.	The preferred policy of Hold the Line (Hold the Line/Managed Realignment in the medium to long term) has the potential to lead to a loss of designated habitat should defences be located in the footprint of the SAC.  <b>Potential for likely significant effects</b> on designated habitats.

		Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath		
6d1.1 Bennane Head to Ballantrae	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath	No impacts are identified as no pathways to impacts are evident.	The preferred policy of Hold the Line (Hold the Line/Managed Realignment in the medium to long term) has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will not be located within or close to the boundaries of this site, therefore no impacts to designated habitats will occur as a result of the SMP.  <b>No significant impacts</b> expected on designated habitats.
6d1.2 Ballantrae to Currarie Port	No Active Intervention	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on designated habitats.
6d2.1 Currarie Port to Galloway Burn	No Active Intervention	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas	None identified as a result of the preferred policy of No Active Intervention and no pathways to impact.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on designated habitats.

		Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath		
--	--	---	--	--

**Table 4.12** Assessment of Likely Significant Effects on Luce Bay and Sands SAC

Natura site	Luce Bay and Sands SAC (8641)			
Location	This site is located within 15km of policy unit 6d2.1.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6d2.1 Currarie Port to Galloway Burn	No Active Intervention	Coastal dune heathland Dune grassland Great crested newt Intertidal mudflats and sandflats, Reefs Shallow inlets and bays Shifting dunes Shifting dunes with marram Sub-tidal sandbanks.	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to the designated habitats will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on designated habitats.

**Table 4.13** Assessment of Likely Significant Effects on River Bladnoch SAC

Natura site	River Bladnoch SAC (8355)			
Location	This site is located within 15km of policy units 6c6.3, 6d1.1, 6d1.2 and 6d2.1.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6c6.3 South Girvan to Bennane Head	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Atlantic salmon	Potential for sediment mobilisation during construction of shoreline defences or alterations of the local sediment regime, which could negatively impact the species.	The majority of the River Bladnoch SAC is located a distance inland of this policy unit, though it meets the sea at Bladnoch, situated around several headlands to the southeast of this policy unit. The Ayrshire SMP defines subcells as areas within which various measures could be applied without affecting adjoining sections of the coast. As the River Bladnoch SAC is located a distance from subcell 6c6, no impacts on the Atlantic salmon will occur as a result of the SMP.

				<b>No significant impacts</b> expected on Atlantic salmon.
6d1.1 Bennane Head to Ballantrae	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Atlantic salmon	Potential for sediment mobilisation during construction of shoreline defences or alterations of the local sediment regime, which could negatively impact the species.	The majority of the River Bladnoch SAC is located a distance inland of this policy unit, though it meets the sea at Bladnoch, situated around several headlands to the southeast of this policy unit. The Ayrshire SMP defines subcells as areas within which various measures could be applied without affecting adjoining sections of the coast. As the River Bladnoch SAC is located a distance from subcell 6d1, no impacts on the Atlantic salmon will occur as a result of the SMP. <b>No significant impacts</b> expected on Atlantic salmon.
6d1.2 Ballantrae to Currarie Port	No Active Intervention	Atlantic salmon	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats or water quality supporting this species will be a result of natural change and not a result of the SMP. <b>No significant impacts</b> expected on Atlantic salmon.
6d2.1 Currarie Port to Galloway Burn Port	No Active Intervention	Atlantic salmon	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats or water quality supporting this species will be a result of natural change and not a result of the SMP. <b>No significant impacts</b> expected on Atlantic salmon.

**Table 4.14** Assessment of Likely Significant Effects on Tarbert Woods SAC

Natura site	Tarbert Woods SAC (8390)			
Location	This site is located within 15km of policy units A1.1 and A4.2.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
A1.1 Lochranza	Hold the Line	Western acidic oak woodland.	None identified as no pathways to impact are evident.	The preferred policy of Hold the Line has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this policy unit will be located at a distance of almost 15km from this site across open water; therefore no impacts to designated habitats will occur as a result of the SMP. <b>No significant impacts</b> expected on designated habitats.
A4.2 Machrie Bay to Lochranza	Short-term: Hold the Line Medium to long-term: Hold the	Western acidic oak woodland.	None identified as no pathways to impact are evident.	The preferred policy of Hold the Line (and medium to long-term Hold the Line/Managed Realignment) has the potential to lead to a loss of habitat should defences be located in the footprint of the designated site. Any works undertaken in this

	Line/Managed Realignment			<p>policy unit will be located at a distance of almost 15km from this site across open water; therefore no impacts to designated habitats will occur as a result of the SMP.</p> <p><b>No significant impacts</b> expected on designated habitats.</p>
--	--------------------------	--	--	--

**Table 4.15** Assessment of Likely Significant Effects on Ailsa Craig SPA

Natura site	Ailsa Craig SPA (8463)			
Location	This site comprises an island, located within 15km of policy units 6c6.1, 6c6.2, 6c6.3, 6d1.1 and 6d1.2.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6c6.3 South Girvan to Bennane Head	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Breeding gannet Breeding guillemot Breeding herring gull Breeding kittiwake Breeding lesser black-backed gull Breeding seabird assemblage	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	<p>The preferred policy of Hold the Line (and medium to long-term Hold the Line/Managed Realignment) has the potential to constrain natural processes. This may lead to a loss of intertidal habitat against the fixed sea defences. Although this policy unit is not located within the SPA site boundaries, it is possible that the designated bird species utilise intertidal habitat in this area for feeding. These seabird species roost on island cliffs, therefore their nesting activity will not be adversely impacted by any loss of intertidal habitat. Following the precautionary principle, this site is therefore screened in for further assessment.</p> <p><b>Potential for likely significant effects</b> on SPA bird species from coastal squeeze impacts.</p>
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	<p>The following appropriate mitigation measures will be applied, to ensure that significant noise and visual disturbance effects on qualifying birds can be avoided:</p> <ul style="list-style-type: none"> <li>- Any works planned during the breeding season will be avoided in areas known to be used by designated birds (from February to September). The use of this area by designated breeding birds will be identified at project level.</li> </ul> <p><b>No significant impacts</b> expected on breeding seabird species.</p>
6d1.1 Bennane Head to Ballantrae	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed	Breeding gannet Breeding guillemot Breeding herring gull Breeding kittiwake Breeding lesser	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or	<p>The preferred policy of Hold the Line (and medium to long-term Hold the Line/Managed Realignment) has the potential to constrain natural processes. This may lead to a loss of intertidal habitat against the fixed sea defences. Although this policy unit is not located within the SPA site boundaries,</p>

	Realignment	black-backed gull Breeding seabird assemblage.	maintenance works.	<p>it is possible that the designated bird species utilise intertidal habitat in this area for feeding. These seabird species roost on island cliffs, therefore their nesting activity will not be adversely impacted by any loss of intertidal habitat. Following the precautionary principle, this site is therefore screened in for further assessment.</p> <p><b>Potential for likely significant effects</b> on SPA bird species from coastal squeeze impacts.</p>
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	<p>The following appropriate mitigation measures will be applied, to ensure that significant noise and visual disturbance effects on qualifying birds can be avoided:</p> <ul style="list-style-type: none"> <li>- Any works planned during the breeding season will be avoided in areas known to be used by designated birds (from February to September). The use of this area by designated breeding birds will be identified at project level.</li> </ul> <p><b>No significant impacts</b> expected on breeding seabird species.</p>
6c6.1 Turnberry to north Girvan	No Active Intervention	Breeding gannet Breeding guillemot Breeding herring gull Breeding kittiwake Breeding lesser black-backed gull Breeding seabird assemblage	None identified as a result of the preferred policy of No Active Intervention.	<p>As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting these species will be a result of natural change and not a result of the SMP.</p> <p><b>No significant impacts</b> expected on breeding seabird species.</p>
6c6.2 Girvan	Hold the Line	Breeding gannet Breeding guillemot Breeding herring gull Breeding kittiwake Breeding lesser black-backed gull Breeding seabird assemblage	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	<p>The preferred policy of Hold the Line has the potential to constrain natural processes. This may lead to a loss of intertidal habitat against the fixed sea defences. Although this policy unit is not located within the SPA site boundaries, it is possible that the designated bird species utilise intertidal habitat in this area for feeding. These seabird species roost on island cliffs, therefore their nesting activity will not be adversely impacted by any loss of intertidal habitat. Following the precautionary principle, this site is therefore screened in for further assessment.</p> <p><b>Potential for likely significant effects</b> on SPA bird species</p>



				from coastal squeeze impacts.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	<p>The following appropriate mitigation measures will be applied, to ensure that significant noise and visual disturbance effects on qualifying birds can be avoided:</p> <ul style="list-style-type: none"> <li>- Any works planned during the breeding season will be avoided in areas known to be used by designated birds (from February to September). The use of this area by designated breeding birds will be identified at project level.</li> </ul> <p><b>No significant impacts</b> expected on breeding seabird species.</p>
6d1.2 Ballantrae to Currarie Port	No Active Intervention	Breeding gannet Breeding guillemot Breeding herring gull Breeding kittiwake Breeding lesser black-backed gull Breeding seabird assemblage	None identified as a result of the preferred policy of No Active Intervention.	<p>As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting these species will be a result of natural change and not a result of the SMP.</p> <p><b>No significant impacts</b> expected on breeding seabird species.</p>

**Table 4.16** Assessment of Likely Significant Effects on Arran Moors SPA

Natura site	Arran Moors SPA (8614)			
Location	This site covers much of the southern area of the Isle of Arran, and part of the northeast, in policy units A1.2, A1.3, A1.4, A3.2, A4.1, and A4.2.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
A1.2 Lochranza to Sannox	No Active Intervention	Breeding hen harrier <i>Circus cyaneus</i>	None identified as a result of the preferred policy of No Active Intervention.	<p>As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting this species will be a result of natural change and not a result of the SMP.</p> <p><b>No significant impacts</b> expected on hen harrier.</p>
A1.3 Sannox to Brodick	Short-term: Hold the Line Medium to long-	Breeding hen harrier <i>Circus cyaneus</i>	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal	Hen harrier use moorland and rough grassland habitats for roosting and foraging, and will therefore not be adversely affected by any loss of intertidal habitat.

	term: Hold the Line/Managed Realignment		squeeze), and during construction and/or maintenance works.	<p>No construction or maintenance work will take place within the SPA boundaries affecting the habitats used by this species.</p> <p><b>No significant effects</b> expected on hen harrier.</p>
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	<p>Hen harrier do not use intertidal habitats for roosting or foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences.</p> <p>The core foraging distance for this species is 2km (SNH 2013). Furthermore, a review by Natural Research Ltd for SNH (2007) indicates a maximum disturbance distance for the hen harrier for construction activity to be 1km. As this policy unit is located &gt;2km from the designated site boundary, at its nearest point, no disturbance is expected.</p> <p><b>No significant effects</b> expected on hen harrier.</p>
A1.4 Brodick	Hold the Line	Breeding hen harrier <i>Circus cyaneus</i>	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	<p>Hen harrier use moorland and rough grassland habitats for roosting and foraging, and will therefore not be adversely affected by any loss of intertidal habitat.</p> <p>No construction or maintenance work will take place within the SPA boundaries affecting the habitats used by this species.</p> <p><b>No significant effects</b> expected on hen harrier.</p>
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	<p>Hen harrier do not use intertidal habitats for roosting or foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences.</p> <p>The core foraging distance for this species is 2km (SNH 2013). Furthermore, a review by Natural research Ltd for SNH (2007) indicates a maximum disturbance distance for the hen harrier for construction activity to be 1km. As this policy unit is located &gt;2km from the designated site boundary, at its nearest point, no disturbance is expected.</p> <p><b>No significant effects</b> expected on hen harrier.</p>
A3.2 Largymore to Drumadoon Point	No Active Intervention	Breeding hen harrier <i>Circus cyaneus</i>	None identified as a result of the preferred policy of No Active Intervention.	<p>As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting this species will be a result of natural change and not a result of the SMP.</p>

				<b>No significant impacts</b> expected on hen harrier.
A4.1 Drumadoon Point to Tormore	No Active Intervention	Breeding hen harrier <i>Circus cyaneus</i>	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting this species will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on hen harrier.
A4.2 Machrie Bay to Lochranza	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Breeding hen harrier <i>Circus cyaneus</i>	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	Hen harrier use moorland and rough grassland habitats for roosting and foraging, and will therefore not be adversely affected by any loss of intertidal habitat. No construction or maintenance work will take place within the SPA boundaries affecting the habitats used by this species.  <b>No significant effects</b> expected on hen harrier.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	Hen harrier do not use intertidal habitats for roosting or foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences. The core foraging distance for this species is 2km (SNH 2013). Furthermore, a review by Natural research Ltd for SNH (2007) indicates a maximum disturbance distance for the hen harrier for construction activity to be 1km. As this policy unit is located >2km from the designated site boundary, at its nearest point, no disturbance is expected.  <b>No significant effects</b> expected on hen harrier.

**Table 4.17** Assessment of Likely Significant Effects on Glen App and Galloway Moors SPA

Natura site	Glen App and Galloway Moors SPA (8615)			
Location	A part of this site is located within 15km of policy units 6d2.1, 6d1.2 and 6d1.1.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6d2.1 Currarie Port to Galloway Burn Port	No Active Intervention	Breeding hen harrier <i>Circus cyaneus</i>	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting this species will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on hen harrier.
6d1.2 Ballantrae to Currarie	No Active Intervention	Breeding hen harrier <i>Circus cyaneus</i>	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting this species will be a result of natural change and not a result of the SMP.

				<b>No significant impacts</b> expected on hen harrier.
6d1.1 Bennane Head to Ballantrae	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Breeding hen harrier <i>Circus cyaneus</i>	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	Hen harrier use moorland and rough grassland habitats for roosting and foraging, and will therefore not be adversely affected by any loss of intertidal habitat.  <b>No significant effects</b> expected on hen harrier.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	Hen harrier do not use intertidal habitats for roosting or foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences. The core foraging distance for this species is 2km (SNH 2013). Furthermore, a review by Natural research Ltd for SNH (2007) indicates a maximum disturbance distance for the hen harrier for construction activity to be 1km. As this policy unit is located >2km from the designated site boundary, at its nearest point, no disturbance is expected.  <b>No significant effects</b> expected on hen harrier.

**Table 4.18** Assessment of Likely Significant Effects on Inner Clyde SPA and Ramsar site

Natura site	Inner Clyde SPA (8615) and Ramsar site (8429)			
Location	This site is located in the Clyde estuary, to the north of policy unit 6b1.1 and 6b1.2.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6b1.1 Skelmorlie to Largs	Hold the Line	Non-breeding redshank	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	The preferred policy of Hold the Line has the potential to constrain natural processes. This may lead to a loss of intertidal habitat against the fixed sea defences. Although the Inner Clyde SPA is >12km from this policy unit, it is possible that Redshank populations of the SPA utilise intertidal habitat in this area for feeding. A previous wader and wildfowl survey of Portencross Coast SSSI by SNH in 2006 (now covered, in part, by Southannan Sands SSSI), and located to the south of Largs, indicated that Redshank populations were using this area. Following the precautionary principle, this site is therefore screened in for further assessment.  <b>Potential for likely significant effects</b> on Redshank from coastal squeeze impacts.
			Noise and visual disturbance may occur during	The following appropriate mitigation measures will be applied, to ensure that significant noise and visual

			construction and/or maintenance activities, affecting Redshank distribution.	disturbance effects on Redshank can be avoided:  - Any works planned during the winter will be avoided in areas known to be used by redshank (from November to March). The use of this area by Redshank will be identified at project level.  <b>No significant impacts</b> expected on redshank.
6b1.2 Largs and Fairlie	Hold the Line	Non-breeding redshank	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	The preferred policy of Hold the Line has the potential to constrain natural processes. This may lead to a loss of intertidal habitat against the fixed sea defences. Although the Inner Clyde SPA is >15km from this policy unit, it is possible that Redshank populations of the SPA utilise intertidal habitat in this area for feeding. A previous wader and wildfowl survey of Portencross Coast SSSI by SNH in 2006 (now covered, in part, by Southannan Sands SSSI), and located to the south of Largs, indicated that Redshank populations were using this area. Following the precautionary principle, this site is therefore screened in for further assessment.  <b>Potential for likely significant effects</b> on Redshank from coastal squeeze impacts.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting Redshank distribution.	The following appropriate mitigation measures will be applied, to ensure that significant noise and visual disturbance effects on Redshank can be avoided:  - Any works planned during the winter will be avoided in areas known to be used by redshank (from November to March). The use of this area by Redshank will be identified at project level.  <b>No significant impacts</b> expected on redshank.

**Table 4.19** Assessment of Likely Significant Effects on Kintyre Goose Roosts SPA

Table 4.15 Assessment of Likely Significant Effects on Kintyre Goose Roosts SPA				
Natura site	Kintyre Goose Roosts SPA (8518)			
Location	This site comprises a series of lochs, grassland and heath areas on the Kintyre peninsula, within 15km of policy units A1.1, A3.2, A4.1 and A4.2.			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
A1.1 Lochranza	Hold the Line	Non-breeding	Habitat may be lost as a result	Greenland white-fronted geese use moorland and grassland

		Greenland white-fronted goose	of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	habitats for foraging, and will therefore not be adversely affected by any loss of intertidal habitat.  <b>No significant effects</b> expected on Greenland white-fronted goose.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution.	Greenland white-fronted geese do not use intertidal habitats for foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences. Furthermore, the core range for this species is 5-8km (SNH 2013); as this policy unit is located >8km from the designated site boundary, at its nearest point, no disturbance is expected.  <b>No significant effects</b> expected on Greenland white-fronted goose.
A3.2 Largymore to Drumadoon Point	No Active Intervention	Non-breeding Greenland white-fronted goose	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting this species will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on Greenland white-fronted goose.
A4.1 Drumadoon Point to Tormore	No Active Intervention	Non-breeding Greenland white-fronted goose	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting this species will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on Greenland white-fronted goose.
A4.2 Machrie Bay to Lochranza	Short-term: Hold the Line Medium to long-term: Hold the Line/Managed Realignment	Non-breeding Greenland white-fronted goose	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	Greenland white-fronted geese use moorland and grassland habitats for foraging, and will therefore not be adversely affected by any loss of intertidal habitat.  <b>No significant effects</b> expected on Greenland white-fronted goose.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution.	Greenland white-fronted geese do not use intertidal habitats for foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences. Furthermore, the core range for this species is 5-8km (SNH 2013); as this policy unit is located >8km from the designated site boundary, at its nearest point, no disturbance is

				expected.
				<b>No significant effects</b> expected on Greenland white-fronted goose.

**Table 4.20** Assessment of Likely Significant Effects on Loch of Inch and Torrs Warren SPA

Natura site	Loch of Inch and Torrs Warren SPA (8533)			
Location	This site is located within 15km of policy unit 6d2.1			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6d2.1 Currarie Port to Galloway Burn	No Active Intervention	Non-breeding Greenland white-fronted goose Non-breeding hen harrier	None identified as a result of the preferred policy of No Active Intervention.	As the preferred policy in this policy unit is for No Active Intervention, any changes to habitats supporting these species will be a result of natural change and not a result of the SMP.  <b>No significant impacts</b> expected on Greenland white-fronted goose or hen harrier.

**Table 4.21** Assessment of Likely Significant Effects on Renfrewshire Heights SPA

Natura site	Renfrewshire Heights SPA (8667)			
Location	This site is located inland from policy unit 6b1.1. and 6b1.2			
Policy unit	Preferred policy	Qualifying interest(s)	Potential impacts	Likelihood of significant effect
6b1.1 Skelmorlie to Largs	Hold the Line	Breeding hen harrier <i>Circus cyaneus</i>	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	Hen harrier use moorland and rough grassland habitats for roosting and foraging, and will therefore not be adversely affected by any loss of intertidal habitat.  <b>No significant effects</b> expected on hen harrier.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	Hen harrier do not use intertidal habitats for roosting or foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences. The core foraging distance for this species is 2km (SNH 2013). Furthermore, a review by Natural Research Ltd for SNH (2007) indicates a maximum disturbance distance for the hen harrier for construction activity to be 1km. As this policy unit is located approximately 2km from the designated site boundary, at its nearest point, no disturbance is expected.  <b>No significant effects</b> expected on hen harrier.

6b1.2 Largs and Fairlie	Hold the Line	Breeding hen harrier <i>Circus cyaneus</i>	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	Hen harrier use moorland and rough grassland habitats for roosting and foraging, and will therefore not be adversely affected by any loss of intertidal habitat.  <b>No significant effects</b> expected on hen harrier.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	Hen harrier do not use intertidal habitats for roosting or foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences. The core foraging distance for this species is 2km (SNH 2013). Furthermore, a review by Natural Research Ltd for SNH (2007) indicates a maximum disturbance distance for the hen harrier for construction activity to be 1km. As this policy unit is located >2km from the designated site boundary, at its nearest point, no disturbance is expected.  <b>No significant effects</b> expected on hen harrier.
6b2.1 Hunterston	Advance the Line	Breeding hen harrier <i>Circus cyaneus</i>	Habitat may be lost as a result of sea level rise against fixed hard defences (coastal squeeze), and during construction and/or maintenance works.	Hen harrier use cropped and rough grassland habitats for roosting and foraging, and will therefore not be adversely affected by any loss of intertidal habitat.  <b>No significant effects</b> expected on hen harrier.
			Noise and visual disturbance may occur during construction and/or maintenance activities, affecting bird distribution and nesting.	Hen harrier do not use intertidal habitats for roosting or foraging and are therefore not expected to be disturbed by construction and/or maintenance of any defences. The core foraging distance for this species is 2km (SNH 2013). Furthermore, a review by Natural Research Ltd for SNH (2007) indicates a maximum disturbance distance for the hen harrier for construction activity to be 1km. As this policy unit is located >2km from the designated site boundary, at its nearest point, no disturbance is expected.  <b>No significant effects</b> expected on hen harrier.



### 4.3.2 Summary of impacts

A summary of the potential Likely Significant Effects from implementation of the Ayrshire SMP upon the qualifying interests of the Natura 2000 sites identified is presented in Table 4.22.

**Table 4.22** Summary of potential Likely Significant effects on Qualifying Interests of Natura 2000 sites.

Natura site	Qualifying interest	Likely significant Effects
Bankhead Moss SAC	Active raised bog	No
Cockinhead Moss SAC	Active raised bog	No
	Degraded raised bog	No
Dykeneuk Moss SAC	Active raised bog	No
	Degraded raised bog	No
Flow of Dergoals SAC	Blanket bog	No
	Depressions on peat substrates	No
Kilhern Moss SAC	Blanket bog	No
	Depressions on peat substrates	No
Kirkcowan Flow SAC	Blanket bog	No
	Depressions on peat substrates	No
Lendalfoot Hills Complex SAC	Base-rich fens	Yes
	Dry heaths	Yes
	Grasslands on soils rich in heavy metals	Yes
	Species-rich grassland with mat-grass in upland areas	Yes
	Very wet mires often identified by an unstable 'quaking' surface	Yes
	Wet heathland with cross-leaved heath	Yes
Luce Bay and Sands SAC	Coastal dune heathland	No
	Dune grassland	No
	Great crested newt	No
	Intertidal mudflats and sandflats	No
	Reefs	No
	Shallow inlets and bays	No
	Shifting dunes	No
	Shifting dunes with marram	No
	Sub-tidal sandbanks	No
River Bladnoch SAC	Atlantic salmon	No
Tarbert Woods SAC	Western acidic oak woodland	No
Ailsa Craig SPA	Breeding gannet	Yes
	Breeding guillemot	Yes
	Breeding herring gull	Yes
	Breeding kittiwake	Yes
	Breeding lesser black-backed gull	Yes
	Breeding seabird assemblage	Yes
Arran Moors SPA	Breeding hen harrier	No
Glen App and Galloway Moors SPA	Breeding hen harrier	No
Inner Clyde SPA and Ramsar site	Non-breeding redshank	Yes
Kintyre Goose Roosts SPA	Non-breeding Greenland white-fronted goose	No
Loch of Inch and Torrs Warren SPA	Non-breeding Greenland white-fronted goose	No
	Non-breeding hen harrier.	No
	Sand dunes (Ramsar feature)	No
Renfrewshire Heights SPA	Breeding hen harrier	No

## 4.4 In-combination with other plans and projects

### 4.4.1 Assessment of in-combination effects

This assessment aims to identify any possible significant in-combination or cumulative effects of the proposed Ayrshire SMP with other Plans and Projects on the identified European sites. A series of individually modest impacts may, in combination, produce a significant impact. An assessment of the potential in-combination effects of other plans and projects is presented in Table 4.23.

**Table 4.23** Potential cumulative and in-combination effects of other plans, programmes and projects.

Plan/Project	Key Policies/Objectives/Issues	Assessment of In-Combination Effects
<b>National Plans and Programmes</b>		
National Planning Framework 3 (June 2014)	The National Planning Framework (NPF) sets the context for development planning in Scotland and provides a framework for the spatial development of Scotland as a whole.	The HRA for the NPF assessed the potential for significant effects on Natura sites from national developments. It concludes that there are no adverse effects on Natura site integrity either alone, or in combination. Consequently, no significant in-combination effects with the Ayrshire SMP are anticipated.
Draft Climate Change Plan (2017-2032) and Draft Scottish Energy Strategy	The aim of the Climate Change Plan is to reduce GHG emissions.	The climate change plan and energy strategy encourage renewable energy projects, which have the potential to result in in-combination effects. However, any renewable energy project will require planning permission, and both North and South Ayrshire LDPs will not permit development proposals that would adversely protect Natura sites. Consequently, no significant in-combination effects with the Ayrshire SMP are anticipated.
<b>Regional and Local Plans and Programmes</b>		
South Ayrshire Local Development Plan (LDP)	The South Ayrshire LDP outlines a long-term vision for South Ayrshire. It contains a spatial strategy, detailing the policies and proposals for development and use of land. HRA carried out for the plan found that a small number of policies could have a likely significant effect upon Natura sites: Wave energy (all Natura sites within the zone of influence), Outdoor public access and core paths (Glen App and Galloway Moors SAC), and Renewable energy (all Natura sites within the zone of influence).	Appropriate assessment of these policies introduced measures to mitigate for any likely significant effect. The 'Outdoor public access and core paths' policy will not result in in-combination effects as no pathway for potential impact on Glen App and Galloway Moors SAC was found resulting from the Ayrshire SMP and, furthermore, mitigation given in the South Ayrshire LDP HRA states that "Development proposals will not be permitted where they would adversely affect the integrity of the Glen App and Galloway Moors SPA". Mitigation is provided in the LDP to ensure no significant effects on Natura sites from policies on renewable energy and wind energy - "Development proposals will not be permitted where they would adversely affect the integrity of a Natura 2000 site". Consequently, no significant in-combination effects with the Ayrshire SMP are anticipated.

Plan/Project	Key Policies/Objectives/Issues	Assessment of In-Combination Effects
South Ayrshire Local Development Plan 2 (in development 2017)	The Ayrshire LDP assessed above is under review and a new Plan is in development.	At this strategic stage it is anticipated that the Ayrshire SMP policies can be undertaken without significant in-combination effects with the Ayrshire LDP2. However, further examination should be undertaken at the project level when the revised LDP and an accompanying HRA are available.
North Ayrshire Local Development Plan (Adopted May 2014)	Four Natura sites assessed for potential impacts of the Ayrshire SMP are located within the area covered by the North Ayrshire LDP: Renfrewshire Heights SAC, Dykeneuk Moss SAC, Cockinhead Moss SAC and Bankhead Moss SAC.	HRA of the North Ayrshire LDP concludes that no likely significant effects are anticipated on Natura sites. The Policy ENV9 states that new development should not result in any unacceptable direct, indirect or cumulative impacts on nature conservation interests, particularly those with statutory protection such as Natura sites. Where multiple policies apply, primacy will be given to Policy ENV9. Consequently, no significant in-combination effects with the Ayrshire SMP are anticipated.
Ayrshire and Arran Tourism Strategy (2012-2017)	This strategy, developed by the Ayrshire Economic Partnership, aims to strengthen and develop the tourism industry in Ayrshire. One of 8 offers developed 'Activities & Natural Environment' recognises the potential to develop infrastructure and facilities in areas such as walking, cycling, horse-riding and watersports. The strategy for sailing includes encouragement of development of dockside and shoreline facilities at major locations. The strategy for islands includes encouragement of Arran island and, potentially, Ailsa Craig as a destination.	Any strategies outlined in the Tourism Strategy that have potential to impacts upon Natura sites will be subject to HRA. Furthermore, regarding any potential for dockside development, it is outlined in both the South and North Ayrshire LDPs that development proposals should not result in any adverse effects on Natura sites. Consequently, no significant in-combination effects with the Ayrshire SMP are anticipated.
Ayrshire Local Biodiversity Action Plan: Marine and Coastal	The Action Plan identifies priority habitats and species which require attention. Objectives of the Action Plan for coastal and marine habitats aim to maintain and enhance the quality and extent of coastal and marine habitats such as estuaries, sediment and rocky shores, shingle and dunes.	The actions and objectives proposed by the Ayrshire LBAP are intended to protect and enhance the coastal and marine ecosystems of Ayrshire. This includes the Natura 2000 sites that are subject to this HRA. Consequently, no significant in-combination effects with the Ayrshire SMP are anticipated.
Ayrshire Fishery Management Plan (2009-2015) and updates (2012)	This management plan aims to protect and conserve fisheries and the habitats that they depend upon in Ayrshire.	The priority measures proposed by the Ayrshire FMP are intended to improve rivers, fish populations and the fisheries they support. No significant in-combination effects with the Ayrshire SMP are anticipated.

## 4.5 Conclusion of the Screening Assessment

This Screening for Appropriate Assessment was completed in accordance with the approach set out in Section 2 of this report. The potential of the Ayrshire SMP has been considered in the context of the Natura sites identified within the project's zone of influence, their Qualifying Interests and Special Conservation Interests, and any conservation objectives which have been set.

From the findings of the Screening exercise, it is concluded that the proposed Ayrshire SMP:

- Is not located within, or directly connected with, or necessary to the management of any Natura site;
- has potential to result in Likely Significant Effects on the integrity of Ailsa Craig SPA. The preferred policy of Hold the Line in Policy Units 6c6.3, 6d1.1 and 6d6.2 has the potential to lead to coastal squeeze of intertidal habitats, which may be used by the breeding seabirds that are Special Conservation Interests of this site;
- has potential to result in Likely Significant Effects on the integrity of Inner Clyde SPA and Ramsar site. The preferred policy of Hold the Line in Policy Units 6b1.1 and 6b1.2 has the potential to lead to coastal squeeze of intertidal habitats, which may be used by the Redshank population that is a Special Conservation Interest of this site;
- has potential to result in Likely Significant Effects on the integrity of Lendalfoot Hills Complex SAC. The preferred policy of Hold the Line (short term) and Hold the Line/Managed Realignment (medium to long term) in Policy Unit 6c6.3, has the potential to result in direct impacts on the Qualifying Interests of this site should shoreline management measures encroach on the designated site boundaries;
- Is not anticipated to have Likely Significant Effects on the Qualifying Interests/Special Conservation Interests of any other Natura site within the project's zone of influence.

Therefore, an Appropriate Assessment of the anticipated Likely Significant Effects of the SMP is required.

## 5. APPROPRIATE ASSESSMENT

---

### 5.1 Assessment of adverse effects on the integrity of Natura sites

Three Natura sites were screened in as having potential for Likely Significant Effects on site integrity resulting from the preferred policies of the Ayrshire SMP. Site integrity is defined by SNH (2015) as ‘the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of population of the species for which it is classified’. An assessment of whether the preferred shoreline management policies identified as having a Likely Significant Effect in the screening process are anticipated to have an adverse effect on the site integrity of screened in Natura sites is described Table 5.1.

**Table 5.1** Assessment of adverse effects on the integrity of screened in Natura sites

SMP Policy	Likely impacts	Qualifying interest	Conservation objectives	Implications for qualifying interest of the Natura site in light of its conservation objectives	Mitigation required	Adverse effect on site integrity
<b>Ailsa Craig SPA</b>						
6c6.3 HTL 6d1.1 HTL 6d6.2 HTL	Potential for a loss of intertidal habitat, used by qualifying birds for feeding, through coastal squeeze, due to rising sea levels, against fixed defences.	Breeding gannet Breeding guillemot Breeding herring gull Breeding kittiwake Breeding lesser black-backed gull Breeding seabird assemblage	To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long term: <ul style="list-style-type: none"> <li>• <i>Population of the species as a viable component of the site</i></li> <li>• <i>Distribution of the species within site</i></li> <li>• <b><i>Distribution and extent of habitats supporting the species</i></b></li> <li>• <i>Structure, function and supporting processes of habitats supporting the species</i></li> <li>• <i>No significant disturbance of the species</i></li> </ul>	The preferred policy of HTL in 6d1.1 and 6d6.2 has the potential to lead to a loss of intertidal habitats, through coastal squeeze against fixed defences. There is a tenuous link between the loss of intertidal habitat in these coastal areas and likely significant effects on the seabird species of Ailsa Craig SPA. Any intertidal habitat that may be lost will be on the coastline of the mainland, and not within the boundaries of the offshore island of Ailsa Craig SPA. However, as it is possible that seabird species of this SPA use the intertidal zone of the nearby mainland for feeding, the precautionary principle dictates that an assessment be made of likely impacts. Should protected birds of Ailsa Craig lose feeding habitat in these policy units, this could negatively impact upon the conservation objective to ensure the long-term 'distribution and extent of habitats supporting the species'.	Following the precautionary principle, the following mitigation is proposed:  Bird surveys should be undertaken to assess the use of the intertidal zone in these policy units by the designated seabirds of Ailsa Craig SPA. These surveys will provide information as to whether the designated seabirds are using these areas for feeding, and to what degree. Should any of the designated species be using these areas, and the potential for likely significant effects on site integrity exist, any proposed hard coastal defences should be designed in such a way as to limit any potential for	No

					<p>coastal squeeze. This could involve setting hard defences further back from the coastline.</p> <p>A more detailed, project level HRA should be undertaken in consultation with SNH once details of the nature and scale of shoreline management measures are known, to more precisely describe the potential impacts of the project and outline any project-level mitigation required. The project-level HRA should conclude 'no adverse effects' upon the designated seabird populations of Ailsa Craig SPA.</p>	
<b>Inner Clyde SPA and Ramsar site</b>						
6b1.1 HTL 6b1.2 HTL	Potential for a loss of intertidal habitat, used by qualifying birds for feeding, through coastal squeeze, due to rising sea levels, against fixed defences.	Non-breeding redshank	<p>To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and</p> <p>To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• <i>Population of the species as a</i></li> </ul>	The preferred policy of HTL in 6b1.1 and 6b1.2 has the potential to lead to a loss of intertidal habitats, through coastal squeeze against fixed defences. There is a tenuous link between the loss of intertidal habitat in these coastal areas, and likely significant effects on the Redshank population of the Inner Clyde SPA. Any intertidal	<p>Following the precautionary principle, the following mitigation is proposed:</p> <p>Bird surveys should be undertaken to assess the use of the intertidal zone in these policy units by</p>	No

			<p><i>viable component of the site</i></p> <ul style="list-style-type: none"> <li>• <i>Distribution of the species within site</i></li> <li>• <b><i>Distribution and extent of habitats supporting the species</i></b></li> <li>• <i>Structure, function and supporting processes of habitats supporting the species</i></li> <li>• <i>No significant disturbance of the species</i></li> </ul>	<p>habitat that may be lost will be on the coastline &gt;12km south, and not within the boundaries of the Inner Clyde SPA. However, as it is possible that the Redshank population of this SPA uses the intertidal zone of nearby coastline for feeding, the precautionary principle dictates that an assessment be made of likely impacts. Should Redshank from the Inner Clyde SPA lose feeding habitat in these policy units, this could negatively impact upon the conservation objective to ensure the long-term 'distribution and extent of habitats supporting the species'.</p>	<p>the designated Redshank population of the Inner Clyde SPA. These surveys will provide information as to whether designated Redshank are using these areas for feeding, and to what degree. Should Redshank from the Inner Clyde SPA be using these areas, and the potential for likely significant effects on site integrity exist, any proposed hard coastal defences should be designed in such a way as to limit any potential for coastal squeeze. This could involve setting hard defences further back from the coastline. A more detailed, project level HRA should be undertaken in consultation with SNH once details of the nature and scale of shoreline management measures are known, to more precisely</p>	
--	--	--	---	---	---	--



					describe the potential impacts of the project and outline any project-level mitigation required. The project-level HRA should conclude 'no adverse effects' upon the Redshank population of the Inner Clyde SPA.	
<b>Lendalfoot Hills Complex SAC</b>						
6c6.3 HTL (short term) HTL/MR (medium to long term)	Potential for direct impacts on designated habitats should shoreline management measures encroach on designated site boundaries. The majority of this site is upland, well set back from the coastline. A small section of the site occurs close to the coastline within policy unit 6c6.3.	Base-rich fens Dry heaths Grasslands on soils rich in heavy metals Species-rich grassland with mat-grass in upland areas Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath	To avoid deterioration of the qualifying habitats, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and  To ensure for the qualifying habitats that the following are maintained in the long term: <ul style="list-style-type: none"> <li>• <b>Extent of the habitat on site</b></li> <li>• <i>Distribution of the habitat within site</i></li> <li>• <i>Structure and function of the habitat</i></li> <li>• <i>Processes supporting the habitat</i></li> <li>• <i>Distribution of typical species of the habitat</i></li> <li>• <i>Viability of typical species as components of the habitat</i></li> <li>• <b>No significant disturbance of typical species of the habitat</b></li> </ul>	The preferred policy of HTL (HTL/MR in the medium to long term) has the potential to lead to a loss of designated habitat during construction and/or in the footprint of shoreline defences, should defences be located in the footprint of the SAC. The site boundary of Lendalfoot Hills Complex SAC occurs in close proximity to the coastline north of Lendalfoot. However, there is no potential for direct impacts on this site, designated for upland and grassland habitats, as the A77 road separates the coastline from the site, and the footprint of shoreline management defences will not be located within the SAC. Therefore there is no potential for impacts on site integrity arising from the policies of the Ayrshire SMP. Should Managed Realignment be necessary in policy unit 6c6.3 in the medium/long-term, this could lead to knock-on effects if it becomes	Careful planning of any future A77 road relocation scheme by Transport Scotland should ensure that no significant effects occur on this site.	No

				necessary for the A77 road to be relocated. This could negatively impact upon the conservation objectives of any designated habitat present at that location, including 'extent of the habitat on site' and 'no significant disturbance of typical species of the habitat'.		
--	--	--	--	---	--	--

## 6. CONCLUSIONS

---

The potential for likely significant effects was recognised for three Natura sites: Ailsa Craig SPA, Inner Clyde SPA and Ramsar site, and Lendalfoot Hills Complex SAC. An Appropriate Assessment was therefore undertaken to assess whether the preferred shoreline management policies were anticipated to have an adverse effect on the integrity of these sites, in view of their conservation objectives. The Appropriate Assessment concluded that there is no potential for impacts on the site integrity of Lendalfoot Hills Complex SAC arising from the policies of the Ayrshire SMP, as the footprint of shoreline management defences will not be located within the SAC boundaries. In the case of Ailsa Craig SPA and Inner Clyde SPA, further information needs to be gathered through surveys at the project stage to allow an informed assessment of the use of the intertidal zone within certain policy units by the designated species. Should this information demonstrate that potential for likely significant effects on site integrity exists; any proposed hard coastal defences should be designed in such a way as to limit any potential for coastal squeeze.

On the basis of the proposed high level policies of the SMP, and information on Natura sites in the zone of influence, it has been concluded that, provided the proposed mitigation measures are implemented, the Ayrshire SMP will not give rise to any adverse effects on the integrity of any Natura site. Further assessment should be undertaken at project level, when detailed information on shoreline management measures are available.

## 7. REFERENCES

---

Ayrshire Biodiversity Group (2001). Ayrshire Local Biodiversity Action Plan. Available at [http://www.ayrshire-jsu.gov.uk/biodiversity\\_action\\_plan.html](http://www.ayrshire-jsu.gov.uk/biodiversity_action_plan.html)

Ayrshire Economic Partnership (2011). Ayrshire & Arran 2012-2017 Tourism Strategy. Available at [https://www.south-ayrshire.gov.uk/documents/sac\\_tourism\\_strat.pdf](https://www.south-ayrshire.gov.uk/documents/sac_tourism_strat.pdf)

Communication on the precautionary principle, COM (2000)1, final.

David Tyldesley and Associates (2015) Habitats Regulations Appraisal of Plans: Guidance for plan-making bodies in Scotland. Edinburgh. Scottish Natural Heritage. Available at: <http://www.snh.gov.uk/docs/A1500925.pdf>

European Commission (2000) Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. Luxembourg. Office for Official Publications of the European Communities. Available at: [http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision\\_of\\_art6\\_en.pdf](http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf)

European Commission (2001) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Oxford. Oxford Brookes University. Available at: [http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura\\_2000\\_assess\\_en.pdf](http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf)

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC: Clarification of the concepts of: Alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission. Available at: [http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance\\_art6\\_4\\_en.pdf](http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance_art6_4_en.pdf)

European Commission (2013) Interpretation Manual of European Union Habitats

European Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

European Council Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

National Planning Framework 3 (2014). Available at <http://www.gov.scot/Publications/2014/06/3539>

North Ayrshire Council (2014). Local Development Plan. Available at <https://www.north-ayrshire.gov.uk/planning-and-building-standards/ldp/local-development-plan.aspx>

South Ayrshire Council. South Ayrshire Local Development Plan. Available at [www.south-ayrshire.gov.uk/planning](http://www.south-ayrshire.gov.uk/planning)

South Ayrshire Council (2017). South Ayrshire Local Development Plan 2. Available at [www.south-ayrshire.gov.uk/planning](http://www.south-ayrshire.gov.uk/planning)