

**Eden Preferred Housing and Policies Document:  
Habitats Regulations Assessment Screening Report**



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## Executive Summary

### Introduction

The Habitats Directive is one of Europe's cornerstone policies for the protection of sites and species considered internationally significant and vital to the global conservation of biodiversity. Under Directives 91/43/EEC and 2009/147/EC a hierarchy of sites and species have been established, along with the conditions for their preservation. There are different types of sites under the directives, though collectively they are known as Natura 2000 sites.

The directive outlines a responsibility for Local Authorities to ensure that the interest features of the Natura 2000 sites are not compromised as a result of plans or programmes developed by the Authority. The way that Local Authorities determine potential impacts is through a Habitats Regulations Assessment.

The purpose of the Habitats Regulations Assessment is to appraise the potential impacts of Eden's Preferred Housing Sites and Policies document against the conservation objectives of the Natura 2000 sites. The Habitats Directive works to ensure that a precautionary approach to development is taken, avoiding potential conflicts as a starting position, applying mitigation and compensation only if compelling reasons for development are provided.

This approach differs from the Sustainability Appraisal, which seeks to balance social, environmental and economic concerns. In this sense, the Habitats Regulations Assessment is therefore a strictly applied plan.

### Stages of Assessment

The assessment has considered the impact of the plan, in combination with other relevant plans, against this list of sites. In doing so, it anticipates any potential impacts associated with development and predicts whether these impacts will lead to significant impacts against the conservation objectives of the sites.

Guidance produced by Natural England in 2009 on the Habitats Directive and Local Development Documents outlines four distinct stages for assessments under the Habitats Directive:

Stage 1: Screening

Stage 2: Appropriate Assessment

Stage 3: Assessment of alternative solutions

Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain

This report is the outcome of the screening stage.

## Sites

In accordance with guidance prepared for Natural England in 2009, all sites within the boundary have been included in the assessment. In addition, sites within 5km of Eden's developable area have been considered, along with sites with hydrological links, irrespective of the distance. The sites included in this assessment, are as follows:

**Table 1: List of sites included in study**

Site Name	Location	Type
Asby Complex (6 Sites)	In plan area	SAC
Cumbrian Marsh Fritillary (2 Sites)	In plan area	SAC
Helbeck & Swindale Woods (2 Sites)	In plan area	SAC
Lake District High Fells (1 site)	In plan area	SAC
Moorhouse – Upper Teesdale (2 sites)	In plan area	SAC
Naddle Forest	Within 5km	SAC
North Pennine Dales Meadows (4 sites)	In plan area	SAC
North Pennine Moors SAC(2 sites)	In plan area	SAC
North Pennine Moors SPA (2 sites)	In plan area	SPA
River Derwent & Bassenthwaite Lake	Within 5km	SAC
River Eden SAC	In plan area	SAC
River Kent SAC	Within 5km	SAC
Tarn Moss	Within 5km	SAC
Tyne & Allen River Gravels	In plan area	SAC
Tyne and Nent (4 sites)	In plan area	SAC

## Summary of Findings

Statutory consultees commented on the Habitats Regulations screening assessment for the Core Strategy. At this high level, it was difficult to understand the impact of the policies, as specific sites were not identified. A number of alterations were made to policies in this document, to ensure that protection of European sites was a priority through the development of the document. The consultees highlighted that allocations documents produced under the Core Strategy were likely to require a full assessment, as the documents specifically allocate locations for development.

The screening report has investigated the likely impacts of development, summarised in the below table:

**Table 2: Summary of likely effects on European Sites**

<b>International Site</b>	<b>Nature of Impact</b>	<b>Likely Significant Effects?</b>	<b>Impact on Conservation Objective</b>	<b>Mitigation Needed?</b>
Asby Complex SAC	Recreational Disturbance	No	Potential recreational pressures could including off road sports, can damage woodland ground flora and disturb breeding birds.	No
	Human Impacts	No	Possibility that local limestone clints will be removed by individuals for garden rockery stone (now illegal).	No
Cumbrian Marsh Fritillary SAC	Recreational Disturbance	No	Objectives for conservation relate to monitoring natural processes of the site to ensure correct balance is maintained to support to the marsh fritillary butterfly. Impacts negligible.	No
	Water Quality Impacts	No		
	Water Resource Availability	No		
	Disturbed Flight Lines/Ecological Activity	No		
	Pollution (Chemical, light, noise, air and dust)	No		
Helbeck & Swindale Wood SAC	Human Impacts	Uncertain	The introduction of non-native species in the area may be detrimental to native woodland species.	?
	Water Quality Impacts	No	Unlikely	No
	Pollution (Chemical, light, noise, air and dust)	No	Possible impacts associated with recreational use could include trampling, (air, noise, light, fly-tipping)	No
Lake District High Fells SAC	Recreational Disturbance	No	Blanket bog on Shap Fells is sensitive to degradation from recreational pressures	No
	Water Quality Impacts	No	Bog quality linked to the availability and quality of water sources. Unlikely to be affected by development.	No
	Water Resource Availability	No		No
	Human Impact	No	Natural grassland site, which requires maintenance or grazing. Impacts of plan unlikely	No
	Pollution (Chemical, light, noise, air and dust)	No	In levels of pollution is likely to be minimal.	No
	Human Impacts	No	The introduction of non-native species in the area may be detrimental to breeding birds	No
	Disturbed Flight Lines/Ecological Activity	Uncertain	Though impacts upon known sites are unlikely, there may be transitional sites we are unaware of.	?
	Pollution (Chemical, light, noise, air and dust)	No	Effects unlikely	No
	Water Quality Impacts	No	Conservation of interest features is reliant upon the maintenance of current conditions. Impact of recreational use, pollutants and water	No
	Water Resource Availability			
	Disturbed Flight Lines/Ecological Activity			
	Pollution (Chemical, light, noise, air and dust)			

International Site	Nature of Impact	Likely Significant Effects?	Impact on Conservation Objective	Mitigation Needed?
			resources are low.	
Moorhouse – Upper Teesdale SAC	Hydrological changes	No	Limited to management of land. Unlikely in-combination effects	No
	Water pollution	No		
	Recreational disturbances	No	There may be slight increases in recreational use of the site, though impacts are likely to be low	No
Naddle Forest	Recreational Disturbance	No	Impacts unlikely	No
	Hydrological changes	No	Impacts unlikely	No
North Pennine Dales Meadows	Hydrological changes	No	Conservation objectives linked to agricultural management, to ensure that levels of pollution are controlled.	No
North Pennine Moors SAC	Hydrological changes	No	The condition of the peat based soils in this SAC is linked to agricultural management. The plan will not lead to significant issues	No
	Recreational Disturbance	No	Dog walking is the main concern from development, and the effects on breeding bird populations. Given the locational strategy, impacts are unlikely to be significant.	No
North Pennine Moors SPA	Hydrological changes	No	The condition of the peat based soils in this SAC is linked to agricultural management. The plan will not lead to significant issues	No
	Recreational Disturbance	No	Dog walking is the main concern from development, and the effects on breeding bird populations. Given the locational strategy, impacts are unlikely to be significant.	No
River Derwent & Bassenthwaite Lake SAC	Recreational Disturbance	No	Impacts unlikely	No
	Water Quality Impacts	No	Conservation of river species dependent on maintenance of river quality. Impacts unlikely	No
	Water Resource Availability	No	Impacts unlikely	No
	Pollution (Chemical, light, noise, air and dust)	No	Development is unlikely to lead to any significant impacts	No
River Eden SAC	Recreational Disturbance	Yes	There may be an impact as a direct result of development adjacent to the river, but increased recreational use of river banks may be detrimental to Otter habitats. This is potentially compounded through the redevelopment of Stamphill gypsum site in Long Marton, which is likely to include	Yes
	Water Quality Impacts	Yes	Run off from both construction and end housing use is likely to lead to detrimental impacts on water quality in the river.	Yes
	Water Resource Availability	Uncertain	Construction and residential consumption is likely to be taken	?



International Site	Nature of Impact	Likely Significant Effects?	Impact on Conservation Objective	Mitigation Needed?
			from natural boreholes, though high levels are needed for the construction of expected units.	
	Pollution (Chemical, light, noise, air and dust)	Yes	In addition to surface water run off, additional pollutants as a result of development may lead to algae enrichment and eutrophication.	Yes
River Kent SAC	Recreational Disturbance	No	There may be cumulative impacts with neighbouring plans, though significant impacts unlikely	No
	Water Quality Impacts	No	Effects unlikely	No
	Pollution (Chemical, light, noise, air and dust)	No	No development within close proximity to SAC	No
Tarn Moss SAC	Recreational Disturbance	No	The site falls within an NNR and as such may be subject to increased recreation pressures.	No
	Water Quality Impacts	No	The interest features of this site are transition mires and quaking bogs, reliant upon nutrient poor ground water to feed the soils. Changes to	No
	Pollution (Chemical, light, noise, air and dust)	No	The interest features of this site are transition mires and quaking bogs, reliant upon nutrient poor ground water to feed the soils.	No
Tyne & Allen River Gravels SAC	Recreational Disturbance	No	The principal feature of this site is the metal rich calaminarian grasslands. Effects of development are unlikely to have significant impacts on this site.	No
	Water Quality Impacts	No		No
	Water Resource Availability	No		No
	Pollution (Chemical, light, noise, air and dust)	No		No
Tyne and Nent SAC	Recreational Disturbance	No	The principal feature of this site is the metal rich calaminarian grasslands. Though part of this SAC lies directly adjacent to Nenthead, the impacts of the plan in isolation or along with other plans are likely to be low.	No
	Water Quality Impacts	No		No
	Water Resource Availability	No		No
	Pollution (Chemical, light, noise, air and dust)	No		No

## Next Steps

A full Appropriate Assessment will be required to appraise the impacts of the following sites.

- River Eden SAC

In the event that the consultation process with statutory consultees identifies additional potential significant impacts, other European sites may also require testing through a full Appropriate Assessment.

# 1. Introduction

## Purpose of Assessment

The screening report produced by the council has been prepared to determine whether an Appropriate Assessment is required to compliment the preferred options stage of the Housing Sites and Policies Document.

## Requirement for HRA

The need for a Habitats Regulations Assessment was established in Article 6 of the 1992 EC Habitats Directive, and transposed into British law through the Conservation of Habitats and Species Regulations 2010. The aim of the directive is to “maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest”<sup>1</sup>. These sites are designated because of the key species and habitats that reside within them. It is these interest features which the Directive seeks to maintain and enhance.

The Habitats Regulations Assessment (HRA) investigates whether any of the proposed sites or policies will lead to any likely significant effects on the conservation objectives of the European sites. These sites often referred to as European sites comprise of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites.

- **SACs** are chiefly designated under the 1992 Habitats Directive and relate to significant habitats (Annex 1) and species (Annex 2) which have been identified for their biological importance.
- **SPAs** are designated under the European Directive on the conservation of wild birds (Directive 79/49/EEC). This directive sets out a framework for conservation and management of wild birds, including the habitats that support them.
- **Ramsar** sites are internationally significant wetland sites, which are listed under the 1971 Convention on Wetlands of International Importance, also known as the Ramsar Convention.

## Housing Sites and Policies Document

The Housing sites and policies document will form an integral part of the Eden Local Plan. The document will operate within the strategic approach of the Core Strategy DPD, which outlined the key areas which housing should be distributed t and set the strategic context for new development. The housing sites and policies document will appraise a number of sites within the district, to determine their suitability for development and their potential to contribute towards sustainable development in the district.

The document seeks to allocate housing sites above 0.15ha, which equates to schemes of 4 units or more. This ensures that the level of development is considered strategic, but also that the development is capable of contributing towards affordable housing, under policies in the Core Strategy. This also sieves the number of sites that the Council will consider, ensuring a timely process. Sites below this threshold will be expected to follow the normal planning application process, and will account for the Habitats Directive accordingly.

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<sup>1</sup> Council Directive 92/43/EEC: Habitats Regulations Article 2 (2)  
Eden Preferred Housing Policies And Sites: Habitats Regulations Assessment

The preferred sites and policies document has been written as a progression of the strategic policies in the Core Strategy. The Core Strategy distributes new growth to a hierarchy of Key and Local Service Centres, which have been designated due to their size and affluence of vital village services. The Core Strategy sets out a vision for the district which involves finding appropriate land to deliver 5258 housing units between 2003 and 2025. Up to March 2012, 1207 units have been completed. There are also a number of existing permissions which have been granted or are under construction. Taking these into account, we have 2792 units left to allocate within the Key and Local Service Centres. The Numbers of units will be distributed based on percentages set in the Core Strategy. The numbers below reflect the target figures over the 22 years, but have been revised to discount growth permitted or developed in the past 9 years.

Penrith – 60% (2105 units)

Alston – 4% (127 units)

Appleby – 9% (166 units)

Kirkby Stephen -7% (226 units)

Local Service Centres – 20% (168 units)

Outside of this development hierarchy, there is likely to be small scale growth which will be directed to areas where there is a high level of affordable housing need. These are considered to be windfall sites, which are unplanned growth outside of the strategic plan.

In addition to the identified sites, the document also proposes a number of housing specific policies which will be

## Structure of assessment

There are a number of stages to the assessment which should be undertaken to ascertain whether the plan will have any impact on the integrity of European sites within, or related to Eden's administrative boundary.

**Table 3: Stages in Habitats Regulations Assessment<sup>2</sup>**

Stage	Task	Outcome
<b>Stage 1:</b> Screening	Identification of European sites potentially affected by the plan	List of sites within 5km boundary of site, including other sites that have hydrological or migratory links with site
	Why the European site has been designated and its conservation objectives	List of qualifying features of interest
	Likely effect of the plan on the qualifying features	Using a precautionary approach, sites are screened for likely significant effects

<sup>2</sup> Adapted from guidance from Levett-Therivel <http://www.levett-therivel.co.uk/AAinE.htm>  
Eden Preferred Housing Policies And Sites: Habitats Regulations Assessment

	Likely 'in combination' effect on European sites	Considers projects either in place, or due to take place which may have an impact on sites
<b>Stage 2:</b> Appropriate assessment	Description of plan and baseline	Plan details are described, along with the baseline condition of sites.
	Impact prediction	Drawing from the screening report, potential impacts of the plan are investigated, using methods such as the Source – pathway – receiver approach.
	Evaluation of impacts against conservation objectives	Impacts are tested against qualifying features of European sites, to understand whether there will be significant impacts on the conservation objectives of the sites.
<b>Stage 3:</b> Assessment of alternative solutions	Avoidance, mitigation and offsetting	Where adverse affects have been identified, alternative options which reduce the impacts on site should be advocated. If no viable alternatives exist, proposals should demonstrate how effects will be mitigated.
<b>Stage 4:</b> Assessment where no alternatives remain	Compensation	Reaching this position should be avoided at all costs. Such development would only be permitted if 'imperative reasons of overriding public interest' (IROPI) have been demonstrated, which would require adequate compensatory measures

## Consultation

This document will be consulted upon alongside the preferred sites and policy document. Representations will be sought from statutory consultees and interest groups who can help shape the report.

## 2. Methodology

### Sites Included within the Assessment

The HRA is principally concerned with the potential effects of development as a result of the housing sites and policies document. It is however required to consider any in combination effects that may arise due to the relationship of the plan along with any transboundary plans.

**Table 4: List of European Sites and Constituent SSSIs in Study**

Site Name	Location	Type	Constituent SSSIs (in Study Area)
Asby Complex	In plan area	SAC	Crosby Gill
			Crosby Ravensworth Fell
			Ewefell Mire
			Great Asby Scar
			Sunbiggin tarn & Moors & Little Asby Scar
			The Clouds
Cumbrian Marsh Fritillary	In plan area	SAC	Middlesceugh Woods & Pastures
			Skelton Pasture
Helbeck & Swindale Woods	In plan area	SAC	Helbeck Wood
			Swindale Wood
Lake District High Fells	In plan area	SAC	Shap Fells

Moorhouse – Upper Teesdale	In plan area	SAC	Appleby Fells
			Moorhouse & Cross Fell
Naddle Forest	Within 5km	SAC	Naddle Forest
North Pennine Dales Meadows	In plan area	SAC	Bretherdale Meadows
			Bowber Head & Piper Holes Meadow
			Raisbeck meadows
			Town End Meadows Little Asby
North Pennine Moors SAC	In plan area	SAC	Geltsdale & Glendue Fells
			Mallerstang-Swaledale Head
North Pennine Moors SPA	In plan area	SPA	Moorhouse & Cross Fell
			Appleby Fells
River Derwent & Bassenthwaite Lake	Within 5km	SAC	
River Eden SAC	In plan area	SAC	River Eden & Tributaries
River Kent SAC	Within 5km	SAC	
Tarn Moss	Within 5km	SAC	Tarn Moss
Tyne & Allen River Gravels	In plan area	SAC	
Tyne and Nent	In plan area	SAC	Alston Shingle Bank
			Haggs Bank
			River Nent at Blagill
			Whitesike Mine & Flinty Fell

## GIS Approach

Sites included within the study have been selected on their proximity with the Eden planning boundary. Under guidance produced by Consultants for Natural England in 2009, any sites within 5km of Eden's planning boundary have been considered. Beyond this distance, it was reasoned that effects on sites would be unlikely unless there was evidence to suggest hydrological or migratory linkages. There are 15 sites included within the study, depicted in table 4 above. Some of these sites are composed of multiple Sites of Special Scientific Interest (SSSIs), designated for their particular ecological interest features. The SSSI will only be considered in this study where the reason for designation corresponds with the qualifying features of interest of the European sites.

GIS appraisal tools have also been used to refine which sites are with a 250m radius of any European Sites. These sites are automatically screened for further assessment. Policies have been appraised, based upon the severity, permanence and duration of impacts both alone and in combination with other policies.

The impact of sites has also been considered in combination with other sites in the document, and wider plans or programmes.

### 3. In-Combination Effects

Article 6(3) of the Habitats Directive requires an Appropriate Assessment of “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”.

In line with the regulations, the HRA is required to consider any other plans or programmes which may give rise to significant effects when considered alongside the preferred sites and policies document.

**Table 5: Summary of in-combination plans and programmes**

Relevant Plans or Programmes	Summary of detail	Summary of potential In-Combination Effect
North Pennines AONB Management Plan	Contains policies for the development of sites within the North Pennines AONB	Policies unlikely to lead to in-combination effects.
Cumbria County Council (draft) minerals and waste local plan 2013-2028	The forthcoming Local Plan contains minerals and waste allocations in Eden, including a mineral extraction site in Long Marton, and a household recycling facility in Flusco, both of which are currently in operation.	HRA screening of document identifies likely significant effects to the River Eden SAC, including direct land take, disturbance and pollution to the quality of the river. It is likely that this will lead to significant effects in conjunction with the potential effects of the plan.
Cumbria County Council Minerals and waste Core Strategy	Spatial document which outlines the strategy for outlining waste and mineral sites	Policies unlikely to lead to in-combination effects.
Eden District Council Employment Allocations Document	Eden District Council will shortly be publishing its employment strategy, which will include the identification of 40ha of land in the Key Service Centres.	The plan will allocate development sites to the main towns in Eden in line with the Core Strategy. This will propose a substantial amount of new employment land in locations which will place additional pressures on the River Eden SAC

## 4. Assessment of likely significant effects

### Sites and Policies

**Table 6: Sites Assessed for Likely Significant Impacts**

Locations	All Sites Submitted	Too Small	Unsuitable Location	Flood Risk	Sites with planning permission	Within Heritage Asset	No Longer Available	Within Natural Asset	Other	Sites Assessed in Document/SA
Penrith	104	5	0	0	13	0	3	0	2	<b>81</b>
Alston	11	0	0	0	2	0	0	0	0	<b>9</b>
Appleby	18	2	0	0	1	0	0	0	0	<b>15</b>
Kirkby Stephen	22	1	0	1	2	0	0	0	0	<b>18</b>
LSCs/Other	271	28	83	5	12	2	0	0	0	<b>141</b>
<b>Total</b>	<b>426</b>	<b>38</b>	<b>0</b>	<b>6</b>	<b>18</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>264</b>

### Potential Impacts from Development

Based on the sites in Eden, there are a number of potential impacts that can occur as a result of development.

**Direct Land Take.** This can either relate to proposed sites falling within an SAC or SPA, but is more likely to relate to sites which are important to the intrinsic features of a European Site (such as a site known for bird nesting or migration outside of an SPA). New development sites will also increase disturbance on sites, adding noise, light pollution to the locality.

New developments will affect local **hydrology**, through both abstraction and pollution. There will be a requirement for additional water resources to both serve the construction of and end domestic use of new properties. Though most of Eden's water is sourced from natural bore holes, this does not preclude the possibility of increased resources on the river Eden. This may lead to the lowering of surface water levels and river flows downstream of new development sites.

New housing development can also lead to increased levels of **water pollution**. Many of the settlements in Eden have dated waste water infrastructure. Inadequate infrastructure may lead to increased waste water disposal into the local river systems, which may be coupled with additional surface water from new developments can lead to pollution entering both water courses and sites that are sensitive to changes in chemical composition.

**Additional road traffic** can lead to increased levels of air pollution, water contamination and levels of disturbance.

As new properties are developed, this also increases the **introduction of non-native species**. Domestic animals brought by families can lead to disturbances in breeding grounds, but within SPAs can also lead to a direct loss of avian species.



**Recreational pressures** from new development can include both increased tourism and local use of SACs/SPAs. This may range from disturbances related to walking or dog walking, to off road sports, which may lead to erosion and a loss of habitat.

### **Asby Complex**

The site is characterised through low nutrient, calcium rich limestone grasslands. Other notable features include hard oligo-mesotrophic waters and petrifying springs. One of the other notable habitats on this site includes Limestone pavements, accounting for 9% of the SAC, which is noted as one of the better examples of a limestone pavement in the country. The site also supports some species which have been listed as qualifying species including *Vertigo geyeri*, the geyer's whorl snail.

Appropriate management of the site is important, as in the past the limestone pavements have been extensively damaged supply of decorative rockery stone, though this has been mitigated through the use of Limestone Pavement Orders. Asby Complex SAC suffers from overgrazing through management agreements on some parts of the site.

The nearest area proposed for development is the village of Tebay, which has been proposed for a small residential site. The site may be vulnerable from recreational pressures associated with the limestone pavement, however the proposed growth is unlikely to have a significant impact on the site.

### **Cumbrian Marsh Fritillary**

The site has been principally designated due to the Marsh Fritillary butterfly. The conservation objectives seek to maintain or restore both the species of butterfly that is localised to this site and the broadleaved woodland, purple moor grass and rush pasture that supports them.

Situation for species in locality is under threat from parasitic wasps, who attack the caterpillars, for this reason, a suitable habitat is difficult to maintain.

The proposed development plan is unlikely to lead to significant impacts upon this SAC.

### **Helbeck & Swindale Woods**

The site has been designated for the Tilio-Acerion forest of slopes, screes and ravines (upland mixed Ash woodland).

Public right of way passes by, and intersects through Swindale Woods. Increased housing brings the possibility of direct human contact with the site. Possible impacts associated with recreational use could include trampling, (air, noise, light, fly-tipping) and the introduction of non-native species such as domestic animals. The main risks for this site are the upland grazing which take place within this site, however land management practices ensure that the impacts upon the integrity of the site are mitigated.

The main project which may have had the potential for an in-combination effect would have been A66 improvements. However, plans to upgrade the A66 between Penrith and Scotch Corner are on hold. Adjoining districts have no large developments expected in the vicinity of Helbeck and Swindale Woods SAC, and likely significant in-combination effects as a result of air pollution can therefore be ruled out.



## Lake District High Fells

The Shap Fells SSSI component of the SAC falls within the Eden planning boundary. The site is characterised by Oligotrophic to mesotrophic standing waters with vegetation, blanket Bog, European Dry Heaths, North Atlantic Wet Heaths with *Erica Tetralix*, Alkaline Fens.

The current condition (Summer 2000) of Blanket Bog on Shap varies from at or near favourable condition to highly degraded. Bog surfaces are fragile and can be affected by recreational uses which can lead to erosion, surface damage and affect the hydrological integrity of the bog. The installation of wind turbines can affect bog and healthland sites and can lead to habitat loss. Agricultural related activities are the prime reason for fen decline, though human interference (through ground trampling) can also be taken into account.

There may be additional recreational pressures on this site, however the is it not anticipated the effects will be significant.

## Moorhouse – Upper Teesdale

This is one of the largest sites in the study, which follows the physical shape of the North Pennine Moors SPA. The site shares boundaries with Northumberland County and contains a large number of habitats including Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp, alpine and boreal heaths, juniperus communis formations on heaths or calcareous grasslands, siliceous alpine and boreal grasslands, semi-natural dry grasslands and scrubland facies: on calcareous substrates, molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinia caerulea*), hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, mountain hay meadows, blanket bogs, petrifying springs with tufa formation (*Cratoneurion*), alkaline fens, alpine pioneer formations of the *Caricion bicoloris-atrofuscae*, siliceous scree of the montane to snow levels, calcareous and calcshist screes of the montane to alpine levels, calcareous rocky slopes with chasmophytic vegetation, siliceous rocky slopes with chasmophytic vegetation, round-mouthed whorl snail and marsh saxifrage.

The risks from development are associated with recreational use of the SAC, including trampling and disturbances of breeding bird sites. The hydrological and chemical composition of the site is important to the maintenance of the site integrity. Any plans that involved drainage or nutrient enrichment should be avoided. It is not considered that the plan, alone or in combination, will lead to significant impacts on this site.

## Naddle Forest

The site is classified through both woodland and dry heath land. Whilst the heath lands are recognised as a qualifying feature, the principal reason for selecting the site is the Old sessile oak woods with *Ilex* and *Blechnum*, which are supported in areas with base-poor soils and high levels of rainfall.

The European habitats on the site have been threatened by grazing, by both sheep and deer. Much of the woodland area has been fenced to reduce sheep and deer grazing and allow regeneration to occur, although deer still range through parts of the site. Sheep grazing pressures have been reduced on the heath areas through entry into the ESA scheme, and further reductions are planned through this mechanism.

The oak woodlands are vulnerable to changes in their composition and extents, through localised hydrological changes which may reduce the spread of bog land. The site may also be sensitive to overgrazing, however, this has little bearing on either the plan or associated developments.

### **North Pennine Dales Meadows**

The North Pennine Dales Meadows are characterised by hay and Molina meadows, which have established on calcareous or peaty soils. The meadows are vulnerable to eutrophication. However, the main sources of eutrophication are fertiliser and stock feeding, and so water quality impacts on the North Pennine Dales Meadows have not been considered to require an in combination assessment.

### **North Pennine Moors SAC**

The site is characterised through a number of qualifying features including European dry heaths, juniperus communis formations, blanket bogs, petrifying springs with tufa formation (Cratoneurion), siliceous rocky slopes with chasmophytic vegetation, old sessile oak woods with Ilex and Blechnum in the British Isles, northern Atlantic wet heaths with Erica tetralix.

These peaty upland areas have, in the past, struggled with agricultural schemes which have drained parts of this site for grazing livestock. Schemes to assist the recovery of the moors have taken place in recent years, however the sites are still vulnerable.

Recreational disturbances from dog walkers on breeding bird populations and pollution such as eutrophication can also be a problem for woodland. Land management is the main concern for this site and the LDF has very little impact on this.

### **North Pennine Moors SPA**

The SPA has been designated due to importance for its upland breeding bird community. Breeding birds on site include, though are not exclusive to, Circus cyaneus Falco columbarius, Falco peregrinus). Pluvialis apricaria.

Recreational pressures may occur, though success of species is dependent on maintenance of habitats. Overburning and drainage of blanket bogs, and pollution (nitrogen acidic deposits) are affecting habitat structure, and therefore bird populations. The introduction of non-native species through new housing, cats in particular, can be damaging to breeding bird populations.

The pattern of development proposed in the document is unlikely to lead to significant recreational pressure or disturbance on the SPA.

### **River Derwent & Bassenthwaite Lake**

The principal features of the site are the oligotrophic to mesotrophic standing waters and water courses of plain to mountane levels. These water bodies support a number of species including the marsh fritillary butterfly, lamprey species, otter and salmon.

The habitats are sensitive to hydrological changes, and nutrient enrichment, whilst the species are vulnerable to recreational uses and associated disturbance. Though the site falls

with 5km of the Eden planning boundary, it is not anticipated that there will be any significant impacts as a result of development.

### **River Eden SAC**

Historically, many of the Eden villages have grown around, or close to the river Eden for strategic or agricultural reasons. Three of the principal growth areas in the district Penrith, Appleby and Kirkby Stephen are very closely related to the river. A GIS analysis has determined that of the housing sites sieved into the study, 36 of them fall within 250m of the River Eden. Of the sites in the preferred option for the district, 11 sites fall within 250m of the River Eden, 5 of which are in Kirkby Stephen.

Whilst individually, they may not lead to changes in the quality of the qualifying interest features of the Eden SAC, we need to consider the cumulative impact of development and whether this will give rise to significant impacts. Some of the villages identified within the document have been identified to have existing waste water issues, which may lead to additional pollution and surface water adding to the River.

In-combination effects have also been identified through the draft Cumbria minerals and waste local plan and the Eden employment allocations document. The minerals and waste local plan proposes an extension of the Long Marton gypsum site, which has identified potential disturbances to otter species along the River Eden, and increased levels of pollution as a result of mining.

The forthcoming Eden Allocations document will be integrated with the housing sites and allocations document to create a comprehensive land allocations document. This document will aim to deliver 40ha of employment land towards the Key Service Centres. The type and precise locations of employment sites have yet to be determined. Depending on the nature of development, there will be implications for water abstraction and pollution given the proximity of these centres with the River Eden. The habitats regulations requires that a precautionary principle is used to determine significance and impact upon European sites. On this basis, potential development sites are likely to have significant effects on the SAC.

### **River Kent SAC**

The primary reason for selection of this site are the plain to montane watercourses, which support a number of species including white-clawed crayfish, freshwater pearl mussel and bullhead. Vulnerabilities to this site include increased levels of pollution, which may lead to changes to the chemical composition of the River.

The hydrological system of the River is distinct from Eden district, and as such the likelihood of impacts from the plan is unlikely.

### **Tarn Moss**

This small SAC lies on the boundary of the Eden planning area and has been chosen for its transition mires and quaking bogs. The site has developed in a hollowed glacial drift, and is vulnerable to changes in land management that may affect the hydrology on site.

Erosion from recreation may also lead to changes to the quality of the bogs and mires. It is not considered that the plan will lead to significant changes in the recreational use of this site.

### **Tyne & Allen River Gravels**

This encompasses the most extensive, structurally varied and species-rich examples of riverine Calaminarian grasslands in the UK. The river gravels contain a range of structural types, ranging from a highly toxic, sparsely vegetated area with abundant lichens through to closed willow/alder *Salix/Alnus* woodland.

The habitats have been developed through mining activities which took place in the past, resulting in metal deposits carried through the river. The grassland is slowly changing composition over time as the conditions for growth have long since changed. The site may be sensitive to increased recreational damage, though the impacts from proposed development in the plan is marginal.

### **Tyne and Nent**

The Tyne and Nent SAC is designated for calaminarian grasslands, which are vulnerable to eutrophication. It is possible that an increase in the nutrient levels in watercourses flowing through the sites could have a detrimental effect on this SAC. However, the Tyne and Nent SAC is contained entirely within Eden and there are no plans or projects which would have a detrimental impact on the SAC in combination with the housing sites and policies document.

## **5. Conclusion and Recommendations**

The HRA screening has considered the impacts of developing the potential housing sites, against the conservation objectives of the European sites.

The main risk affecting the integrity of the European sites are though indirect impacts on water quality and recreation. Based upon this, it is recommended that a further stage of assessment is undertaken to appraise the impacts of the River Eden SAC, based on the

- Effects of pollution directly adjacent to SAC
- Recreational pressures and direct land take associated with development
- Cumulative water pollution from settlements with waste water treatment issues
- In combination effects Cumbria waste and minerals local plan and Eden employment allocations document.

It is not anticipated that there are any other likely significant effects on other European sites in the study. These sites can be screened out for further assessment at this stage, unless additional information is provided by stakeholders during the consultation of the plan which indicate significant effects upon other sites.

Potential impacts as a result of the policies in the document have also been appraised, however they are not considered to present impacts that would alone, or in combination,

lead to significant effects on the integrity of the European sites. A summary of the potential impacts of the policies can be found in Appendix 5. Where there are deemed to be potential moderate impacts, enhancements have been recommended, which will mitigate against the potential impacts of the policies.

## Appendix 1 – European Sites and Interest Features

European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
<b>Asby Complex SAC (3122.23 ha)</b>	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	<p>Subject to natural change, to maintain in favourable condition*:</p> <ul style="list-style-type: none"> <li>• Calcareous grassland</li> <li>• Flushes</li> <li>• Lowland heath</li> <li>• Lowland (limestone) grassland</li> <li>• Open water (marl lake)</li> <li>• Swamp and fen</li> <li>• Calcareous flushes</li> <li>• Breeding bird assemblage</li> <li>• Breeding bird aggregation (black headed gull)</li> <li>• Vascular plant assemblage</li> <li>• Invertebrate assemblage</li> <li>• Surface Karst (IC) – Little Asby Scar</li> <li>• Inland outcrops and stream sections (EO) – Potts Valley</li> </ul> <p>with particular reference to</p> <ul style="list-style-type: none"> <li>• Hardwater springs depositing lime</li> <li>• Calcium-rich spring water fed fens</li> <li>• Calcium-rich fens dominated by great fen sedge</li> <li>• Limestone grassland</li> <li>• Purple moor grass meadows</li> <li>• Dry heath</li> <li>• Calcium-rich, nutrient poor lakes or pools</li> <li>• Geyers whorl snail</li> </ul> <p>* or restore to favourable condition if features are judged to be unfavourable</p>	<p>Land management, hydrology disturbance</p> <p>Disturbance – people, vehicles, animals drainage</p> <p>No unconsented tipping, landfill, tree planting, engineering or drainage work. No inappropriate specimen collecting. No removal of rock from the site.</p>
	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> )		
	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )		
	Alkaline fens		
	Limestone pavements		
	Geyer's whorl snail		
	Slender green feather-moss		
	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.		
	European dry heaths		
	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>		

European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
<b>Cumbria Marsh Fritillary Site SAC (22.96 ha)</b>	Marsh fritillary butterfly	Subject to natural change, to maintain in favourable condition*: <ul style="list-style-type: none"> <li>• Broadleaved Woodland</li> <li>• Purple moor grass &amp; rush Pasture</li> </ul> with particular reference to <ul style="list-style-type: none"> <li>• Marsh Fritillary,</li> </ul> * or restore to favourable condition if features are judged to be unfavourable	Conservation objectives are to maintain broadleaved woodland and purple moor grass and rush pasture in favourable condition, to support the marsh fritillary.
<b>Helbeck and Swindale Woods SAC (136.38 ha)</b>	<i>Tilio-Acerion</i> forests of slopes, screes and ravines	Subject to natural change, to maintain in favourable condition*: <ul style="list-style-type: none"> <li>• Broadleaved, mixed and yew woodland</li> <li>• Plant assemblage</li> </ul> with particular reference to <ul style="list-style-type: none"> <li>• <i>Tilio-acerion</i> forests of slopes, screes and ravines</li> </ul> * or restore to favourable condition if features are judged to be unfavourable	Main concerns are pollution, excessive grazing and spread of non-native species. Of these, only pollution is a possible impact of policies in the LDF.
<b>Lake District High Fells SAC (26999.36ha) (698.33ha in LDF)</b>	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	To maintain* in favourable condition: <ul style="list-style-type: none"> <li>• Blanket bogs</li> <li>• European dry heaths</li> <li>• Northern Atlantic wet heaths with <i>Erica tetralix</i></li> <li>• Alkaline fens</li> <li>• Oligotrophic to mesotrophic standing waters</li> </ul> *maintenance implies restoration if the feature is not currently in favourable condition.	Concerns are almost entirely to do with land management (grazing pressure, hot fires, use of vehicles), over which the LDF has little influence. Changes to hydrology of the area would also have an impact N.B. Only unit within LDF area is Shap Fells SSSI
	Northern Atlantic wet heaths with <i>Erica tetralix</i>		
	European dry heaths		
	Alpine and Boreal heaths		
	<i>Juniperus communis</i> formations on heaths or calcareous grasslands		
	Siliceous alpine and boreal grasslands		

European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
	<i>Hydrophilous</i> tall herb fringe communities of plains and of the montane to alpine levels Blanket bogs Siliceous scree of the montane to snow levels ( <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> ) Siliceous rocky slopes with chasmophytic vegetation Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles Species-rich <i>Nardus</i> grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) Alkaline fens Calcareous rocky slopes with chasmophytic vegetation Slender green feather-moss		
<b>Moorhouse – Upper Teesdale SAC*</b> <b>(38808.64 ha)</b> <b>(10585.35ha in LDF)</b>	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Alpine and Boreal heaths <i>Juniperus communis</i> formations on heaths or calcareous grasslands Calaminarian grasslands of the <i>Violetalia calaminariae</i> Siliceous alpine and boreal	To maintain* in favourable condition: <ul style="list-style-type: none"> <li>Habitats for the populations of regularly occurring bird species (Golden Plover, Hen Harrier, Merlin, Peregrine and Curlew): <ul style="list-style-type: none"> <li>Upland moorland</li> <li>Upland pasture</li> </ul> </li> <li>Blanket bog (active only)</li> <li>European dry heaths</li> <li>Alpine and boreal heaths</li> </ul>	Land management is the main concern (LDF has very little impact on land management). Disturbance from people e.g. trampling can be problem for some aspects – particularly tufa formation For some interest features, hydrological and chemical composition of the local environment appear critical and all modifications (eg drainage, nutrient input) should be avoided



European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
	grasslands	<ul style="list-style-type: none"> <li>• Siliceous alpine and boreal grasslands</li> </ul>	
	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )	<ul style="list-style-type: none"> <li>• Alkaline fens</li> <li>• Petrifying springs with tufa formations (<i>Cratoneurion</i>)</li> </ul>	
	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> )	<ul style="list-style-type: none"> <li>• Alpine pioneer formations of <i>Caricion bicoloris-atrofuscae</i></li> </ul>	
	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	<ul style="list-style-type: none"> <li>• Semi-natural dry grassland and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>)</li> </ul>	
	Mountain hay meadows	<ul style="list-style-type: none"> <li>• Calaminarian grasslands of the <i>Violetalia calaminariae</i></li> </ul>	
	Blanket bogs	<ul style="list-style-type: none"> <li>• Limestone pavement</li> </ul>	
	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )	<ul style="list-style-type: none"> <li>• Calcareous rocky slopes with chasmophytic vegetation</li> </ul>	
	Alkaline fens	<ul style="list-style-type: none"> <li>• Siliceous rocky slopes with chasmophytic vegetation</li> </ul>	
	Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i>	<ul style="list-style-type: none"> <li>• Calcareous and calcshist screes of the montane to alpine levels</li> </ul>	
	Siliceous scree of the montane to snow levels ( <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> )	<ul style="list-style-type: none"> <li>• Siliceous scree of the montane to snow levels</li> </ul>	
	Calcareous and calcshist screes of the montane to alpine levels ( <i>Thlaspietea rotundifolii</i> )	<ul style="list-style-type: none"> <li>• Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels</li> </ul>	
	Calcareous rocky slopes with chasmophytic vegetation	<ul style="list-style-type: none"> <li>• Habitats for the population of marsh saxifrage (<i>Saxifraga hirculus</i>)</li> </ul>	
	Siliceous rocky slopes with chasmophytic vegetation	* maintenance implies restoration if the feature is not currently in favourable condition	
	Round-mouthed whorl snail		
	Marsh saxifrage		

European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
	European dry heaths		
	Limestone pavements		
<b>North Pennine Dales Meadows SAC</b> <b>(497.09 ha)</b> <b>(55.75ha in Ldf)</b>	Mountain hay meadows	Subject to natural change, to maintain in favourable condition*: <ul style="list-style-type: none"> <li>• Mountain hay meadow</li> </ul> *or restored to favourable condition if features are judged to be unfavourable.	Mostly concerned with land management issues, which are not an issue for LDF Changes to water table would be a concern Any development on site Raisbeck Meadows includes roadside verges on a very minor road between Raisbeck and the B6260, so development affecting this road would potentially be an issue
	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) (Not a feature of constituent SSSIs within LDF area.)		
<b>North Pennine Moors SAC*</b> <b>(103,109.42 ha)</b> <b>(937.37 in LDF)</b>	European dry heaths	To maintain* in favourable condition: <ul style="list-style-type: none"> <li>• Habitats for the populations of Annex 1 species of European Importance (Golden Plover, Hen Harrier, Merlin and Peregrine) with particular reference to               <ul style="list-style-type: none"> <li>○ Upland moorland</li> </ul> </li> <li>• Habitats for the populations of migratory bird species (curlew) of European importance, with particular reference to:               <ul style="list-style-type: none"> <li>○ Upland moorland</li> <li>○ Upland pasture</li> </ul> </li> <li>• Blanket bog</li> <li>• European dry heaths</li> <li>• Northern Atlantic wet heaths with <i>Erica tetralix</i></li> <li>• Alkaline fens</li> <li>• Petrifying springs with tufa formations (<i>Cratoneurion</i>)</li> <li>• Calcareous rocky slopes with chasmophytic vegetation</li> <li>• Siliceous rocky slopes with chasmophytic</li> </ul>	Disturbance from dogs and people can be a problem, especially from April to mid July. Pollution such as eutrophication can also be a problem for woodland. However, land management is the main concern and the LDF has very little impact on this.
	<i>Juniperus communis</i> formations on heaths or calcareous grasslands		
	Blanket bogs		
	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )		
	Siliceous rocky slopes with chasmophytic vegetation		
	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles		
	Northern Atlantic wet heaths with <i>Erica tetralix</i>		
	<i>Calaminarian</i> grasslands of the <i>Violetalia calaminariae</i>		
	Siliceous alpine and boreal grasslands		
	Semi-natural dry grasslands and scrubland facies: on calcareous substrates ( <i>Festuco-Brometalia</i> )		

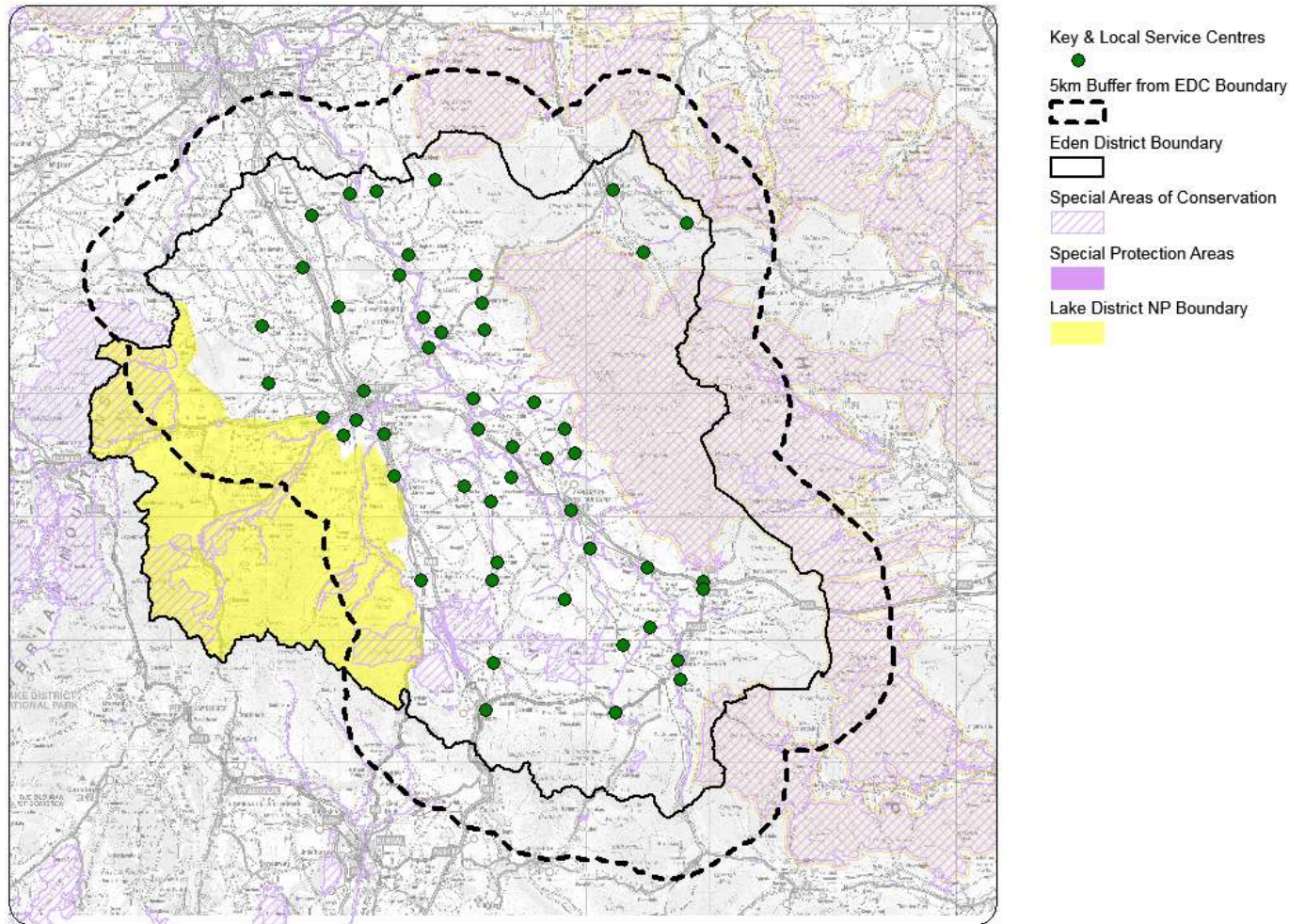
European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
	Alkaline fens Siliceous scree of the montane to snow levels ( <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> ) Calcareous rocky slopes with chasmophytic vegetation Marsh saxifrage	vegetation <ul style="list-style-type: none"> <li>• Calcareous and calcshist screes of the montane to alpine levels</li> <li>• Siliceous scree of the montane to snow levels</li> <li>• Calaminarian grasslands of the <i>Violetalia calaminariae</i></li> <li>• Old oak woodlands with <i>Blechnum</i> and <i>Ilex</i></li> </ul> * maintenance implies restoration if the feature is not currently in favourable condition	
<b>North Pennine Moors SPA*</b> <b>(147246.4 ha)</b> <b>(25642.32ha in LDF)</b>	Golden Plover ( <i>Pluvialis apricaria</i> ) Hen Harrier ( <i>Circus cyaneus</i> ) Merlin ( <i>Falco columbarius</i> ) Peregrine ( <i>Falco peregrinus</i> ) Curlew ( <i>Numenius arquata</i> ) Dunlin ( <i>Calidris alpina schinzii</i> )	To maintain* in favourable condition: <ul style="list-style-type: none"> <li>• Habitats for the populations of Annex 1 species of European Importance (Golden Plover, Hen Harrier, Merlin and Peregrine) with particular reference to <ul style="list-style-type: none"> <li>○ Upland moorland</li> </ul> </li> <li>• Habitats for the populations of migratory bird species (curlew) of European importance, with particular reference to: <ul style="list-style-type: none"> <li>○ Upland moorland</li> <li>○ Upland pasture</li> </ul> </li> <li>• Blanket bog</li> <li>• European dry heaths</li> <li>• Northern Atlantic wet heaths with <i>Erica tetralix</i></li> <li>• Alkaline fens</li> <li>• Petrifying springs with tufa formations (<i>Cratoneurion</i>)</li> <li>• Calcareous rocky slopes with chasmophytic vegetation</li> </ul>	Disturbance from dogs and people can be a problem, especially from April to mid July. Pollution such as eutrophication can also be a problem for woodland. However, land management is the main concern and the LDF has very little impact on this.

European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
		<ul style="list-style-type: none"> <li>Siliceous rocky slopes with chasmophytic vegetation</li> <li>Calcareous and calcshist screes of the montane to alpine levels</li> <li>Siliceous scree of the montane to snow levels</li> <li>Calaminarian grasslands of the <i>Violetalia calaminariae</i></li> <li>Old oak woodlands with <i>Blechnum</i> and <i>Ilex</i></li> </ul> <p>* maintenance implies restoration if the feature is not currently in favourable condition</p>	
<b>River Eden and Tributaries (2463.23ha)</b>  <b>(755.00ha in LDF)</b>	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	Subject to natural change, to maintain in favourable condition*: <ul style="list-style-type: none"> <li>Rivers and Streams</li> <li>Wet woodland</li> <li>Lowland wetland</li> <li>Standing Open Water</li> <li>Atlantic salmon <i>Salmo salar</i></li> <li>River lamprey <i>Lampetra fluviatilis</i></li> <li>Brook lamprey <i>Lampetra planeri</i></li> <li>Sea lamprey <i>Petromyzon marinus</i></li> <li>Bullhead <i>Cottus gobio</i></li> <li>White-Clawed crayfish <i>Austropotamobius pallipes</i></li> <li>Schelly <i>Coregonus lavaretus</i></li> <li>Otter <i>Lutra lutra</i></li> <li>Invertebrate Assemblage</li> <li>Breeding bird assemblage</li> <li>Sand martins (breeding)</li> </ul>	Only unit of this type (Ullswater) is upstream of LDF area – not a concern
	Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation		Sewage and any other discharges into river, Any development within river, or on or near riverbank Development in riparian zone (could use SFRA 'functional floodplain' area as a proxy for screening purposes)
	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> )		Any development close to woodland (preventing expansion/regeneration) Development affecting natural river processes
	White-clawed (or Atlantic stream) crayfish		As for whole river, particular concerns include barriers to fish migration or loss of gravel from salmon spawning sites
	Sea lamprey		
	Brook lamprey		
	River lamprey		

European Site	Qualifying Interest Features	Conservation Objectives	Possible Concerns for LDF
	Atlantic salmon	<ul style="list-style-type: none"> <li>• Surface Karst (IC)</li> </ul> *or restore to favourable condition if features are judged to be unfavourable.	
	Bullhead		
	Otter		As for whole river, also light and noise disturbance would be a concern
<b>Tyne and Nent (36.84 ha)</b>	Calaminarian grasslands of the <i>Violetalia calaminariae</i>	Subject to natural change, to maintain in favourable condition*: <ul style="list-style-type: none"> <li>• Grasslands rich in heavy metals</li> <li>• Active Geomorphological processes (IA)</li> <li>• Calaminarian grassland</li> <li>• Upland Calcareous grassland</li> <li>• Calcareous grassland</li> </ul> *or restore to favourable condition if features are judged to be unfavourable.	Concerns are mainly to do with managing succession and other changes not relevant to LDF. Other than any development onsite, LDF's potential influence would be changes to river processes



Appendix 2 – Map of European Sites in Eden

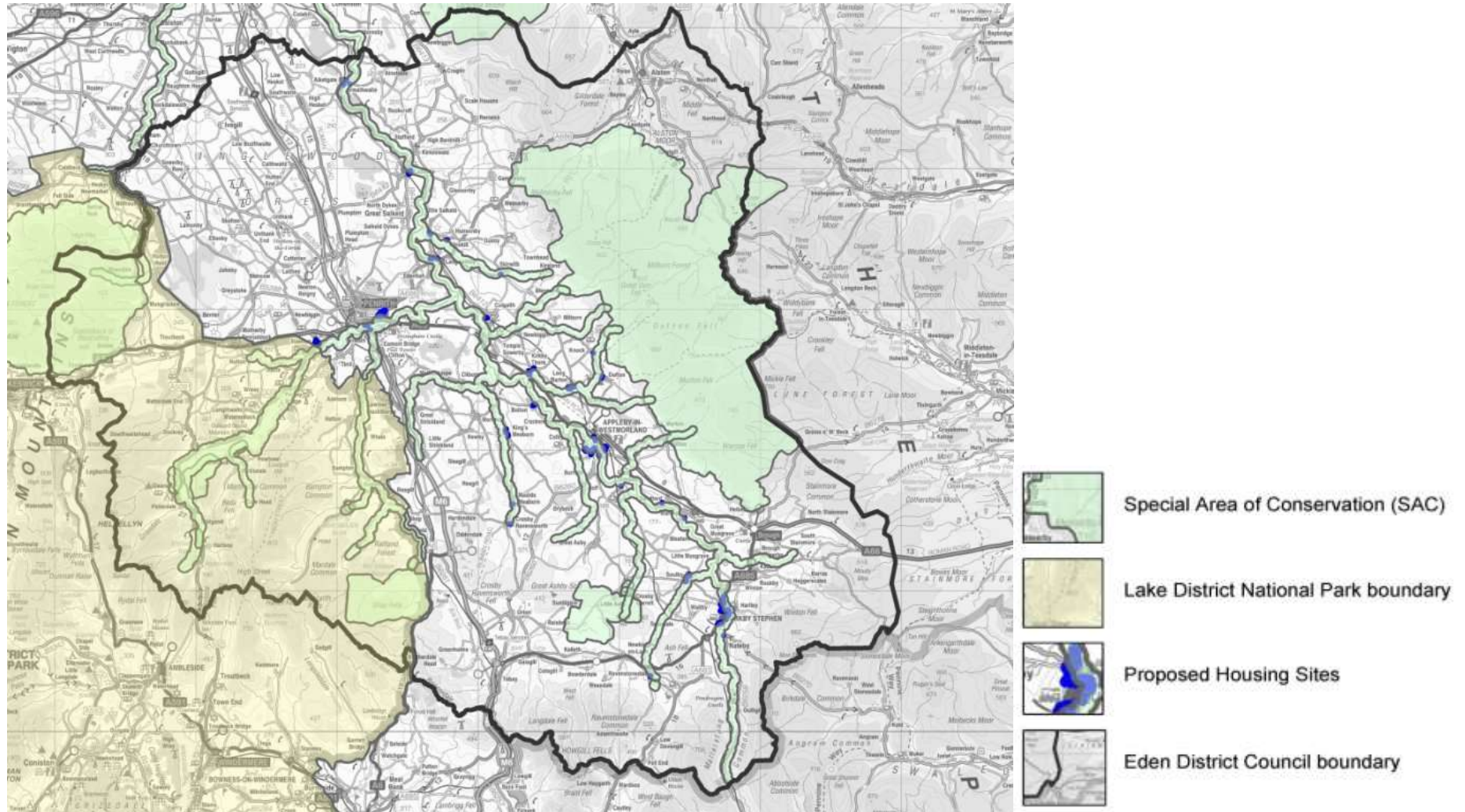


### Appendix 3 – Sites Within 250m of European Sites

Site Reference	Site Address	Settlement	Area (ha)	Preferred Site?
AP18	Land at Battlebarrow	Appleby	2.462	
AP5	Back Lane	Appleby	4.549	Y
AP7	Banks Nursery	Appleby	1.017	
AP9	Land adjacent Castle Bank Lodge	Appleby	0.935	
KS10	Land off Bollam Lane	Kirkby Stephen	0.28	
KS13	Land to west of Faraday Road	Kirkby Stephen	4.094	Y
KS18	Land adjacent Croglam Park	Kirkby Stephen	1.177	
KS19	Land behind The Crescent, Nateby Road	Kirkby Stephen	0.275	
KS2/5	Hobson's Lane / Land adj. Mountain Rescue Post, Christian Head	Kirkby Stephen	1.535	Y
KS21	Land at Edensyde	Kirkby Stephen	0.509	
KS22	Land at Mellbecks	Kirkby Stephen	4.863	Y
KS7	Mark Johns Motors	Kirkby Stephen	0.18	Y
KS9	Field adjacent The Crescent, Nateby Road	Kirkby Stephen	0.949	Y
LAR5	Land at Coal Bank	Armathwaite	0.222	
LAR6	Land opposite Old School	Armathwaite	0.596	
LBO12	Land adjacent Helmsteads	Bolton	2.117	
LCR2	Land at Sun House	Crosby Ravensworth	0.232	
LCU2	Land north of Otter's Holt	Culgaith	1.276	
LKM6	Land at Carls Head	Kings Meaburn	0.459	
LKT2	Ashton Lea	Kirkby Thore	0.796	
LKT4	Land off Piper Lane	Kirkby Thore	0.76	
LKT5	Land at River Croft	Kirkby Thore	0.538	
LLG2	Townhead	Langwathby	0.435	Y
LLG6	Land at Eden Straits	Langwathby	0.689	
LLM2	Land at the Nursery	Long Marton	1.114	
LLM3	Field adjacent Marton Mill	Long Marton	2.667	
LLM6	Land adjacent Merry Vale	Long Marton	0.494	
LLZ12	Playing Field	Lazonby	1.679	
LMM2	Meaburn Hill Farm	Maulds Meaburn	0.222	
LRA1	Land behind Stonethwaite House	Ravenstonedale	0.242	
LRA1	Land behind Stonethwaite House	Ravenstonedale	0.242	
LST7	Land to the south of Inglenook	Stainton	8.492	
LWA3	Eden Gate Farm, Stripes Lane	Warcop	0.55	Y
P16	Carleton - Land at Long Acres	Penrith	3.327	Y
P53	Carleton Greenfield between sites P16 and P26	Penrith	5.266	Y
P98	Land at Carleton Hall Farm	Penrith	3.798	Y



## Appendix 4 – Map of Potential Housing Sites within 250m of European Sites





## Appendix 5 – Potential Effects of Policies on European Sites

Policy	Title	Likely Significant Effect?	Comments
SD1	The presumption in Favour of Sustainable Development	No	Policy sets out approach to new development in the district, following the approach set in the NPPF and Core Strategy. Whilst it may be a repetition of wording in CS1 of the Core Strategy, the policy could specify that <i>"development would not be permitted if there are adverse effects on European Sites"</i> .
HS1	Local Service Centres	No	This policy has, to some extent already been tested in the HRA screening of the Core Strategy. The housing sites and policies document identifies a low provision of housing to be distributed in the rural centres. To avoid inappropriate waste water discharges into the River Eden SAC, additional text could be added to the policy, which stipulates that LSCs need to be sympathetic to its surroundings and <i>"able to connect to the sewerage system without placing strain on the capacity of the infrastructure"</i> .
HS2	Housing Allocations	N/A	Covered in sites detail in other sections.
HS3	Masterplans	No	Policy does not allocate development, relating to the implementation of urban extensions
HS4	Additional Housing to Meet Local Need in Rural Areas	No	This policy seeks to permit small scale development in rural areas in line with the NPPF. The locations identified are covered within policy CS2 and CS9 of the Core Strategy. Significant effects are unlikely.
HS5	Housing Mix	No	Policy relates to type of housing. Limited correlation with conservation objectives of European Sites.
HS6	Design	No	Policy relates to type of housing. Limited correlation with conservation objectives of European Sites.
HS7	Housing for Older People and Those in Need of Support	No	Policy relates to type of development with spatial hierarchy. Limited correlation with conservation objectives of European Sites.

Policy	Title	Likely Significant Effect?	Comments
HS8	Essential Dwellings for Workers in the Countryside	No	Though locations for development could be suggested throughout the district, the impacts of these units are unlikely to be significant. Further mitigation could be added to this policy under the last bullet point to suggest that <i>"development will not have significant impacts on European Nature Sites..."</i>
HS9	Self Build Housing and Community Land Trusts	No	The policy does not suggest which locations will be suitable in this policy. New developments would need to accord with policy CS1, which ensure that the status of the European sites are accounted for if there are conflicts with new development.
HS10	Conversion of Employment Sites to Housing	No	This relates to the conversion of existing buildings. There is unlikely to be any significant changes to the footprint or outputs of new housing sites. Little relationship to conservation objectives.
HS11	Holiday Accommodation	No	Development of holiday units account for a small percentage of annual development. The basis of this policy has been covered in the HRA of the Core Strategy.
HS12	Live/Work Units	No	The policy seeks to encourage rural economic activity through the development of small scale live/work units. These are likely to be isolated in development, however further enhancement could be added to the policy to refer to "live/work units will not be permitted if they lead to unacceptable direct or indirect impacts on European Sites". This serves as an additional caveat to mitigate against potential unacceptable locations.