Arnside and Silverdale AONB Development Plan Document

Habitats Regulations Assessment

Screening Report

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ABBREVIATIONS

AONB	Area of Outstanding Natural Beauty
CCW	Countryside Council for Wales
cSAC	Candidate Special Area of Conservation
DPD	Development Plan Document
EC	European Community
FCS	Favourable Conservation Status
HRA	Habitats Regulations Assessment
IROPI	Imperative Reasons of Overriding Public Interest
NPPF	National Planning Policy Framework
NRW	Natural Resources Wales
pSPA	Potential Special Protection Area
SAC	Special Area of Conservation
SCI	Site of Community Importance
SNCO	Statutory Nature Conservation
SPA	Special Protection Area
SuDs	Sustainable drainage

1 INTRODUCTION AND PURPOSE OF THIS REPORT

1.1 Introduction

This Screening Report has been prepared by Arcadis (formerly Hyder Consulting (UK) Limited) on behalf of South Lakeland District Council and Lancaster City Council as part of the statutory Habitats Regulations Assessment (HRA) of the Arnside and Silverdale Area of Outstanding Natural Beauty (AONB) Development Plan Document (DPD).

The DPD will focus on delivering sustainable development in the AONB for a 15 year period 2016 to 2031 and will include:

- policies to guide decisions on planning applications;
- proposals for the development of housing, employment and other land uses; and
- policies that seek the conservation and enhancement of the natural and built environment including landscape quality and character.

The framework of policies and proposals contained within the DPD will seek to regulate and control the development and use of land and provide the basis for consistent and transparent decision making on individual planning applications.

The purpose of the AONB designation will be at the heart of the DPD; the document will reflect the national importance of the AONB. The DPD will take into account the key management objectives contained within the AONB Management Plan which aim to realise the vision and provide direction for positive action. These are grouped under the following three themes:

- an outstanding landscape, rich in wildlife and cultural heritage;
- a thriving sustainable economy and vibrant communities; and
- a strong connection between people and the landscape.

The DPD will be prepared in accordance with the procedures set out in the Town and Country Planning (Local Planning) (England) Regulations.

1.2 Purpose of this Report

This report is the first stage in the HRA process, commonly referred to as Screening. It identifies whether or not the Arnside and Silverdale AONB DPD is likely to result in significant effects upon a European Site either alone or in-combination with other plans or projects and subsequently whether or not an Appropriate Assessment will be required. If Appropriate Assessment is required this document will outline its proposed scope.

1.3 Background to Habitats Regulations Assessment

Under Article 6 of the EC Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora), an assessment is required where a plan or project may give rise to significant effects upon a Natura 2000 site (also known as a ‘European site’).

Natura 2000 is a network of areas designated to conserve natural habitats and species that are rare, endangered, vulnerable or endemic within the EC. This includes SACs, SCIs and candidate SACs designated (or adopted by the European Commission but not yet formally

designated) under the Habitats Directive for their habitats and/or species of European importance; and SPAs classified under Directive 2009/147/EC on the Conservation of Wild Birds (the codified version of Directive 79/409/EEC as amended) for rare, vulnerable and regularly-occurring migratory bird species and internationally important wetlands.

In addition, NPPF paragraph 118 states that pSPAs and sites designated under the 1971 Ramsar Convention for their internationally important wetlands (Ramsar sites) and (in England) proposed Ramsar sites, are treated as European sites and considered in this process.

The requirements of the Habitats Directive are transposed into UK law by means of the Conservation of Habitats and Species Regulations 2010 (as amended), which are also referred to as the Habitats Regulations. The process of assessing the implications of development on European Sites is therefore known as HRA.

Paragraph 3, Article 6 of the Habitats Directive states that:

'Any plan or project not directly connected with or necessary to the management of the 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 the light of the conclusions of the assessment of the implications for the site and subject to paragraph 4 (see below), the competent national authority shall agree to the plan or project only 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'.

Paragraph 4, Article 6 of the Habitats Directive states that:

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

The overarching aim of HRA is to determine, in view of a site's conservation objectives and qualifying interests, whether a plan, either in isolation and/or in combination with other plans or projects, would have a significant adverse effect on a European site. If the Screening (the first stage of the process, see section 3.1 of this report for details) concludes that significant adverse effects are likely, then Appropriate Assessment must be undertaken to determine whether there will be adverse effects on site integrity.

1.4 Legislation and Guidance

This HRA Screening report has drawn upon the following legislation and guidance:

- Conservation of Habitats and Species Regulations 2010 (as amended);
- European Commission, Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC;
- European Commission, Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC;
- NPPF 2012 (Section 11:Conserving and Enhancing the Natural Environment);
- Department for Communities and Local Government (2006) Planning for the Protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents;

- DTA Publications Limited The Habitats Regulations Assessment Handbook (accessed online June 2016).

2 INTRODUCTION TO THE DEVELOPMENT PLAN DOCUMENT

The Arnside and Silverdale AONB is located on the boundary of Lancashire and Cumbria, bounded to the west by Morecambe Bay and to the east by the A6. The AONB is characterised by a mosaic of low limestone hills, woodland, wetland, pastures, limestone pavements, intertidal flats, coastal scenery and distinctive settlements.

The DPD for the AONB focuses on the conservation and enhancement of the AONB and will ensure consistent policies and decisions across the whole of the AONB in respect of the conservation significances and the response to development pressures. The DPD is designed to deliver development to meet local needs in a way that reflects the purpose of the designation and that conserves and enhances the landscape character of the AONB.

The AONB DPD is one of a number of plans affecting the AONB. Other plans which must be read alongside the AONB DPD in order to understand the full range of requirements to which new development within the AONB would be subject include the Lancaster District Local Plan, the South Lakeland Local Plan and the Arnside and Silverdale AONB Management Plan.

2.1 Vision and Objectives

The overall Vision for the AONB is set out in the adopted Management Plan. The Vision for the AONB DPD is designed to reflect and supplement the adopted Management Plan Vision, the two relevant Local Plans, national policy, the evidence gathered and wider context. The supplementary vision for the AONB DPD is as follows:

Within the Arnside & Silverdale AONB, housing, employment, services, infrastructure and other development is managed and delivered to contribute towards meeting the needs of the communities of the AONB in a way that:

(I) Creates vibrant, diverse and sustainable communities with a strong sense of place;

(II) Maintains a thriving local economy; and

Protects, conserves and enhances the special qualities of the AONB, including landscape character and visual amenity, wildlife, geology, heritage and settlements character.

In order to achieve the Vision for the AONB DPD, seven objectives have been produced as follows:

Objective 1: To protect, conserve and enhance the special qualities of the Arnside & Silverdale AONB, including landscape character and visual amenity, wildlife, geology, heritage and settlement character; natural, historical and landscape qualities of the AONB.

Objective 2: To ensure that all development is appropriate and sustainable in its location and design, is of high quality and avoids adverse impact on the special qualities of the AONB.

Objective 3: To ensure that planning policy is shaped by effective community engagement.

Objective 4: To provide sufficient supply and mix of high quality housing to contribute to meeting the needs of the AONB's communities, with an emphasis on affordable housing and without adverse impact on the landscape character and Special Qualities of the AONB.

Objective 5: To support rural employment and livelihoods, and sustainable tourism.

Objective 6: To provide the necessary services and infrastructure to support both existing and new development.

Objective 7: To support the development of a safe and sustainable transport network, including paths and cycleways, to improve connectivity, reduce the need to travel and encourage sustainable forms of transport.

2.2 Policies within the DPD

The policies within the DPD are listed below:

Overall Strategy

Policy AS01 – Development Strategy

Policy AS02 – Landscape

Policy AS03 – General Requirements

Policy Issues

Policy AS04 – Housing Provision

Policy AS05 – Natural Environment

Policy AS06 – Public Open Space and Recreation

Policy AS07 – Key Settlement Landscapes

Policy AS08 – Historic Environment

Policy AS09 – Design

Policy AS10 – Economic Development and Community Facilities

Policy AS11 – Infrastructure for New Development

Policy AS12 – Camping, Caravan and Tourist Accommodation

Policy AS13 – Water Quality, Sewerage and Sustainable Drainage

Policy AS14 – Energy and Communications

Policy AS15 – Advertising and Signage

Proposed Development Allocations - Housing

Policy AS16 – Proposed Housing Allocations

Policy AS17 – Proposed Mixed Use Allocations

Policy AS18 – A6 Land off Queen's Drive, Arnside

Policy AS19 – A8/A9 Land on Hollins Lane, Arnside

Policy AS20 – A11 Land at Briery Bank, Arnside

Policy AS21 – B108 Land at Church Street, Beetham

Policy AS22 – B112 Land at Stanley Street, Beetham

Policy AS23 – S56 Land at Whinney Fold, Silverdale

Policy AS24 – W88 Land North West of Sand Lane, Warton

Policy AS25 – W130 Land North of 17 Main Street, Warton

Proposed Development Allocations – Mixed Use

Policy AS26 – A25/A26/A27 Station House and Yard, Arnside

Policy AS27 – B35/B38/B81/B125 Land at Sandside Road and Quarry Lane, Sandside

Policy AS28 – S70 Land at the Railway Goods Yard, Silverdale

3 THE HABITATS REGULATIONS ASSESSMENT PROCESS

This section provides an outline of the stages involved in HRA and the specific methods that have been used in preparing this report.

3.1 Stages in HRA

The requirements of the Habitats Directive comprise four distinct stages:

1 **Screening** is the process which initially identifies the likely impacts upon a European site of a project or plan, either alone or in-combination with other projects or plans, and considers whether these impacts may have a significant effect on the integrity of the site's qualifying habitats and/or species. It is important to note that the burden of evidence is to show, on the basis of objective information, that there will be no significant effect; if the effect may be significant, or are not known, that would trigger the need for an Appropriate Assessment. There is European Court of Justice case law to the effect that unless the likelihood of a significant effect can be ruled out on the basis of objective information, and adopting the precautionary principle, then an Appropriate Assessment must be made.

2 **Appropriate Assessment** is the detailed consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's conservation objectives and its structure and function. This is to determine whether or not there will be adverse effects on the integrity of the site. This stage also includes the development of mitigation measures to avoid or reduce any possible impacts.

3 **Assessment of alternative solutions** is the process which examines alternative ways of achieving the objectives of the project or plan that would avoid adverse impacts on the integrity of the European site, should avoidance or mitigation measures be unable to cancel out adverse effects.

4 **Assessment where no alternative solutions exist and where adverse impacts remain.** At Stage 4, an assessment is made with regard to whether or not the development is necessary for Imperative Reasons of Overriding Public Interest (IROPI). If it is, this stage also involves detailed assessment of the compensatory measures needed to protect and maintain the overall coherence of the Natura 2000 network.

3.2 Approach to Screening

This Screening Report takes into account the requirements of the Habitats Regulations and relevant guidance produced by David Tyldesley Associates1 .

The following stages have been completed:

- Identification of all European sites potentially affected (including those outside of the AONB DPD area);
- A review of each European site, including the features for which the site is designated, the Conservation Objectives, and an understanding of the current conservation status and the vulnerability of the individual features to threats;

[1] DTA Publications Limited The Habitats Regulations Assessment Handbook (2013).

- A review of the policies and proposals which have the potential to affect the European sites, and whether the sites are vulnerable to these effects (this has included a categorisation of the potential effects of the Policy, in line with current guidance);
- A consideration of any impacts in-combination with other plans or projects;

Where potential effects are identified, avoidance or mitigation measures have been considered in order to avoid significant effects.

3.3 Consideration of Effects

3.3.1 Definition of Significant Effects

A critical part of the HRA Screening process is determining whether or not the proposals are *likely* to have a significant effect on European Sites and, therefore, if they will require an Appropriate Assessment. Judgements regarding significance should be made in relation to the qualifying interests for which the site is of European importance and also its conservation objectives.

In considering whether the plan is likely to have a significant effect on a European site, a precautionary approach must be adopted:

- The plan should be considered 'likely' to have such an effect if the plan making authority is unable (on the basis of objective information) to exclude the possibility that the plan could have significant effects on any European site, either alone or in combination with other plans or projects.

- An effect will be 'significant' in this context if it could undermine the site's conservation objectives. The assessment of that risk must be made in the light of factors such as the characteristics and specific environmental conditions of the European site in question.

3.3.2 Categorising effects

All elements of the DPD, including all of the options, policies and proposals, have been screened for likely significant effects on European sites and categorised in accordance with The Habitats Regulations Assessment Handbook, DTA Publications Limited[1].

The effects associated with the DPD can be allocated into one of 12 categories according to the ways in which the option, policy or proposal could affect the European site. These are described in Table 3-1 below.

Table 3-1 Screening Assessment Categories

Category	Description
Category A: General statements of policy/general aspirations.	Policies which are no more than general statements of policy or general political aspirations should be screened out because they cannot have a significant effect on a European site.
Category B: Policies listing general criteria for testing the acceptability/sustainability of proposals.	These general policies cannot have any effect on a European site and should be screened out.

Category	Description
Category C: Proposal referred to but not proposed by the plan.	Screen out any references to specific proposals for projects, such as those which are identified, for example, in higher policy frameworks such as National Policy Statements, relating perhaps to nationally significant infrastructure projects. These will be assessed by the Secretary of State. A useful 'test' as to whether a project should be screened out in this step is to ask the question: '*Is the project provided for/proposed as part of another plan or programme and would it be likely to proceed under the other plan or programme irrespective of whether this subject plan is adopted with or without reference to it?'* If the answer is 'yes' it will normally be appropriate to screen the project out in this step.
Category D: Environmental protection/site safeguarding policies	These are policies, the obvious purpose of which is to protect the natural environment, including biodiversity, or to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any adverse effect on a European site. They can be screened out because the implementation of the policies is likely to protect rather than adversely affect European sites and not undermine their conservation objectives.
Category E: Policies or proposals that steer change in such a way as to protect European sites from adverse effects.	These types of policies or proposals will have the effect of steering change away from European sites whose qualifying features may be affected by the change and they can therefore be screened out.
Category F: Policies or proposals that cannot lead to development or other change.	Policies that do not themselves lead to development or other change, for example, because they relate to design or other qualitative criteria for development, such as materials for new development. They do not trigger any development or other changes that could affect a European site and can be screened out.
Category G: Policies or proposals that could not have any conceivable adverse effect on a site.	Policies which make provision for change but which could have no conceivable effect on a European site, because there is no causal connection or link between them and the qualifying features of any European site, and can therefore be screened out.
Category H: Policies or proposals the (actual or theoretical) effects of which cannot undermine the conservation objectives (either alone or in combination with other aspects of this or other plans or projects).	Policies or proposals which make provision for change but which could have no significant effect on a European site, either alone or in combination with other aspects of the same plan, or in combination with other plans or projects, can be screened out. These may include cases where there are some potential effects which (and theoretically even in combination) would plainly be insignificant and could not undermine the conservation objectives.
Category I: Policies or proposals with a likely significant effect on a site alone.	Policies or proposals which are likely to have a significant effect on a European site alone, should be screened in.
Category J: Policies or proposals not likely to	These aspects of the plan would have some effect on a site, but the effect would not be likely to be a significant effect; so they must be checked for in-combination (cumulative) effects. They will then be re-categorised as

Category	Description
have a significant effect alone.	either Category K (no significant effect in combination) or Category L (likely to have a significant effect in-combination), as explained below.
Categories K and L: Policies or proposals not likely to have a significant effect either alone or in-combination (K) or likely to have a significant effect in-combination (L) after the in-combination test.	Where an aspect of a plan could have some effect on the qualifying feature(s) of a European site, but the effects of that aspect of the plan alone would not be significant, the effects of that aspect of the plan will need to be checked in-combination firstly, with other effects of the same plan, and then with the effects of other plans and projects.

3.4 Mitigation Measures

In preparing this report, consideration has been given to potential avoidance and mitigation measures which would serve to avoid adverse effects on the integrity of European sites, for example the provision of specific clauses within the policies that may prevent effects occurring.

3.5 In-Combination Effects

As outlined in Section 3.1, it is necessary for HRA to consider in-combination effects with other plans and projects.

Where an aspect of a plan could have some effect on the qualifying feature(s) of a European site, but the effects of that aspect of the plan alone would not be significant, the effects of that aspect of the plan will need to be checked in-combination firstly, with other effects of the same plan, and then with the effects of other plans and projects.

It will be necessary to look for plans or projects at the following stages:

a) Applications lodged but not yet determined.

b) Projects subject to periodic review e.g. annual licences, during the time that their renewal is under consideration.

c) Refusals subject to appeal procedures and not yet determined.

d) Projects authorised but not yet started.

e) Projects started but not yet completed.

f) Known projects that do not require external authorisation.

g) Proposals in adopted plans.

h) Proposals in finalised draft plans formally published or submitted for final consultation, examination or adoption.

Consideration of in-combination effects is included in Section 7.4.

4 POTENTIAL IMPACT PATHWAYS

During the HRA Screening stage, the likely nature, magnitude, frequency, timing, duration, location and spatial extent of changes resulting from implementation of the DPD will be assessed. As a part of this, mechanisms through which the DPD could directly or indirectly impact upon European sites will be considered.

The main impact pathways have been summarised below.

4.1 Physical loss of habitat/damage to habitat

Construction works could result in the direct destruction of habitats, leading to a net loss in the extent of habitat area. None of the proposed development sites are within a designated site so direct habitat loss is not anticipated.

Physical damage could occur as a result of:

- Siting of plant or machinery or trampling by construction workers.
- Hydrological changes to sensitive wetland habitats for example through increasing or decreasing runoff or percolation; or increasing or decreasing water abstraction; or interruption to/alteration of hydrological flows through, for example, construction of foundations.
- Smothering of wetland/marine habitats caused by increases in suspended sediment and re-deposition of that sediment on sensitive habitats.

4.2 Non-physical disturbance

Non-physical disturbance could occur as a result of:

- Construction/operation activities and effects, such as visual, noise, vibration and lighting to species and their prey species.
- Fragmentation effects which cause a barrier to the movement and dispersal of species, thereby limiting access to foraging opportunities and breeding sites. This could occur as a result of construction/operation activities and effects, including visual, noise, vibration and lighting, as well as through inappropriate siting of developments.

4.3 Recreational pressure

Increased recreational pressure occurs as a result of additional people in an area and the consequent increases in people visiting the European sites and causing disturbance to the qualifying features associated with the European site. A Recreational Disturbance Study carried out by Footprint Ecology for the Morecambe Bay Partnership (Liley, Panter and Roberts, 2015) identified that visitors to Morecambe Bay who were on a day-trip/short visit from home travelled a median distance of 3.454 km to get to the designated site. For the purposes of this assessment, potential for recreational pressure is considered for proposed development sites which are within 3.454 km of European sites vulnerable to recreational pressure, and which would result in an increase in people visiting the European sites for recreation. This includes housing sites and car parks. Business sites are excluded as it is likely that people associated with business developments would only go for a short walk at lunchtime during the week, and this is unlikely to result in a significant increase in recreational pressure.

Not all European sites are vulnerable to recreational pressure. Morecambe Bay SPA and Ramsar is known to be vulnerable to recreational pressure, as evidenced by the above-mentioned study. The Standard Natura 2000 Data Form also identifies that Morecambe Bay SAC is vulnerable to recreational pressure.

The above-mentioned Recreational Disturbance Study (Liley, Panter and Roberts, 2015) identified that numbers of birds were low at Arnside during the survey carried out during the breeding season and key species recorded were lapwing (*Vanellus vanellus)*, oystercatcher (*Haematopus ostralegus)* and redshank (*Tringa tetanus)*.

4.4 Contamination

Contamination could occur as a result of:

- Increases in suspended sediments resulting in ecological effects, including the direct loss of habitats caused by re-deposition of suspended sediment, and the consequential health or mortality effects on prey species, particularly invertebrates associated with the intertidal mudflats.
- Potential pollution incidents.
- Disturbance of contaminated sediments during construction.
- Changes in air quality as a result of atmospheric pollution and consequential impacts on habitats. Any construction sites or routes used by construction vehicles within 50m of a European site[2]; and any European site within 200m of the main access roads used by HGVs accessing the site[3] could lead to significant effects and would require assessment.

4.5 Biological disturbance

Biological disturbance could occur as a result of:

- The introduction of invasive species onto nearby European sites.
- Mortality of birds as a result of collision with construction infrastructure.
- Loss of fitness due to noise and vibration during construction and the consequential health or mortality effects on prey species.
- Loss of fitness and, potentially, mortality due to contamination.

4.6 Functionally Linked Land

Concern has been expressed that the proposed development sites may affect functionally linked land that supports the qualifying bird species of a number of European designated sites (Morecambe Bay SPA and Ramsar and Leighton Moss SPA and Ramsar). Arcadis undertook a

[2] Institute of Air Quality Management (IAQM), Guidance on the assessment of dust from demolition and construction (2014)

[3] Design Manual for Roads and Bridges, Volume 11, Section 3, Part 1, HA 207/07 – Air Quality, Highways Agency, 2007.

separate study of the proposed development sites to determine whether they may affect functionally linked land, and whether there is the potential for significant effects on European designated sites, either alone or in-combination. This study is included in Appendix B.

The aims of the study were to:

- Determine whether the sites identified in the DPD directly affect functionally linked land in relation to the qualifying bird species associated with the European designated sites within the zone of influence of the plan, and assess whether development on the allocated sites has the potential to give rise to significant effects on a European designated site;

- Consider whether development of the allocated sites has the potential to generate recreational pressure on the functionally linked land, and whether this could give rise to significant effects on a European designated site.

The study concluded that none of the sites are likely to affect functionally linked land alone or in-combination, such that there would be a significant effect on a European designated site.

5 IDENTIFYING THE EUROPEAN SITES

5.1 Approach to Identifying Sites

Within the Arnside & Silverdale AONB, six European sites are present, which together cover 49% of the total AONB area. These sites are:

- Leighton Moss SPA
- Leighton Moss Ramsar
- Morecambe Bay SAC
- Morecambe Bay SPA
- Morecambe Bay Ramsar
- Morecambe Bay Pavements SAC

Only the Leighton Moss sites lie entirely within the AONB. Both the Leighton Moss SPA and Ramsar site cover exactly the same area, comprising almost 320ha of reedbed and wetland. Both designations are for the site's bird interest, though the latter has slightly wider criteria with additional species listed as qualifying features.

The extent of the three Morecambe Bay sites also overlap and all cover the entire intertidal area of the AONB. Land within the AONB represents a relatively small proportion of these sites, however, with each extending considerably beyond the boundaries of the AONB around the Bay. The SAC is the most extensive of the three sites as it encompasses the entire Bay between Walney Island and Fleetwood as well as the Duddon Estuary. It is designated for its important shallow sea, intertidal and coastal habitats and species. The SPA and Ramsar site cover only the intertidal sandflats and saltmarshes of Morecambe Bay. They are designated on account of their highly significant bird interest.

Morecambe Bay Pavements SAC comprises a number of whole or part Sites of Special Scientific Interest (SSSIs), eight of which are within the AONB and a further four are located outside. These areas are designated for important habitats and species associated with their limestone features.

Effects of the DPD on European sites located up to 20 km from the AONB boundary have also been considered. This is considered an appropriate distance to allow impacts on mobile species, such as birds, or sites which have a hydrological link to the AONB, to be considered. Sites within 20 km of the AONB boundary include:

- Witherslack Mosses SAC (0.7 km from the AONB boundary).
- River Kent SAC (5.6 km from the AONB boundary).
- Roudsea Wood and Mosses SAC (8 km from the AONB boundary).
- Subberthwaite Blawith and Torver Low Commons SAC (17.3ha from the AONB boundary).
- Duddon Mosses SAC (17.8 km from the AONB boundary).
- Calf Hill and Cragg Woods SAC (10.3 km from the AONB boundary).

- Yewbarrow Woods SAC (11.3 km from the AONB boundary).
- Bowland Fells SPA (10.2 km from the AONB boundary).

Witherslack Mosses SAC, Roudsea Wood and Mosses SAC, Subberthwaite Blawith and Torver Low Commons SAC, Duddon Mosses SAC, Calf Hill and Cragg Woods SAC and Yewbarrow Woods SAC are all designated on account of their habitats, which comprise predominantly bog and woodland habitats, with none of them supporting mobile species as a qualifying feature. The AONB is outside of the catchment relevant to the designated sites and on the opposite side of the river Kent estuary, so hydrological impacts are not anticipated. Air quality impacts are also not anticipated over such distances. Given the nature of the qualifying features, the lack of hydrological connectivity and the considerable distance of these sites from the AONB, there are no identified 'cause-effect' pathways between the impacts potentially arising from the DPD and the known environmental conditions at the designated sites which could lead to an impact on the integrity of the designated sites. As such, these sites have been screened out of this assessment.

The River Kent SAC is designated on account of its habitats, the presence of white-clawed crayfish (*Austropotamobius pallipes*), freshwater pearl mussel (*Margaritifera margaritifera*) and bullhead (*Cottus gobio*). The AONB is located downstream of the river Kent, the DPD would not affect the river Kent and hydrological impacts are therefore not anticipated. The species which form the qualifying features of the River Kent SAC are non-migratory and not particularly wide ranging. As such, there are no identified impact pathways between the impacts potentially arising from the DPD and the known environmental conditions at the designated site which could lead to an impact on the integrity of the designated site. The River Kent SAC is therefore screened out of this assessment.

Bowland Fells SPA is designated on account of its breeding hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*) and lesser black-backed gull (*Larus fuscus*). Hen harriers hunt over rough grassland and marshy grassland habitats as well as moorland, up to 7 km from the nest site[4] Merlin typically stay within 1 km of the nest location[4]. Given the distance of the designated site from the AONB, it is unlikely that there would be any impacts on these species whilst breeding within the SPA as a result of the DPD. Although lesser black-backed gull forage more widely, the birds associated with Bowland Fells SPA are unlikely to range a sufficient distance from the designated site during the breeding season for there to be any significant impacts on them as a result of the proposals within the DPD. As such, there are no identified impact pathways between the impacts potentially arising from the DPD and the known environmental conditions at the designated site which could lead to an impact on the integrity of the designated site. Bowland Fells SPA is therefore screened out of this assessment.

The following sites are considered further in this assessment:

- Leighton Moss SPA
- Leighton Moss Ramsar
- Morecambe Bay SAC
- Morecambe Bay SPA

[4] Raptors: a field guide to survey and monitoring (Jon Harden, Humphrey Crick, Chris Wernham, Helen Rilen, Brian Etheridge, Des Thompson, Scottish Natural Heritage, 2006)

- Morecambe Bay Ramsar
- Morecambe Bay Pavements SAC

Details of the European sites mentioned above are provided in Appendix A.

5.2 Conservation Objectives and Site Integrity

Under Regulation 35(3) of the Conservation of Habitats and Species Regulations 2010 (as amended) the appropriate statutory nature conservation body (in this case Natural England) has a duty to communicate the conservation objectives for a European site to the relevant/competent authority responsible for that site. The information provided under Regulation 35 must also include advice on any operations which may cause deterioration of the features for which the site is designated.

The conservation objectives for a European site are intended to represent the aims of the Habitats and Birds Directives in relation to that site. To this end, habitats and species of European Community importance should be maintained or restored to FCS, as defined in Article 1 of the Habitats Directive below:

The conservation status of a natural habitat will be taken as 'favourable' when:

- Its natural range and the area it covers within that range are stable or increasing;
- The specific structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future; and
- Conservation status of typical species is favourable as defined in Article 1(i).

The conservation status of a species will be taken as favourable when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Guidance from the European Commission[5] indicates that the Habitats Directive intends FCS to be applied at the level of an individual site, as well as to habitats and species across their European range. Therefore, in order to properly express the aims of the Habitats Directive for an individual site, the conservation objectives for a site are essentially to maintain (or restore) the habitats and species of the site at (or to) FCS.

Details from site condition assessments have been obtained from the Natural England website and have been used to provide additional detail on the Conservation Objectives for each of the European Sites. This is provided in Appendix A.

The vulnerabilities of each European site have also been obtained and are also presented in Appendix A. This information will be used to determine whether the integrity of each site would be adversely affected by the DPD.

[5] Managing Natura 2000 sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC. (European Commission 2000)

6 IMPACTS RELEVANT TO THE EUROPEAN DESIGNATED SITES

Not all of the potential impacts described in Section 4 are relevant to the European designated sites scoped into the assessment identified in Section 5. For example, disturbance effects are not considered relevant to SACs designated only for their habitats, as these features are not vulnerable to non-physical disturbance.

Based on our knowledge of the designated sites, Table 6-1 below identifies which impacts are relevant to the European designated sites.

Table 6-1 Vulnerabilities of European sites to potential impacts

	European site			
Potential impact	**Leighton Moss SPA & Ramsar**	**Morecambe Bay SAC**	**Morecambe Bay SPA & Ramsar**	**Morecambe Bay Pavements SAC**
Physical loss of habitat/damage to habitat	✓	✓	✓	✓
Non-physical disturbance (excluding recreational pressure)	✓	x	✓	x
Recreational pressure	x	✓	✓	x
Contamination	✓	✓	✓	✓
Biological disturbance	✓	✓	✓	✓
Effects on functionally linked land	✓	x	✓	x

7 SCREENING

7.1 Policies

An initial screening of the policies included within the AONB DPD was undertaken to screen out to eliminate those policies from the assessment which very clearly would not affect European sites in order to focus on those policies where there was potential for effects or uncertainty about potential effects. These policies were generally those that could not lead to 'direct development', or could have no impact pathway to any of the European sites identified. The policies that were identified as having potential impacts on the European sites or those policies for which impacts were uncertain, were then assessed in more detail.

The initial screening of the AONB DPD is presented in Table 7-1, below.

The policies within the sub-headings were initially examined to determine their need for further detailed screening. The notations below were used to indicate if further detailed assessment screening is required:

✓ Further detailed screening is required to determine the nature of effects on the European site.

X No further screening is required as no effects are predicted on the European site.

Table 7-1 Initial Screening of the DPD Policies

European Sites	Overall Strategy	Policy Issues	Proposed Development Allocations - Housing	Proposed Development Allocations – Mixed Use
Morecambe Bay SPA	X	X	✓	✓
Morecambe Bay Ramsar	X	X	✓	✓
Morecambe Bay SAC	X	X	✓	✓
Leighton Moss SPA	X	X	✓	✓
Leighton Moss Ramsar	X	X	✓	✓
Morecambe Bay Pavements SAC	X	X	X	X
Policies Screened In			**All**	**All**
Policies Screened out	**All**	**All**		

Following the initial screening of the AONB DPD, policies contained within the overall strategy and policy issues sub-headings in the plan can be screened out completely from further assessment, on the basis that no identifiable impact pathway exists linking the policies with the European Sites and/or because there will be no foreseeable adverse impact on European sites through Policy implementation. Table 7-2, below, provides a justification for the policies screened out of further assessment, and the assessment categories set out within Table 7-1, above.

Table 7-2 Policies screened out of further assessment

Policy	Justification	Assessment Category
Overall Strategy Policies: AS01 –Development Strategy AS02 – Landscape AS03 – General Requirements	The three policies included within the overall strategy set out the strategy for the AONB and how the approach to development must ensure the primary purpose of conserving and enhancing the natural beauty of the AONB are at the heart of planning. None of the policies will lead directly to change and cannot have a significant effect on a European site	A
Policy Issues AS04 – Housing AS09 – Design AS11 –Infrastructure for New Development AS15 – Advertising and Signage	These policies all relate to design or outline qualitative criteria for development and do not in themselves lead to change that could adversely affect European sites.	F
AS06 – Public Open Space and Recreation AS10 – Economic Development and Community Facilities AS14 – Energy and Communications	Whilst these policies provide for change which could have some effect upon the European sites, the policies include clauses which ensure that biodiversity assets or the Special Qualities of the AONB (including internationally important species) are not compromised as a result of the development, thereby steering change away from European sites whose qualifying features may be affected.	E
AS05 – Natural Environment AS07 – Key Settlement Landscapes AS08 Historic Environment AS13 Water Quality, Sewerage and Sustainable Drainage	Policy AS05 provides for the protection and enhancement of the AONB's biodiversity. Under this policy, developments that would be likely to compromise the extent, value or integrity of a European Site would not be permitted, therefore implementation of this policy will protect the natural environment. Policy AS07 provides for the protection of key settlement landscapes which are private areas of particular importance to the character of settlements within the AONB. Any development proposals that could compromise their integrity would not be permitted. Policy AS08 provides for protection of historic environments, implementation of which would not have any adverse effects on a European Site.	D

	Policy AS13 provides for the protection of existing sewerage infrastructure and ensure new developments reflect the special needs of the AONB in relation to likely impacts and potential benefits for water quality, sewerage infrastructure and sustainable drainage. Implementation of this policy will act to protect nearby European sites from increased water pollution.	
AS12 Camping, Caravan and Tourist Accommodation	Whilst policy AS12 does allow for change, the scale of any developments under the policy are small and would be associated with existing sites, either allowing for small-scale extension or conversion to alternative, lower impact visitor accommodation. Impacts from such development would be insignificant and would not undermine the conservation objectives of European sites.	H

All of the policies related to development allocations for both housing and mixed-use (refer to Section 2.2) have been screened into more detailed assessment due to their potential for impacts upon European sites as a result of the development proposals. None of the policies are anticipated to lead to significant effects alone; however, in combination effects of all of the policies together or in combination with other plans or projects cannot be screened out without further assessment. In order to determine the likelihood of significant effects upon European sites as a result of the policies relating to development, the individual sites have been assessed. Where this assessment demonstrates that no significant effects would be anticipated on European sites, the corresponding policy can then also be screened out.

7.2 Development Allocations

Each proposed development site has been checked for the likelihood of it leading to a significant effect on a European site, firstly alone (Section 7.3, Table 7.4), then, if not alone, in combination with other elements of the same plan, or other plans or projects (Section 7.4).

Table 7-4 below presents the results of the Screening assessment of proposed development sites alone.

The potential effects of the DPD on the European sites have been allocated into one of 12 categories as described in Table 3-1. Only four of the 12 categories are relevant to this assessment and for ease, they have been colour-coded, as shown in Table 7-3.

Table 7-3 Screening Assessment Categories colour codes

	Sites which have the potential to significantly effect a European designated site alone (Category I)
	Sites which could potentially effect a European designated site, but the effects are not likely to be significant alone, so they must be checked for in-combination effects (Category J).
	Sites which are within the 20 km zone of influence, where a potential impact pathway exists, however the effects cannot undermine the conservation objectives either alone or in combination with other aspects of this or other plans or proposals, and where the implementation of standard best practice working methods would eliminate any adverse impacts (Category H)
	Sites which are within the 20 km zone of influence but where no impact pathway has been identified (Category G)

Where there is the potential for more than one effect on a European designated site, the colour code for the most severe effect has been used, but the other potential effects have been described in the ‘justification’ column. Table 7-3 is ordered with the most severe effect at the top (red).

7.3 Consideration of sites alone

Table 7-4 below considers all of the proposed development sites alone.

Table 7-4 Screening Assessment

Information about the proposed development sites			Distance from European sites (km unless otherwise stated)				Screened 'in' or 'out' or 'check for likely significant effect in-combination	Category	Justification
Site reference number	Site name	Description and history	Morecambe Bay Pavements SAC	Morecambe Bay SAC	Morecambe Bay SPA and Ramsar	Leighton Moss SPA and Ramsar			
A6	Land off Queens Drive, Arnside	Best use: housing. Dwellings potential: 8 Size: 0.10ha	1.8	0.5	0.5	3.8	Check for likely significant effect in-combination	J	There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. Given the small scale of the potential development, this is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
A8/A9	Land on Hollins Lane, Arnside	Best Use: Housing Dwellings potential: 8 Size: 0.12ha	1.4	0.7	3	3.5	Check for likely significant effect in-combination	J	There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
A11	Land at Briery Bank, Arnside	Best use: Housing on part of the site Dwellings potential: 14 Size: 0.29ha	1.8	0.6	0.6	3.7	Check for likely significant effect in-combination	J	There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
A25, A26, A27	Station House and Yard, Arnside	Best use: Car parking, employment, community/visitor facilities and rail access. Possible residential or live-work Size: 1.03ha	1.7	Adjacent	Adjacent	3.9	Check for likely significant effect in-combination	J	Development of this site has the potential to affect Morecambe Bay SAC, SPA and Ramsar. There is potential for: physical damage to habitat, contamination and biological disturbance. Given there is no overlap between the designated site boundaries and the proposed development site effects are unlikely to be significant alone, but need to be reviewed for likely significant effects in-combination. It is anticipated that the implementation of standard best practice approaches such as pollution prevention measures and appropriate timing of the works, would eliminate any adverse impacts altogether. Appropriate ecological surveys will be required to assess the potential impacts upon the designated sites and therefore any potentially significant effects would require appropriate mitigation and / or compensation to enable planning permission to be granted. There is also the potential for the car park to lead to increased recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. However, the site is currently utilised as a car park for access to the coast and the development would formalise the parking and would be aimed at rail users. Therefore, development of this site is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
S56	Land at Whinney Fold, Silverdale	Best use: Housing on part of the site Dwelling potential: 6 Size: 0.30ha	1.6	0.1	0.1	1.6	Check for likely significant effect in-combination	J	The proposed development site is located on the edge of Silverdale, with existing development between it and Morecambe Bay SAC, SPA and Ramsar There do not appear to be any hydrological links between the proposed development site and the European sites. Disturbance to birds within the SPA and Ramsar is therefore considered unlikely. There is the potential for air quality effects on habitats associated with the SAC. However,

Information about the proposed development sites			Distance from European sites (km unless otherwise stated)				Screened 'in' or 'out' or 'check for likely significant effect in-combination	Category	Justification
Site reference number	Site name	Description and history	Morecambe Bay Pavements SAC	Morecambe Bay SAC	Morecambe Bay SPA and Ramsar	Leighton Moss SPA and Ramsar			
									given the proposed development site's small size and location, adverse effects are considered unlikely. Furthermore, it is anticipated that the implementation of standard best practice approaches such as pollution prevention measures, would eliminate any adverse impacts altogether. There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
S70	Railway Goods Yard, Silverdale	Best use: Employment and car parking Size: 0.36ha If developed for car park, possible scope for up to 20 spaces, which could benefit visitors/tourists, but mostly rail users.	0.4	1.7	1.7	0.3	Check for likely significant effect in-combination	J	If the tourism and car park option was taken forward, there is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination. Myers Dike is adjacent to the site and it connects with Leighton Moss SPA and Ramsar. There is therefore the potential for contamination and consequent ecological effects on qualifying features. However, effects are unlikely to be significant over such a distance and in relation to such a small development. In addition, the implementation of standard pollution prevention measures would eliminate any adverse impacts. Any development proposals will also be required to show that additional flood or surface water risks would not occur to nearby land and ensure appropriate controls on drainage are incorporated. As such, adverse effects upon Leighton Moss SPA and Ramsar are not anticipated.'
B35	Old Station Yard, Sandside	Best use: Business or mixed use Size: 0.31ha	1	25 m	25 m	5.1	Check for likely significant effect in-combination		Whilst this site is primarily identified for business, there is the potential for some residential to be included as part of the mixed use on the site. As such there is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
B38	Land south of Quarry Lane, Sandside	Best use: Business Size: 0.26ha	0.9	70 m	70 m	5.1	Out	H	The proposed development site is separated from Morecambe Bay SAC, SPA and Ramsar by two roads and existing development, and there do not appear to be any hydrological links between the proposed development site and the European sites. Disturbance to birds within the SPA and Ramsar is therefore considered unlikely. There is the potential for air quality effects on habitats associated with the SAC. However, given the proposed development site's size and location, adverse effects are considered unlikely. Furthermore, it is anticipated that the implementation of standard best practice approaches such as pollution prevention measures, would eliminate any adverse impacts altogether.

Information about the proposed development sites			Distance from European sites (km unless otherwise stated)				Screened 'in' or 'out' or 'check for likely significant effect in-combination	Category	Justification
Site reference number	Site name	Description and history	Morecambe Bay Pavements SAC	Morecambe Bay SAC	Morecambe Bay SPA and Ramsar	Leighton Moss SPA and Ramsar			
B81	Travis Perkins, Sandside	Best use: Mixed use – residential, business and car parking. Dwelling potential: Not specified Size: 2.28ha	0.7	70 m	70 m	4.8	Check for likely significant effect in-combination	J	The proposed development site is separated from Morecambe Bay SAC, SPA and Ramsar by two roads and existing development, and there do not appear to be any hydrological links between the proposed development site and the European sites. Disturbance to birds within the SPA and Ramsar is therefore considered unlikely. There is the potential for air quality effects on habitats associated with the SAC. However, given the proposed development site's size and location, adverse effects are considered unlikely. Furthermore, it is anticipated that the implementation of standard best practice approaches such as pollution prevention measures, would eliminate any adverse impacts altogether. Appropriate ecological surveys are required of the site to ensure no significant adverse impacts upon Morecambe Bay SAC, SPA and Ramsar. There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
B125	The Ship Inn, Park Road, Sandside (part)	Best Use: Vehicular access route to site 81 Size: 0.1ha	0.7	70 m	70 m	4.8	Out	H	The proposed development site is existing hardstanding therefore any works required to convert into an access route would be minimal and implantation of standard best practice would eliminate any adverse effects.
W88	Land North West of Sand Lane 1, Warton	Best Use: Housing Dwelling potential: 12 Size: 0.4ha	2.5	0.6	0.6	2.2	Check for likely significant effect in-combination	J	There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
W130	Land North of 17 Main Street, Warton	Best Use: Housing Dwelling potential: 16 Size: 0.53ha	2.2	0.8	0.8	2.3	Check for likely significant effect in-combination	J	There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
B108	Land at Church Street, Beetham	Best use: Housing Dwelling potential: 6 Size: 0.20ha	0.8	1.9	1.9	3.7	Check for likely significant effect in-combination	J	There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.
B112	Land at Stanley Street, Beetham	Best use: Housing Dwelling potential: 4 Size: 0.10ha	0.5	2.4	2.4	3.6	Check for likely significant effect in-combination	J	There is the potential for recreational pressure on Morecambe Bay SAC, Morecambe Bay SPA and Morecambe Bay Ramsar. This is unlikely to be significant alone, but needs to be reviewed for likely significant effects in-combination.

7.4 Consideration of in-combination effects

7.4.1 Effects of the DPD as a whole

Of the 28 policies included within the DPD, only the 13 policies associated with the development allocations (housing and mixed use – refer to Section 2.2) were identified as having the potential to effect European sites. An assessment of the individual sites to which these polices relate has been undertaken, the outcome of which was that none of the sites would, on their own, have a significant effect upon European sites; however, there was the potential for in-combination effects in relation to increased recreational pressure.

Of the sites assessed, 12 sites allocated for housing or car parking have been identified which could result in increased recreational pressure on a European designated site. However, the potential effects alone would not be significant. The potential effects of development of those sites have therefore been checked in-combination with development of other sites of this type in the DPD. All of these sites are small-scale, ranging from four to 16 dwellings, or 20 to 30 parking spaces which would not all be for visitors or tourists (many would be for rail users), resulting in only a limited number of additional people visiting the designated sites. As such, it is considered unlikely that there would be any significant in-combination effects on European sites as a result of the development of these 12 sites.

7.4.2 Effects of the DPD in-combination with other plans and projects

Only the effects of other plans or projects which (like those of the plan under consideration here) alone would not be likely to be significant, need to be included in the in-combination assessment. If the effects of other plans or projects will already be significant on their own, they are not added to those associated with the DPD.

To be relevant to the in-combination assessment, the residual effects of other plans or projects will need to either make the unlikely effects of the DPD likely, or insignificant effects of the plan significant, or both. An assessment has therefore been made of the 'other' plans and projects listed in Table 7-5 with a view to determining whether or not they would result in impacts which, in combination with the proposed land allocations set out in the DPD could lead to significant effects.

Table 7-5 Plans and Projects Considered for In-Combination Effects

Plan / project	Potential effect of plan/project	Conclusion
South Lakeland Core Strategy (adopted October 2010)	As a result of the HRA Screening Assessment of this strategy, and following the incorporation of a number of mitigation measures, it was concluded that the plan will not have an adverse effect on the integrity of European sites.	In-combination effects considered unlikely.
South Lakeland Local Plan 2006, saved policies	There are some saved policies from the adopted 1997 Local Plan (saved Local Plan 2006) which will remain part of the Council's planning policies until	In-combination effects considered unlikely.

Plan / project	Potential effect of plan/project	Conclusion
	replaced. This document was updated September 2007 to incorporate modifications, Some polices have been superseded by Core Strategy policies and others have been superseded by the Local Plan Land Allocations. In the event of a conflict between an existing saved policy and the National Planning Policy Framework, the latter will take precedence. Policy C6 aims to safeguard sites of international nature conservation value.	
Local Plan Land Allocations (for South Lakeland District outside the Lake District and Yorkshire Dales National Parks) Development Plan Document Incorporating changes to the Policies Map Adopted 17 December 2013.	Allocates land for housing, employment, open space and other uses. All sites have been screened under the Habitats Regulations Directive. The Screening report identified one site (Station House and Yard, Arnside) where significant effects on a European site were likely if the site was developed for mixed employment and residential. Recommendations to amend the site boundaries to exclude land within Morecambe Bay SAC/SPA/Ramsar and restrict development to land behind existing flood defence embankment were made within the subsequent Appropriate Assessment to avoid the likely effect.	This site (with the revised boundary) is also considered in this Screening assessment. The policy associated with Station House and Yard has been updated to include the requirement for appropriate ecological surveys to be undertaken, therefore any proposed development with the potential to significantly affect the adjacent European site would not be permitted. In-combination effects are therefore considered unlikely.
Arnside and Silverdale AONB Management Plan 2014-2019	Contains many objectives aiming to conserve biodiversity resource	No objectives likely to add to in-combination adverse effects
Lancaster District Core Strategy (adopted 2008)	Outlines a spatial vision of a sustainable District whose quality of life and standards of development will lead the North West, comprising a prosperous knowledge-based City, a regenerated coast and a conserved countryside. It also explains where new homes and jobs will be located, which areas will be regenerated and which areas will be conserved.	The Screening Assessment states that the plan will not provide for any development which might have a significant adverse effect, either alone or in-combination, on a European site and which cannot either be scoped out or adequately mitigated for either in policy formulation for any future DPDs (for Land Allocations and Development Control policies which will define and detail the Core Strategy) or at the Planning Application Stage or in the granting of any Planning Consent. In-combination effects are therefore considered unlikely.

Plan / project	Potential effect of plan/project	Conclusion
Cumbria County Council Generic Development Control Policies (2009)	Sets out the Generic Development Control Policies of the Cumbria Minerals and Waste Development Framework. These are the policies that are used when planning applications are considered. Development Control Policies DC10 Biodiversity and Geodiversity aims to safeguard sites of nature conservation value.	This document does not itself lead to development and would therefore not lead to in-combination effects.
Cumbria Minerals and Waste Local Plan (in development), Core Strategy (adopted 2009)	Core Strategy Policy 4 aims to safeguard sites of nature conservation value.	In-combination effects considered unlikely.
Joint Lancashire Minerals and Waste Development Framework Core Strategy (2009)	It is the strategic document for future minerals and waste development in Lancashire until 2021. Policy CS5 aims to safeguard sites of nature conservation value.	In-combination effects considered unlikely.
Joint Lancashire Minerals and Waste Site allocations and development management policies (2013)	This plan provides site specific policies and allocations, and detailed development management policies for minerals and waste planning in the areas covered by the Councils of Lancashire, Blackpool and Blackburn with Darwen. It should be read together with the Joint Lancashire Minerals and Waste Local Plan Core Strategy adopted in 2009 (see below) which includes a policy which aims to safeguard sites of nature conservation value.	In-combination effects considered unlikely.
Moving Cumbria Forward, Cumbria Transport Plan Strategy 2011-2026	The new 3rd Local Transport Plan for Cumbria is a statutory document that sets out how roads, footways, cycleways, rights of way and bus and train services in Cumbria will be improved and managed. It does not identify specific future schemes.	In-combination effects considered unlikely.
Local Transport Plan 2011 - 2021, A Strategy for Lancashire	The HRA report found the strategy to have no likely significant effects on the	In-combination effects considered unlikely.

Plan / project	Potential effect of plan/project	Conclusion
	identified Natura 2000 sites at this stage.	
Lancashire County Council Lancaster District Highways and Transport Masterplan (draft) (2015)	The Lancaster District Highways and Transport Masterplan outlines ambitious new plans to see the city centre and towns Morecambe, Carnforth, Heysham, transformed over coming decades, with much less traffic, no city centre one-way system, and much greater use of sustainable transport such as park-and-ride buses and cycling. The Masterplan includes the Heysham to M6 Link Road which is already under construction and due for completion in 2016.	In-combination effects considered unlikely.
North West England and North Wales Shoreline Management Plan SMP2 – July 2010	Sets out the policies for managing the risks of coastal erosion and tidal flooding over the next 100 years along the North West England and North Wales coast.	In-combination effects considered unlikely.

8 CONCLUSION

This HRA Screening of the AONB DPD has considered the potential implications of the plan policies and development allocations on European Sites within and near to the AONB boundary.

The screening of the DPD identified 13 policies associated with specific development allocations that could have an effect upon European sites as a result of those developments (refer to Section 2.2). However, where a development site was located within close proximity to a European site or had the potential to affect land which could be considered to be functionally linked to the European sites, the requirement for appropriate ecological surveys to be undertaken has been included within the associated policy for that allocation. Such surveys will enable an appropriate ecological impact assessment to be undertaken and for mitigation/compensatory measures to be incorporated into development proposals should potentially significant effects be identified prior to planning permission being granted. In addition to the individual requirements for each allocation site, the inclusion of Policy AS05 Natural Environment also provides safeguards to protect European sites from harm, ensuring that any development proposals that would be likely to compromise the extent, value or integrity of designated sites would not be permitted.

In addition to the policies, the sites themselves were assessed for their potential to affect European sites. None of the proposed development allocations within the DPD were considered likely to have a significant effect upon European sites alone. The functionally linked land study (refer to appendix B) did not identify any potentially significant effects upon functionally linked land as a result of the proposed development allocations and given the small size of each of the proposed locations and the safeguards included within Policy AS05 (Natural Environment), no in-combination effects are considered likely.

9 REFERENCES

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Appendix A
European Sites Considered

Information obtained from the JNCC website, the Natura 2000 Standard Data form, the Conservation Objectives and the Citation.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
Morecambe Bay Pavements SAC Area: 2609.69ha Within the AONB	**Annex I habitats that are a primary reason for selection of this site** • 3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. Hawes Water is a lowland lake in northern England within Morecambe Bay Pavements. It is a lake on a predominantly Carboniferous limestone foundation and has a substrate of deep lacustrine shell-marl. The water is highly calcareous and the lake is fed by springs within it. This site is considered to be the best example of a lowland hard oligomesotrophic lake with *Chara* spp. in England, owing to the clarity, low nutrient status and high calcium content of its water. The rare rugged stonewort *Chara rudis* and scarce species *C. aspera*, *C. hispida* and *C. pedunculata* occur here. • 5130 Juniperus communis formations on heaths or calcareous grasslands Morecambe Bay Pavements represents *Juniperus communis* formations on 8240 Limestone pavements at low to intermediate altitude in north-west England. In contrast to most other areas in northern England, these are ungrazed or grazed at low intensity and have affinities to southern mixed scrub, owing to the presence of species such as wild privet *Ligustrum vulgare* and burnet rose *Rosa pimpinellifolia*. Other stands occur on 6210 semi-natural dry grassland dominated by blue moor-grass *Sesleria caerulea*. • 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites) Extensive CG9 *Sesleria albicans – Galium sterneri* grasslands occur at Morecambe Bay Pavements in north-west England. The grassland, which has an overall northern character, is also rich in southern lowland species, so providing important regional variation distinct from Craven Limestone Complex and Moor House – Upper Teesdale, also in northern England. There is a wide range of structural variation associated with intensity of grazing and the presence of cliffs, screes, and 8240 Limestone pavements on the margins of the grassland stands. There are important transitions to calcareous scrub and 9180 *Tilio-Acerion* forests. • 8240 Limestone pavements * Priority feature This is one of four sites in northern England representing Limestone pavements on Carboniferous limestone. This site provides an example of lowland pavements that range from low to moderate altitudes (up to 274 m). Some of the pavements form woodland clearings that are sheltered and warm up quickly in spring. The pavement flora is here at its most diverse and, where grazing is absent, can be seen at its best because plant growth is not confined to the grikes. Trees and shrubs, including yew *Taxus baccata*, juniper *Juniperus communis*, buckthorn *Rhamnus cathartica*, hazel *Corylus avellana*, small-leaved lime *Tilia cordata* and ash *Fraxinus excelsior*, grow above the pavement surface. Some pavements lie within sheep pasture but are for the most part lightly grazed. Rustyback *Ceterach officinarum* is restricted to pavements that form sheltered woodland clearings. Other ferns occurring on the site include the nationally scarce rigid buckler-fern *Dryopteris submontana*, which is abundant on Hutton Roof Crags, and limestone fern *Gymnocarpium robertianum*. These pavements tend to be rich in herbs, with lily-of-the-valley *Convallaria majalis*, dark-red helleborine *Epipactis atrorubens*, pale St John's-wort *Hypericum montanum*, ploughman's-spikenard *Inula conyzae*, angular Solomon's-seal *Polygonatum odoratum*, wood-sage *Teucrium scorodonia*, lesser meadow-rue *Thalictrum minus* and hairy violet *Viola hirta* achieving their best representation in limestone pavement here.	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'qualifying Features') and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site.	The site is subject to a number of problems related to the decline of traditional management practices. The under-grazing of grasslands and decline of traditional cattle grazing is leading to the loss of sward diversity and scrub encroachment problems. Localised overgrazing (sheep-dominated) has impoverished the pavement flora on one of the component sites. A decline of traditional coppice management has reduced the interest of some of the woodland sites. The planting of non-native conifer crops on some of the sites has led to localised declines in condition. However, large parts of the site are nature reserves and are sensitively managed. A further restoration project funded by LIFE Nature is in progress to remove non-native conifer plantations and further other aspects of site restoration. The problems are being addressed primarily through a series of management agreements. These include English Nature Wildlife Enhancement Schemes, Environmentally Sensitive Area Agreements and Woodlands Grant Schemes.	**Cringlebarrow and Deepdale SSSI** – 100% unfavourable recovering. **Gait Barrows SSSI** Units 19 and 22 unfavourable recovering. Units 24, 25, 26 and 27 favourable. 92.50% favourable. 7.50% unfavourable recovering. **Hawes Water SSSI** Units 1, 3, 5, 6, 7, 9, 10 favourable. Units 2, 4, 8, 11, 13, 14, 15, 16, 17, 18 (not within SAC) 19 unfavourable recovering. Unit 12 unfavourable no change due to area with low canopy cover. 18.20% favourable, 80.98% unfavourable recovering, 0.81% unfavourable no change. **Middlebarrow SSSI** Unit 1 (not in SAC) unfavourable recovering. Unit 2 (not in SAC) favourable. Unit 3 unfavourable declining with cotoneaster removal being the required action and deer control needing addressing. **Thrang End and Yealand Hall Allotment SSSI** Units 1, 2 (not in SAC) and 3 unfavourable recovering. 100% unfavourable recovering. **Thrang Wood SSSI** Unit 1 favourable. 100% favourable. **Underlaid Wood SSSI** Units 1, 2, 3 (not in SAC), 4 and 5 unfavourable recovering. 100% unfavourable recovering.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	• 9180 Tilio-Acerion forests of slopes, screes and ravines * Priority feature Woodland within Morecambe Bay Pavements, along with the nearby Roudsea Wood, represents *Tilio-Acerion* forests on Carboniferous limestone in north-west England. Although close to the northern limit of lime distribution, the ash *Fraxinus excelsior*-dominated woodland around Morecambe Bay contains many patches of small-leaved lime *Tilia cordata*, which survive sometimes with elm *Ulmus* spp., often along outcrop edges. There is a rich assemblage of rare species, including fingered sedge *Carex digitata*, wood fescue *Festuca altissima* and mezereon *Daphne mezereum*. The habitat type occurs here both on 8240 Limestone pavements and on loose scree and steep slopes. • 91J0 Taxus baccata woods of the British Isles * Priority feature Morecambe Bay Pavements is an example of yew *Taxus baccata* woods in north-west England. The site is similar to the nearby Roudsea Wood and Mosses. These yew woods are on the northern Carboniferous limestone and, as in the Wye Valley, yew occurs both as dense groves and as scattered trees in the understorey of ash or ash-elm *Fraxinus-Ulmus* woodland. Yew woodland here represents the development of long-established stands on unstable scree and rocky slopes. **Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site** • 4030 European dry heaths • 7210 Calcareous fens with Cladium mariscus and species of the Caricion davallianae * Priority feature • 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles **Annex II species that are a primary reason for selection of this site** • 1014 Narrow-mouthed whorl snail Vertigo angustior Morecambe Bay Pavements represents narrow-mouthed whorl snail *Vertigo angustior* in north-west England, near the northern limit of its range in the UK. Gait Barrows supports strong populations of the species in mossy clint tops of Annex I habitat 8240 Limestone pavements at transitions to woodland, an unusual habitat for the species.			
Morecambe Bay SAC Area: 61506.22ha Within the AONB	**Annex I habitats that are a primary reason for selection of this site:** • 1130 Estuaries Morecambe Bay in north-west England is the confluence of four principal estuaries, the Leven, Kent, Lune and Wyre (the latter lies just outside the site boundary), together with other smaller examples such as the Keer. Collectively these form the largest single area of continuous intertidal mudflats and sandflats in the UK and the best example of muddy sandflats on the west coast. The estuaries are macro-tidal with a spring tidal range of 9 m. The significant tidal prisms of the estuaries result in the Bay being riven by large low-water channel systems. The Kent, Leven and Lune estuaries have been modified variously by railway embankments, flood embankments and training walls but support extensive intertidal areas. Although cobble 'skears' and shingle beaches occur at their mouths, the estuaries consist predominantly of fine sands and muddy sands. The estuaries support dense invertebrate communities, their composition reflecting the salinity and sediment regimes within each estuary. Extensive saltmarshes and glasswort Salicornia spp. beds are present in the Lune estuary, contrasting with the fringing saltmarshes and more open intertidal flats of the Leven and Kent estuaries. Most of the saltmarshes are grazed, a characteristic feature of north-west England. In the upper levels of the saltmarshes there are still important	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species	There are a wide range of pressures on Morecambe Bay but the site is relatively robust and many of these pressures have only slight or local effects on its interests. The interests depend largely upon the coastal processes operating within the Bay, which have been affected historically by human activities including coastal protection and flood defence works. Opportunities to reverse coastal squeeze are being explored. The saltmarsh is traditionally grazed and is generally in favourable condition for its bird interest. Most of the saltmarsh is traditionally grazed and is utilised by breeding, wintering and migrating birds for feeding, roosting and nesting	**Morecambe Bay SSSI** Units 1, 2, 4, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 18, 19, 20, 21, 22, 23, 24, 25, 26 favourable. Unit 3, 17 unfavourable recovering. 94.23% favourable, 5.77% unfavourable recovering.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	transitions from saltmarsh to freshwater and grassland vegetation. Water quality is generally good. • 1140 Mudflats and sandflats not covered by seawater at low tide Morecambe Bay in north-west England is the confluence of four principal estuaries, the Leven, Kent, Lune and Wyre (the latter lies just outside the site boundary), together with other smaller examples such as the Keer. Collectively these form the largest single area of continuous intertidal mudflats and sandflats in the UK and the best example of muddy sandflats on the west coast. At low water, large areas of sandflats are exposed, and these range from the mobile fine sands of the outer Bay to more sheltered sands in the inner areas. With increasing shelter in the Bay's adjoining estuaries, finer sediments settle out and form extensive mudflats, supporting a particularly rich and diverse range of infaunal species. • 1160 Large shallow inlets and bays Morecambe Bay in north-west England is the second-largest embayment in the UK, after the Wash. It is a large, very shallow, predominantly sandy bay bordered on the south by the channel of the Lune estuary and on the north by Walney Channel. At low tide vast areas of intertidal sandflats are exposed, with small areas of mudflat, particularly in the upper reaches of the associated estuaries. The sediments of the bay are mobile and support a range of community types, from those typical of open coasts (mobile, well-sorted fine sands), grading through sheltered sandy sediments to low-salinity sands and muds in the upper reaches. Apart from the areas of intertidal flats and subtidal sandbanks, Morecambe Bay supports exceptionally large beds of mussels Mytilus edulis on exposed 'scars' of boulder and cobble, and small areas of 1170 Reefs with fucoid algal communities. Of particular note is the rich community of sponges and other associated fauna on tide-swept pebbles and cobbles at the southern end of Walney Channel. • 1220 Perennial vegetation of stony banks Morecambe Bay represents Perennial vegetation of stony banks in north-west England. Walney Island on the shores of Morecambe Bay is a barrier island fringed by shingle with a partial sand covering. Two areas of exposed vegetated shingle occur at the extremes of the barrier. The southern area has been highly modified by eutrophication from a large gull colony, resulting in communities that are unusually species-rich for pioneer shingle vegetation. Perennial rye-grass Lolium perenne, common chickweed Stellaria media and biting stonecrop Sedum acre are constant elements, with dove's-foot crane's-bill Geranium molle an unusual and important feature. • 1310 Salicornia and other annuals colonizing mud and sand Two types of pioneer saltmarsh are represented at Morecambe Bay in north-west England. Pioneer glasswort Salicornia spp. saltmarsh occurs intermittently along the coastline of the bay, forming a transition from the extensive intertidal sand and mudflats to the distinctive saltmeadows at this site. The sea pearlwort Sagina maritima community occurs in open pans on the upper marsh. • 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) Morecambe Bay is characteristic of saltmarshes in north-west England, with large areas of closely grazed upper marsh. The mid-upper marsh vegetation is strongly dominated by the saltmarsh-grass/fescue Puccinellia/Festuca communities, of which over 1,000 ha occur here, and by smaller areas of saltmarsh rush Juncus gerardii community. NVC type SM18 Juncus maritimus community is also more strongly represented here than elsewhere in England. The plant species include both southern elements, such as lesser centaury	The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.	purposes. Positive management is being secured through NGO reserve management plans, English Nature's Site Management Statements and Coastal Wildlife Enhancement Scheme, the European Marine Site Management Schemes for the Duddon Estuary and Morecambe Bay, and the Duddon Estuary and Morecambe Bay Partnerships. These aim for sustainable use of the site, taking account of other potential threats including commercial fisheries, aggregate extraction, gas exploration, recreation and other activities.	

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	Centaurium pulchellum, and northern elements, such as saltmarsh flat-sedge Blysmus rufus and few-flowered spike-rush Eleocharis quinqueflora. • 2120 "Shifting dunes along the shoreline with Ammophila arenaria (""white dunes"")" Shifting dune vegetation forms a major component of the active sand dune systems at the entrance to Morecambe Bay on Walney Island and the Duddon Estuary at Sandscale Haws. A small area is also present at the entrance to the Wyre. Sandscale Haws supports a mosaic of shifting communities, which form a continuous block around the seaward edge of this site. There are transitions to 2110 Embryonic shifting dunes. The prograding shingle spits at either end of Walney Island support dune systems at South End and North End Haws. Species associated with these shifting dunes include sea holly Eryngium maritimum, sea spurge Euphorbia paralias, Portland spurge Euphorbia portlandica and sea bindweed Calystegia soldanella. • 2130 "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")" * Priority feature Sandscale Haws at the entrance to the Duddon Estuary supports the largest area of calcareous fixed dunes in Cumbria, which contrast with the acidic dunes at the adjacent North End Haws on Walney Island. South End Haws on Walney Island supports a smaller area of fixed dunes. North Walney and Sandscale in particular show well-conserved structure and function. The fixed dunes support a rich plant diversity including wild pansy Viola tricolor, lady's bedstraw Galium verum, common restharrow Ononis repens and the uncommon dune fescue Vulpia membranacea and dune helleborine Epipactis dunensis. • 2190 Humid dune slacks Dune slacks are particularly well-represented at Sandscale Haws, the largest calcareous dune system in Cumbria. The slacks support a good range of vegetation communities and are very species-rich. Several uncommon species including marsh helleborine Epipactis palustris, dune helleborine Epipactis dunensis and coralroot orchid Corallorhiza trifida occur. **Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site** • 1110 Sandbanks which are slightly covered by sea water all the time • 1150 Coastal lagoons * Priority feature • 1170 Reefs • 2110 Embryonic shifting dunes • 2150 Atlantic decalcified fixed dunes (Calluno-Ulicetea) * Priority feature • 2170 Dunes with Salix repens ssp. argentea (Salicion arenariae) **Annex II species that are a primary reason for selection of this site** • 1166 Great crested newt Triturus cristatus The site, located on the southern shore of the Duddon estuary in north-west England, consists of a large sand dune complex containing both permanent and ephemeral waterbodies and man-made scrapes. Breeding colonies of great crested newts are known in approximately 20 of these ponds, and are believed to utilise 200 ha of the 282 ha site, foraging widely over foreshore, yellow dunes, dune-heath and scrub. Note, Sea Lamprey Petromyzon marinus, Twait Shad Alosa fallax and Grey Seal Halichoerus grypus also listed as Annex II species on Natura 2000 Data Form but are not listed on the JNCC website or on the conservation objectives. The Natura 2000 data form is			

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	dated 200305, the conservation objectives are dated 30 June 2014 and the JNCC information is undated.			
Morecambe Bay SPA Area: 37404.6ha Within the AONB	Morecambe Bay is located on the Irish Sea coast of north-west England. It is one of the largest estuarine systems in the UK and is fed by five main river channels (the Leven, Kent, Keer, Lune and Wyre) which drain through the intertidal flats of sand and mud. Mussel *Mytilus edulis* beds and banks of shingle are present, and locally there are stony outcrops. The whole system is dynamic, with shifting channels and phases of erosion and accretion affecting the estuarine deposits and surrounding saltmarshes. The flats contain an abundant invertebrate fauna that supports many of the waterbirds using the bay. The capacity of the bay to support large numbers of birds derives from these rich intertidal food sources together with adjacent freshwater wetlands, fringing saltmarshes and saline lagoons, as well as dock structures and shingle banks that provide secure roosts at high tide. The site is of European importance throughout the year for a wide range of bird species. In summer, areas of shingle and sand hold breeding populations of terns, whilst very large numbers of geese, ducks and waders not only overwinter, but (especially for waders) also use the site in spring and autumn migration periods. The bay is of particular importance during migration periods for waders moving up the west coast of Britain. This site qualifies under **Article 4.1** of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive: **During the breeding season;** Little Tern *Sterna albifrons*, 26 pairs representing at least 1.1% of the breeding population in Great Britain (Count, as at 1994) Sandwich Tern *Sterna sandvicensis*, 290 pairs representing at least 2.1% of the breeding population in Great Britain (5 year peak mean for 1992 to 1996) Common eider *Somateria mollissima* (Note, only mentioned on the conservation objectives) Common tern *Sterna hirundo* (Note, only mentioned on the conservation objectives). **Over winter;** • Bar-tailed Godwit *Limosa lapponica*, 2,611 individuals representing at least 4.9% of the wintering population in Great Britain (5 year peak mean for 1991/92 to 1995/96) • Golden Plover *Pluvialis apricaria*, 4,097 individuals representing at least 1.6% of the wintering population in Great Britain (5 year mean for 1991/92 to 1995/96) This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: **During the breeding season;** • Herring Gull *Larus argentatus*, 11,000 pairs representing at least 1.2% of the breeding Northwestern Europe (breeding) and Iceland/Western Europe - breeding population (5 year mean 1992 to 1996) • Lesser Black-backed Gull *Larus fuscus*, 22,000 pairs representing at least 17.7% of the breeding Western Europe/Mediterranean/Western Africa population (5 year mean 1992 to 1996) **On passage;** • Ringed Plover *Charadrius hiaticula*, 693 individuals representing at least 1.4% of the Europe/Northern Africa - wintering population (5 year peak mean for 1991/92 to 1995/96)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features'), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and, • The distribution of the qualifying features within the site.	The site is subject to a wide range of pressures such as land-claim for agriculture, overgrazing, dredging, overfishing, industrial uses and unspecified pollution. However, overall the site is relatively robust and many of those pressures have only slight to local effects and are being addressed thorough Management Plans. The breeding tern interest is very vulnerable and the colony has recently moved to the adjacent Duddon Estuary. Positive management is being secured through management plans for non-governmental organisation reserves, English Nature Site Management Statements, European Marine Site Management Scheme, and the Morecambe Bay Partnership.	**Morecambe Bay SSSI** Units 1, 2, 4, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 18, 19, 20, 21, 22, 23, 24, 25, 26 favourable. Unit 3, 17 unfavourable recovering. 94.23% favourable, 5.77% unfavourable recovering.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	• Sanderling *Calidris alba*, 2,466 individuals representing at least 2.5% of the Eastern Atlantic/Western & Southern Africa - wintering population (Count as at May 1995) **Over winter;** • Curlew *Numenius arquata*, 13,620 individuals representing at least 3.9% of the wintering Europe - breeding population (5 year peak mean for 1991/92 to 1995/96) • Dunlin *Calidris alpina alpina*, 52,671 individuals representing at least 3.8% of the wintering Northern Siberia/Europe/Western Africa population (5 year peak mean for 1991/92 to 1995/96) • Grey Plover *Pluvialis squatarola*, 1,813 individuals representing at least 1.2% of the wintering Eastern Atlantic - wintering population (5 year peak mean for 1991/92 to 1995/96) • Knot *Calidris canutus*, 29,426 individuals representing at least 8.4% of the wintering Northeastern Canada/Greenland/Iceland/Northwestern Europe population (5 year peak mean for 1991/92 to 1995/96) • Oystercatcher *Haematopus ostralegus*, 47,572 individuals representing at least 5.3% of the wintering Europe& Northern/Western Africa population (5 year peak mean for 1991/92 to 1995/96) • Pink-footed Goose *Anser brachyrhynchus*, 2,475 individuals representing at least 1.1% of the wintering Eastern Greenland/Iceland/UK population (5 year peak mean for 1991/92 to 1995/96) • Pintail *Anas acuta*, 2,804 individuals representing at least 4.7% of the wintering Northwestern Europe population (5 year peak mean for 1991/92 to 1995/96) • Redshank *Tringa totanus*, 6,336 individuals representing at least 4.2% of the wintering Eastern Atlantic - wintering population (5 year peak mean for 1989/90 to 1993/94) • Shelduck *Tadorna tadorna*, 6,372 individuals representing at least 2.1% of the wintering Northwestern Europe population (5 year peak mean for 1991/92 to 1995/96) • Turnstone *Arenaria interpres*, 1,583 individuals representing at least 2.3% of the wintering Western Palearctic - wintering population (5 year peak mean for 1991/92 to 1995/96) **Assemblage qualification: A seabird assemblage of international importance** The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 seabirds During the breeding season, the area regularly supports 61,858 individual seabirds (5 year peak mean for 1991/92 to 1995/96) including: Herring Gull, Lesser Black-backed Gull, Little Tern, Sandwich Tern. **Assemblage qualification: A wetland of international importance.** The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl Over winter, the area regularly supports 210,668 individual waterfowl (5 year peak mean for 1991/92 to 1995/96) including: Great Crested Grebe *Podiceps cristatus*, Bar-tailed Godwit *Limosa lapponica*, Pinkfooted Goose *Anser brachyrhynchus*, Shelduck *Tadorna tadorna*, Pintail *Anas acuta*, Oystercatcher *Haematopus*			

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	ostralegus, Grey Plover *Pluvialis squatarola*, Knot *Calidris canutus*, Dunlin *Calidris alpine alpina*, Curlew *Numenius arquata*, Golden Plover *Pluvialis apricaria*, Turnstone *Arenaria interpres*, Blacktailed Godwit *Limosa limosa islandica*, Cormorant *Phalacrocorax carbo*, Wigeon *Anas penelope*, Teal *Anas crecca*, Mallard *Anas platyrhynchos*, Eider *Somateria mollissima*, Goldeneye *Bucephala clangula*, Red-breasted Merganser *Mergus serrator*, Ringed Plover *Charadrius hiaticula*, Lapwing *Vanellus vanellus*, Sanderling *Calidris alba*, Redshank *Tringa totanus*, Whimbrel *Numenius phaeopus*.			
Morecambe Bay Ramsar Area: 37404.6ha Within the AONB	Morecambe Bay lies between the coasts of South Cumbria and Lancaashire, and represents the largest continuous intertidal area in Britain. Morecambe Bay comprises the estuaries of five rivers and the accretion of mudflats behind Walney Island. The area is of intertidal mud and sandflats, with associated saltmarshes, shingle beaches and other coastal habitats. It is a component in the chain of west coast estuaries of outstanding importance for passage and overwintering waterfowl (supporting the third-largest number of wintering waterfowl in Britain), and breeding waterfowl, gulls and terns. **Ramsar criterion 4** The site is a staging area for migratory waterfowl including internationally important numbers of passage ringed plover *Charadrius hiaticula*. **Ramsar criterion 5** Assemblages of international importance: Species with peak counts in winter: 223709 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6 – species/populations occurring at levels of international importance.** Qualifying Species/populations (as identified at designation): Species regularly supported during the breeding season: • Lesser black-backed gull *Larus fuscus graellsii* W Europe/Mediterranean/W Africa 19666 apparently occupied nests, representing an average of 13.3% of the breeding population(Seabird 2000 Census) • Herring gull *Larus argentatus argentatus*, NW Europe and Iceland/W Europe) 10431 apparently occupied nests, representing an average of 2.8% of the breeding population (Seabird 2000 Census) • Sandwich tern , *Sterna (Thalasseus) sandvicensis sandvicensis*, W Europe 290 pairs, representing an average of 2.8% of the GB population (5 year mean for 1992 to 1996) Species with peak counts in spring/autumn: • Great cormorant *Phalacrocorax carbo carbo* NW Europe 967 individuals, representing an average of 4.2% of the GB population (5 year peak mean 1998/9-2002/3) • Common shelduck *Tadorna tadorna* NW Europe 7032 individuals, representing an average of 2.3% of the population (5 year peak mean 1998/9-2002/3) • Northern pintail *Anas acuta*, NW Europe 3743 individuals, representing an average of 6.2% of the population (5 year peak mean 1998/9-2002/3)	None listed in RIS	None listed in RIS	**Morecambe Bay SSSI** Units 1, 2, 4, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 18, 19, 20, 21, 22, 23, 24, 25, 26 favourable. Unit 3, 17 unfavourable recovering. 94.23% favourable, 5.77% unfavourable recovering.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	• Common eider *Somateria mollissima mollissima*, NW Europe 5657 individuals, representing an average of 7.7% of the GB population (5 year peak mean 1998/9-2002/3) • Eurasian oystercatcher *Haematopus ostralegus ostralegus*, Europe & NW Africa – wintering 66577 individuals, representing an average of 6.5% of the population (5 year peak mean 1998/9-2002/3) • Ringed plover *Charadrius hiaticula*, Europe/Northwest Africa 1041 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3) • Grey plover *Pluvialis squatarola*, E Atlantic/W Africa –wintering 1655 individuals, representing an average of 3.1% of the GB population (5 year peak mean 1998/9-2002/3) • Sanderling *Calidris alba*, Eastern Atlantic 703 individuals, representing an average of 3.4% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak) • Eurasian curlew *Numenius arquata arquata*, *N.a. arquata* Europe (breeding) 20018 individuals, representing an average of 4.7% of the population (5 year peak mean 1998/9-2002/3) • Common redshank *Tringa totanus totanus*, 8816 individuals, representing an average of 3.5% of the population (5 year peak mean 1998/9-2002/3) • Ruddy turnstone *Arenaria interpres interpres*, NE Canada, Greenland/W Europe & NW Africa 1371 individuals, representing an average of 1.4% of the population (5 year peak mean1998/9-2002/3) • Lesser black-backed gull *Larus fuscus graellsii*, 40393 individuals, representing an average of 7.6% of the population (5 year peak mean 1998/9-2002/3) Species with peak counts in winter: • Great crested grebe *Podiceps cristatus cristatus*, NW Europe 217 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3) • Pink-footed goose *Anser brachyrhynchus*, Greenland, Iceland/UK 3665 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9-2002/3) • Eurasian wigeon *Anas penelope*, NW Europe 6133 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3) • Common goldeneye *Bucephala clangula clangula*, NW & C Europe 285 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3) • Red-breasted merganser *Mergus serrator*, NW & C Europe 327 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3) • European golden plover *Pluvialis apricaria apricaria*, P. a. altifrons Iceland & Faroes/E Atlantic 4073 individuals, representing an average of 1.6% of the GB population (5 year peak mean1998/9-2002/3) • Northern lapwing *Vanellus vanellus*, Europe – breeding 16492 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)			

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	• Red knot *Calidris canutus islandica*, W & Southern Africa (wintering) 66335 individuals, representing an average of 14.7% of the population (5 year peak mean 1998/9-2002/3) • Dunlin *Calidris alpina alpina*, W Siberia/W Europe 26416 individuals, representing an average of 1.9% of the population (5 year peak mean 1998/9-2002/3) • Bar-tailed godwit *Limosa lapponica lapponica*, W Palearctic 4579 individuals, representing an average of 3.8% of the population (5 year peak mean 1998/9-2002/3)			
Leighton Moss SPA Area 128.61ha Within the AONB	The site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive: During the breeding season; Bittern *Botaurus stellaris*, 4 individuals representing at least 10% of the breeding population in Great Britain. Marsh harrier *Circus aeruginosus*, 2 pairs representing at least 1.3% of the breeding population in Great Britain Over winter; Bittern, 8 individuals representing at least 8% of the wintering population in Great Britain.	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features'), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and, • The distribution of the qualifying features within the site.	Leighton Moss is the largest reedbed in North West England and is vulnerable to changes in water quality and water levels. Since the establishment of a reserve at Leighton Moss in 1964 the RSPB has raised water levels and actively managed the site in order to maintain and enhance its Phragmites dominated fen and open water to provide optimum conditions for its nationally important reedbed birds. This has involved water level management, ditch maintenance work, the coppicing and control of invading willow scrub, as well as the annual rotational cutting of reedbeds. The decline of booming bitterns on the site, reflecting a national trend, has been halted through detailed research and improved management of the site. This management, which also benefits other birds on the site, has involved further refinement of reedbed management and the manipulation of the reed/open water interface and with increased water level control. The maintenance of a high quality spring fed water supply is important and although there are few opportunities for this to become polluted within the catchment, agricultural run-off from land immediately adjacent to the reserve has been identified as a potential hazard in recent years. Initiatives are currently being initiated to reduce/remove this threat by the EA.	**Leighton Moss SSSI** Units 1 and 2 unfavourable recovering. 100% unfavourable recovering.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
			The Moss is also susceptible to saline intrusion upstream of its tidal sluice from Morecambe Bay. This is potentially one of the most damaging threats to the reserve, there having been three inundations since 1964 caused by gales pushing in unusually high 10 metre tides. Fortunately these have occurred during the winter when the vegetation has been dormant and as such the effects have only been minor. It is proposed that the lowest point of the sea wall next to the tidal sluice be raised when strengthening the Quaker Stang sea defences, taking into account predicted sea level rise due to global warming in order to improve the tidal defences in the area.	
Leighton Moss Ramsar Area 128.61ha Within the AONB	Leighton Moss is the largest reedbed in north-west England and is situated on the eastern edge of Morecambe Bay in Lancashire. Large areas of open water are surrounded by extensive reedbeds in which areas of willow scrub and mixed fen vegetation also occur. A typical and varied fen flora has developed in part, whilst the reedbed shows all stages of seral transition from open water through to woodland. Ramsar criterion 1 An example of large reedbed habitat characteristic of the biogeographical region. The reedgbeds are of particular importance as a northern outpost for breeding populations of bittern, marsh harrier and bearded tit *Panurus biarmicus*. Ramsar criterion 3 The site supports a range of breeding birds including bittern, marsh harrier and bearded tit. Species occurring in nationally important numbers outside the breeding season include northern shoveler *Anas clypeata* and water rail *Rallus aquaticus*.	None listed in RIS	Sedimentation/siltation – Natural processes causing sedimentation. This results in increased turbidity and loss of aquatic flora and subsequently decreased quality of bittern habitat. Pollution – pesticides/agricultural runoff – Slurry from adjacent dairy farm and inorganic compounds from other agricultural sources.	**Leighton Moss SSSI** Units 1 and 2 unfavourable recovering. 100% unfavourable recovering.
Duddon Mosses SAC Area 313.07ha 17.8 km from AONB	**Annex I habitats that are a primary reason for selection of this site:** • 7110 Active raised bogs This complex in north-west England is found in the plain of the Duddon estuary. In the southern part of the complex, where there are transitions from saltmarsh to bog, the vegetation is rich in the rare Sphagnum pulchrum. Further north a variety of raised bog conditions can be observed, from hand-cut and vigorously regenerating cuttings, to domes of uncut bog, which display significant areas of actively-growing bog vegetation. • 7120 Degraded raised bogs still capable of natural regeneration This bog complex is within the tributary plains of the Duddon estuary in south Cumbria. The contiguity of the original peat domes has been severed by road construction and agricultural conversion. On some of the component bogs peatcutting has left a drained surface which is now only partially 7110 active raised bog. The degraded raised bog is mostly dominated by purple moor grass *Molinia caerulea*, although pockets of raised bog plants including bog-mosses Sphagnum spp. offer good prospects for regeneration provided the hydrology is	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;	Past drainage for peat extraction has lowered the water table and allowed scrub to spread across the mosses. The majority of landowners have management agreements with English Nature to allow restoration work. A programme of scrub removal and ditch-blocking is being undertaken, with positive results.	**Duddon Mosses SSSI** Units 1 and 18 favourable (Unit 18 not within SAC). Units 2, 5, 7, 11, 12, 13, 19, 20, 21, 22, 23, 25, 28 Unfavourable recovering. Units 3, 4, 6, 9, 10, 14, 16, 24, 26 Unfavourable declining due mainly to the habitats being too dry. Units 8, 15, 17 and 27 Unfavourable no change (Unit 17 not within SAC). 4.51% favourable, 50.73% unfavourable recovering, 9.91% unfavourable no change, 34.84% unfavourable declining.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	repaired. Degraded bog also occurs around the edges of discrete domes of active bog due to deep regional drainage and agricultural use of the surrounding land. There is no present-day peat-extraction on this site.	• The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely.		
Subberthwaite Blawith and Torver Low Commons SAC Area 1865.17ha 17.3 km from AONB	**Annex I habitats that are a primary reason for selection of this site:** • 7140 Transition mires and quaking bogs This site in south-west Cumbria supports some of the best examples of Transition mires and quaking bogs in the UK, with over 200 mires on a broad hilly plateau. The mires are dominated by tall sedges and rushes with mixed herbs, over a ground layer of bog-mosses Sphagnum spp. and feather-mosses including Calliergon cuspidatum. Twenty-six NVC types are represented, including M4 Carex rostrata – Sphagnum recurvum mire, M9 Carex rostrata – Calliergon cuspidatum/giganteum mire, and S27 Carex rostrata – Potentilla palustris tall-herb fen. **Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:** • 7150 Depressions on peat substrates of the Rhynchosporion	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and, • The supporting processes on which the qualifying natural habitats rely.	This site comprises a complex mosaic of over 200 discrete mires set within an agriculturally unimproved landscape. The mires are at or near favourable condition and would only be threatened by intensification of land-use on the surrounding commons or by interference with the site hydrology. There is a good liaison with a commoners association over part of the site. Lowland heath is not listed as a SAC feature on the site because of its degraded, unfavourable condition. Heathland may be inhibited from recovery by the livestock management regime but at current livestock levels this is not believed to be affecting the mire interest.	**Subberthwaite Blawith and Torver Low Commons SSSI** Units 1 – 10 favourable. 100% favourable.
Roudsea Wood and Mosses SAC Area 470.45ha 8 km from AONB	**Annex I habitats that are a primary reason for selection of this site:** • 7110 Active raised bogs * Priority feature Roudsea consists of a complex of raised bogs on the northern shore of Morecambe Bay in north-west England. Although the majority of the complex has undergone extensive drainage in the past, with domestic peat-cutting around the margins, drainage was abandoned many years ago and much of the area has recovered to a considerable degree. Less than 20% of the site is classified as 7120 degraded raised bog. Within the site there are transitions between acid bog and limestone woodland, with a number of scarce plant species including the rare large yellow-sedge Carex flava.	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the	In the latter part of the 20th century, coppicing of the woodland ceased and lower water tables on the bogs, caused by drainage for peat-cutting, had allowed scrub to spread across them. Most of the site is now managed as a National Nature Reserve. Woodland management is carried out and much scrub has been cleared from Deer Dike Moss and	**Roudsea Wood and Mosses SSSI** Unit 1, 6, 7, 8, 12 unfavourable recovering Units 2, 3, 9, 11 unfavourable declining due to bog vegetation being shaded out by conifers (units 2 and 11); poor understorey cover due to deer browsing (unit 9); unfavourable hydrology resulting in lack of desired vegetation communities (unit 3). Unit 10 favourable.

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	• 7120 Degraded raised bogs still capable of natural regeneration This is a complex of raised bogs on the northern shore of Morecambe Bay in north-west England. Although the majority of the complex has undergone extensive drainage in the past, with domestic peat-cutting around the margins, drainage was abandoned many years ago and peat-formation has resumed over much of its area. Less than 20% of the site is classified as degraded raised bog. Within the site there are transitions between acid bog and limestone woodland, with a number of scarce plant species including the rare yellow sedge Carex flava. • 9180 Tilio-Acerion forests of slopes, screes and ravines * Priority feature Woodland at Roudsea, with others within the nearby Morecambe Bay Pavements, represents Tilio-Acerion forests on Carboniferous limestone in north-west England. Although close to the northern limit of lime distribution, the ash Fraxinus excelsior-dominated woodland around Morecambe Bay contains many patches of small-leaved lime Tilia cordata, which survive sometimes with elm Ulmus spp., often along outcrop edges. There is a rich assemblage of rare species, including fingered sedge Carex digitata. A notable feature of this wood is the sudden vegetation change across the boundaries between the limestone, where the Tilio-Acerion occurs, and acid peats or Silurian slates. • 91J0 Taxus baccata woods of the British Isles * Priority feature The yew Taxus baccata woods of Roudsea Wood have strong similarities with the yew stands at the nearby Morecambe Bay Pavements. They are both on the northern Carboniferous Limestone, and as in the Wye Valley yew occurs both as dense groves and as scattered trees in the understorey of ash or ash-elm Fraxinus-Ulmus woodland.	site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats,and • The supporting processes on which qualifying natural habitats rely.	ditches blocked to allow regeneration of the bog vegetation. Management of the southern bog, recently added to the National Nature Reserve, has been addressed in the management plan.	2.35& favourable, 78.37% unfavourable recovering, 19.28% unfavourable declining.
Witherslack Mosses SAC Area 486.53ha 0.7 km from AONB	**Annex I habitats that are a primary reason for selection of this site:** • 7110 Active raised bogs * Priority feature Meathop Moss, Nichols Moss and Foulshaw Moss are remnants of a formerly interconnected peat body on the west side of the Kent estuary, on its coastal plain. All retain some of the original dome structure, though each has been at least in part degraded by peat-cutting around the edges and by commercial forestry on Foulshaw Moss. Although restricted in area on Foulshaw Moss, each site contains good examples of NVC type M18a Erica tetralix – Sphagnum papillosum raised and blanket mire, Sphagnum magellanicum – Andromeda polifolia sub-community. Most of Foulshaw Moss is classified as 7120 degraded raised bog. • 7120 Degraded raised bogs still capable of natural regeneration Meathop Moss, Nichols Moss and Foulshaw Moss are remnants of a formerly interconnected peat body on the west side of the Kent estuary, on its coastal plain. All retain some of the original dome structure, though each has been at least in part degraded by peat-cutting around the edges and by commercial forestry on Foulshaw Moss. Degraded raised bog predominates on Foulshaw Moss and is present around the edges on the other two, but each site contains good examples of 7110 Active raised bogs as NVC type M18a Erica tetralix – Sphagnum papillosum raised and blanket mire, Sphagnum magellanicum – Andromeda polifolia sub-community. The forestry plantations are now being removed from Foulshaw Moss.	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and, • The supporting processes on which the	Past drainage for peat extraction and forestry has lowered the water table and allowed scrub to spread across the mosses. A programme of restoration works is in place on two of the mosses, and a management plan has been completed for major works on the third.	**Foulshaw Moss SSSI** Units 1, 2, 3, 4, 7, 9, 13, 14 unfavourable recovering Units 5, 6 unfavourable declining due to inappropriate water levels. Units 8, 10, 11, 12 unfavourable no change due to inappropriate water levels. 91.91% unfavourable recovering, 6.11% unfavourable no change, 2.59% unfavourable declining. **Meathop Moss SSSI** Unit 4 unfavourable recovering. 100% unfavourable recovering. **Nichols Moss SSSI** Units 1, 2, 5, 6, 7, 8, 13, 18, 19, 20, 21, 22, 23, 24 unfavourable declining due to invasive species, bog and vegetation structural features, active drainage, cover of bog indicator species, cover of indicator bogmosses and tree cover. Units 3, 9, 10, 15, 16, 17, 25 unfavourable no change due to invasive species, bog and vegetation structural features, active

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
		qualifying natural habitats rely.		drainage, cover of bog indicator species, cover of indicator bogmosses and tree cover, as well as lack of appropriate management (unit 16), deer browsing (unit 15). Units 4, 11, 12, 26 favourable 21.19% favourable, 19.02% unfavourable no change, 59.78% unfavourable declining.
River Kent SAC Area 109.12ha 5.6 km from AONB	**Annex I habitats present as a qualifying feature, but not a primary reason for** selection of this site • 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation **Annex II species that are a primary reason for selection of this site** • 1092 White-clawed (or Atlantic stream) crayfish Austropotamobius pallipes The Kent is a river of upland character in southern Cumbria. Densities of white-clawed crayfish Austropotamobius pallipes are very high throughout much of the Kent system (particularly in the tributaries), perhaps higher than anywhere else in England. **Annex II species present as a qualifying feature, but not a primary reason for site selection** • 1029 Freshwater pearl mussel Margaritifera margaritifera • 1163 Bullhead Cottus gobio	The maintenance of breeding and nursery areas for the species on this site depends on the habitat quality of streams and their margins. Some areas of the site suffer from poor habitat quality. The intention is to address this through implementation of habitat improvement schemes. The impact of point-discharges on water quality will be reviewed and action proposed where necessary. A particular problem on this site and affecting white-clawed crayfish is incidents of pyrethroid sheep-dip pollution of watercourses. These are currently under investigation. The dwindling population of freshwater pearl mussels needs to be investigated in relation to the factors affecting its recruitment and structure. A management plan will be developed for the part of the catchment supporting this species.	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site.	**River Kent and Tributaries SSSI** Units 101, 102, 103, 107, 111 unfavourable no change due to water abstraction/pollution and overgrazing. Units 104, 105, 106, 109, 110, 112, 113, 114, 115 unfavourable recovering. Unit 108 favourable. 0.37% favourable, 83.37% unfavourable recovering, 16.26% unfavourable no change.
Calf Hill and Cragg Woods SAC 10.3 km from AONB boundary Area 34.43ha	**Annex I habitats that are a primary reason for selection of this site** • 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles These old sessile oak woods occupy north- and south-facing slopes of a valley on millstone grit. Oak dominates in the canopy with birch Betula sp., rowan Sorbus aucuparia and holly Ilex aquifolium. The ground flora ranges from areas of abundant bilberry Vaccinium	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'), and subject to natural change;	Calf Hill and Cragg Woods support one of the most extensive stands of upland oak woodland in Lancashire, in addition to a well-developed alder/ash woodland on lower flushed slopes along the valley bottom. Currently there is limited intervention	**Calf Hill and Cragg Woods SSSI** Units 1, 2, 3 favourable 100% favourable

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	myrtillus, through grassy areas, to rich moss carpets. Small areas of alder Alnus glutinosa flushes also occur. **Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site** • 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) * Priority feature	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely.	in land-use/management terms. There is also no immediate need for woodland management in order to safeguard the interest of the site. However, in the long-term it would be desirable to repair some of the walls/fences at the far eastern most end of Calf Hill Wood in order to control sheep grazing from the adjacent fell. Some grazing is considered desirable (to help maintain the diversity of the ground flora) but it would be beneficial to be able to exclude sheep altogether for certain times of the year, or altogether for a limited period in order to encourage natural regeneration. In addition, since the canopy of the oak woodland is fairly dense and natural regeneration is quite limited, it would be desirable over the long-term to instigate small-scale selective fellings/silvicultural thinning, whilst felling a small stand of planted larch/pine (<0.5 ha) and replacing it with oak/birch. The Abbeystead's woodland management proposals for the woodland complex as a whole already recognise these problems and do not conflict with nature conservation objectives for the site. In fact, it is hoped that repairs to fences/walls at the easternmost end of Calf Hill Wood will be undertaken in the next few years, whilst a programme of selective woodland thinning and small fellings will be instigated in the not too distant future under WGS.	
Yewbarrow Woods SAC 11.3 km from AONB boundary Area 112.89ha	**Annex I habitats that are a primary reason for selection of this site** • 91J0 Taxus baccata woods of the British Isles * Priority feature Extensive yew Taxus baccata groves occur on the slopes and crags of Yewbarrow in association with 91A0 old sessile oak woods and invasive beech Fagus sylvatica stands on acidic substrates. Over much of the site, where light conditions allow, grasses such as wavy hair-grass Deschampsia flexuosa and creeping soft-grass Holcus mollis predominate with bracken Pteridium aquilinum. There are also some base-rich flushes along the stream-sides.	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features'), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the	Although lack of regeneration at Yewbarrow is a problem resulting from browsing by deer, woodland grants have been given in recent years to encourage regeneration of native trees, together with funding for stockproof fencing. Estimates of areas covered by yew, juniper and	**Yewbarrow Woods SSSI** Units 1, 2, 4, 5 unfavourable recovering Unit 3 favourable 25.47% favourable, 74.53% unfavourable recovering

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
	Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site • 5130 Juniperus communis formations on heaths or calcareous grasslands • 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles	site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely	heath will be checked the next time the site is surveyed.	
Bowland Fells SPA 10.2 km from AONB boundary Area 16002.31ha	The Bowland Fells are an extensive upland area in Lancashire, in north-west England. It forms a western outlier of the Pennines, with summits mostly in the range 450-550 m. The geology is millstone grit-capped fells overlying softer Bowland shales, resulting in predominantly acidic vegetation types. The major habitats are heather-dominated moorland and blanket mire. It is important for its upland breeding birds, especially breeding Merlin Falco columbarius and Hen Harrier Circus cyaneus. **This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:** During the breeding season; • Hen Harrier Circus cyaneus, 13 pairs representing up to 2.6% of the breeding population in Great Britain (Three year mean 1995-1997). • Merlin Falco columbarius, 20 pairs representing up to 1.5% of the breeding population in Great Britain (Three year mean, 1994-1996). **This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:** During the breeding season; • Lesser Black-backed Gull Larus fuscus, 13,900 pairs representing up to 11.2% of the breeding Western Europe/Mediterranean/Western Africa population (Minimum 1998; 13,900-16,300 pairs).	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and, • The distribution of the qualifying features within the site.	The expansive blanket bog and heather dominated moorland provides suitable habitat for a diverse range of upland breeding birds. Favourable nature conservation status of the site depends on appropriate levels of sheep grazing, sympathetic moorland burning practice, sensitive water catchment land management practices and on going species protection. Since designation as an SPA, many localised problems of over-grazing have been controlled through management agreements or the Countryside Stewardship Scheme. To date approximately 20% of SPA is under Section 15 management agreements and Countryside Stewardship to stimulate heather regeneration in order to produce better moorland for grouse and raptors alike. Burning plans and stocking levels have also been agreed for all other areas of the SPA through Site Management Statements, whilst problems of raptor persecution continues to be addressed by the RSPB in conjunction with North West Water,	**Bowland Fells SSSI** Units 1, 9 favourable Units 2, 3, 4, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 unfavourable recovering Units 5, 6, 15 unfavourable declining due to low numbers of lesser black backed gulls recorded in 2012. 5.29% favourable, 80.11% unfavourable recovering, 14.61% unfavourable declining.iit

Site name and distance from the AONB boundary	Qualifying features	Conservation Objectives	Vulnerabilities	Site Condition Assessment Component SSSIs are listed, as well as a summary of their condition assessment and reason for adverse condition, where appropriate.
			English Nature and Lancashire Constabulary.	

Definitions of terms:

Favourable: The designated feature(s) within a unit are being adequately conserved and the results from monitoring demonstrate that the feature(s) in the unit are meeting all the mandatory site specific monitoring targets set out in the FCT. The FCT sets the minimum standard for favourable condition for the designated features and there may be scope for the further (voluntary) enhancement of the features / unit. A unit can only be considered favourable when all the component designated features are favourable.

Unfavourable recovering: Often known simply as 'recovering'. Units/features are not yet fully conserved but all the necessary management mechanisms are in place. At least one of the designated feature(s) mandatory attributes are not meeting their targets (as set out in the site specific FCT). Provided that the recovery work is sustained, the unit/feature will reach favourable condition in time.

Unfavourable declining: The unit/feature is not being conserved and will not reach favourable condition unless there are changes to site management or external pressures. The site condition is becoming progressively worse, and this is reflected in the results of monitoring over time, with at least one of the designated features mandatory attributes not meeting its target (as set out in the site specific FCT) with the results moving further away from the desired state. The longer the SSSI unit remains in this poor condition, the more difficult it will be, in general, to achieve recovery.

Appendix B

Functionally Linked Land Desk Study