



**Stockton-on-Tees**  
BOROUGH COUNCIL

**HABITATS REGULATIONS ASSESSMENT  
(APPROPRIATE ASSESSMENT)**

**CORE STRATEGY DEVELOPMENT PLAN DOCUMENT  
PUBLICATION DRAFT**

**STOCKTON-ON-TEES BOROUGH  
LOCAL DEVELOPMENT FRAMEWORK**

MARCH 2009



## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
	Methodology used for this Appropriate Assessment.....	1
<b>2</b>	<b>INITIAL SCREENING</b> .....	<b>2</b>
	Table 1: Sites potentially affected by the Stockton-on-Tees Borough Council LDF .....	2
	Table 2: Natura 2000 Sites that could possibly be affected by the Core Strategy Development Plan Document .....	3
	Table 3: Key Requirements for Maintenance of Sites in a Favourable Condition .....	5
	Conclusions of initial screening.....	6
	Table 4: Qualifying features of Teesmouth and Cleveland Coast SPA and Ramsar Site .....	9
	Table 5: Qualifying features of North York Moors SAC.....	11
	Table 6: Qualifying features of North York Moors SPA.....	12
	Table 7: Qualifying features of Castle Eden Dene SAC.....	12
	Table 8: Qualifying features of Thrislington SAC .....	13
	Table 9: Qualifying features of Durham Coast SAC.....	13
	Table 10 Qualifying Features of Northumbria Coast SPA and Ramsar Site .....	14
<b>3</b>	<b>SCREENING ANALYSIS OF THE STOCKTON ON TEES BOROUGH CORE STRATEGY</b> .....	<b>15</b>
	Scale of development .....	15
	Screening analysis of the Stockton on Tees Council Core Strategy Policies.....	17
	Table 11. Policy Analysis of potential impacts upon Teesmouth and Cleveland Coast SPA .....	17
	Table 12 Policy analysis of potential impacts upon Teesmouth and Cleveland Coast Ramsar site.....	18
	Table 13: Policy Analysis of potential impacts upon North York Moors SPA .....	20
	Table 14: Policy Analysis of potential impacts upon North York Moors SAC.....	21
	Table 15: Policy Analysis of potential impacts upon Castle Eden Dene SAC.....	23
	Table 16: Policy Analysis of Potential Impacts upon Thrislington SAC.....	25
	Table 17: Policy Analysis of Potential Impacts On Durham Coast SAC .....	26
	Table 18: Policy Analysis of Potential Impacts On Northumbria Coast SPA/Ramsar .....	28
<b>4</b>	<b>IN COMBINATION ASSESSMENT</b> .....	<b>30</b>
	Table 19: Analysis of the Core Strategy Preferred Options in combination with other plans and projects.....	30
	Consideration of ‘in combination’ effects .....	34
<b>5</b>	<b>DETAILED POLICY ASSESSMENT</b> .....	<b>36</b>
	Table 20: Policy Assessment of Potential Impact on the Teesmouth and Cleveland Coast SPA .....	36
	Table 21: Policy Assessment of Potential Impact on the Teesmouth and Cleveland Coast Ramsar site .....	39
	Table 22: Policy Assessment of Potential Impact on the North York Moors SPA/SAC .....	42
	Table 23: Policy Assessment of Potential Impact on the Castle Eden Dene SAC .....	42
<b>6</b>	<b>CONCLUSIONS</b> .....	<b>44</b>
	Impact of traffic growth on Castle Eden Dene SAC. ....	44
	<b>APPENDIX 1: FAVOURABLE CONDITIONS TABLE – TEESMOUTH AND CLEVELAND COAST SPA AND RAMSAR SITE</b> .....	<b>50</b>
	<b>APPENDIX 2 FAVOURABLE CONDITIONS TABLE – NORTH YORK MOORS SAC AND SPA SITE</b> .....	<b>53</b>
	<b>APPENDIX 3: CASTLE EDEN DENE SAC</b> .....	<b>60</b>
	<b>APPENDIX 4: FAVOURABLE CONDITIONS THRISLINGTON SAC</b> .....	<b>63</b>

<b>APPENDIX 5: FAVOURABLE CONDITION TABLE – DURHAM COAST SAC.....</b>	<b>66</b>
<b>MAP 1: LOCATION OF EUROPEAN SITES CONSIDERED IN THE APROPRIATE ASSESSMENT .....</b>	<b>70</b>

# 1 INTRODUCTION

- 1.1 The EC Habitats Directive Articles 6.3 and 6.4 require an assessment of the impact of all plans and projects on sites designated as of European importance for their nature conservation value. This is known as Appropriate Assessment.
- 1.2 The requirement came into force in October 2005 following a ruling by the European Court of Justice. The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007, which came into force in August 2007, include a new Part IVa to the 1994 Regulations “Appropriate Assessment for Land Use Plans for England and Wales” in Schedule 1 of the Regulations.
- 1.3 The Regulations require that “any plan or project not directly concerned 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 and projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives.”
- 1.4 Two types of European sites are involved:

**Special Protection Areas (SPAs)** – designated under the EC Birds Directive for rare and vulnerable bird species, for regularly occurring migratory bird species, and for the protection of wetlands, especially wetlands of international importance.

**Special Areas for Conservation (SACs)** – protected sites under the Habitats Directive that make a significant contribution to conserving habitat types and species (excluding birds) identified in Annexes I and II of the Directive.
- 1.5 In addition, the UK Government’s Planning Policy Statement 9 Biodiversity and Geological Conservation states that “listed **Ramsar sites**...should receive the same level of protection as SPAs and SACs” (ODPM 2005). Ramsar sites are wetlands of international importance designated under the Ramsar Convention.

## Methodology used for this Appropriate Assessment

- 1.6 European guidance recommends a process of up to four stages:
  - Screening. Determining whether the plan is likely to have a significant effect on a European site;
  - Appropriate Assessment. Determining whether, in view of the site’s conservation objectives, the plan would have an adverse effect (or risk of this) on the integrity of the site, If not, the plan can proceed;
  - Assessment of alternative solutions. Where the plan is assessed as having an adverse effect (or risk of this) on the integrity of a site, there should be an examination of alternatives;
  - Assessment where no alternative solutions remain and where adverse impacts remain.
- 1.7 This report discusses stages 1 (Screening) and 2 (Appropriate Assessment).

## 2 INITIAL SCREENING

- 2.1 The initial screening process aims to consider all of the European sites that the proposed Core Strategy could possibly affect. Table 1 shows the locations of the European sites which lie within Stockton on Tees Borough, and also includes sites which exist in neighbouring authorities.
- 2.2 Within the Borough, Cowpen Marsh Site of Special Scientific Interest (SSSI), parts of the Tees and Hartlepool Foreshore and Wetlands SSSI, and the majority of Seal Sands SSSI lie within the Teesmouth and Cleveland Coast Special Protection Area (SPA). This SPA is also recognised as a wetland of international importance for nature conservation, under the Ramsar convention.
- 2.3 This site also extends into neighbouring Boroughs, and a number of other European sites exist in different parts of the region. Government advice states “when considering whether the plan option is likely to have a significant effect on a European site, it should be noted that such a site may be located either within or outside the area covered by the plan. Significant effects may be incurred even in cases where the area of the plan is some distance away”. Therefore the table below provides a list of sites that lie, either within the Borough boundary or within approximately 10km of the Borough boundary, and may be affected by the Stockton-on-Tees Borough Council LDF.

**Table 1: Sites potentially affected by the Stockton-on-Tees Borough Council LDF<sup>1</sup>**

Site Name and Status	Location	Primary Reason for Designation
Teesmouth and Cleveland Coast SPA	Stockton-on-Tees, Hartlepool, Redcar and Cleveland	Sandwich Tern, Breeding Little Tern, Internationally important assemblage of over-wintering waterfowl; wintering Knot and Redshank; internationally important population of Ringed Plover in spring.
Teesmouth and Cleveland Coast Ramsar	Stockton-on-Tees, Hartlepool, Redcar and Cleveland	Knot, Common Redshank, Sandwich Tern, Breeding Little Tern, Internationally important assemblage of over-wintering waterfowl
North Yorkshire Moors SAC	North Yorkshire Moors National Park	North Atlantic Wet Heaths, European Dry Heaths.
North Yorkshire Moors SPA	North York Moors National Park	Breeding Golden Plover, Merlin
Thrislington (SAC)	Sedgefield Borough	Semi natural dry grasslands and scrubland facies; Calcareous Grasslands
Castle Eden Dene (SAC)	Easington	Extensive occurrence of Yew Woodland
Durham Coast SAC	Easington	Vegetated Sea Cliffs

<sup>1</sup> Source - <http://www.wetlands.org/rsis/>  
& <http://www.jncc.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0012768>

Site Name and Status	Location	Primary Reason for Designation
Northumbria Coast SPA/Ramsar	Much of the coastline between the Tweed and Tees Estuaries	In summer, the site supports important numbers of breeding Little Tern <i>Sterna albifrons</i> , whilst in winter the mixture of rocky and sandy shore supports large number of Turnstone <i>Arenaria interpres</i> and Purple Sandpiper <i>Calidris maritima</i> .

2.4 The map located on the last page of this document shows the locations of the sites considered in this Appropriate Assessment.

**Table 2: Natura 2000 Sites that could possibly be affected by the Core Strategy Development Plan Document**

Site Name and Status	Qualifying Features	Conservation Objectives
Teesmouth and Cleveland Coast (Ramsar, SPA)	<p>SPA classified in August 1995 and extended in March 2000. Listed as a Ramsar site under the Convention of Wetlands of International Importance. The intertidal part of the SPA is termed a European Marine Site.</p> <p>Wetland of international importance comprising intertidal sand and mudflats, rocky shore, sand dunes, salt and freshwater marsh, all used for breeding, feeding and roosting of internationally important populations of regularly occurring Annex 1 species<sup>2</sup>. Teesmouth and the Cleveland coast is of importance for internationally important populations of breeding Little Tern and migrant sandwich tern. Knot occurs in internationally important numbers in winter and Redshank occurs in internationally important numbers during moult and migration in late summer and autumn. Internationally important wintering waterbird assemblage.</p>	Focus on maintaining favourable conservation status <sup>3</sup> , through appropriate site management including the avoidance of damaging activities and disturbance to species for which the site was designated.
North Yorkshire Moors (SAC/SPA)	<p>Classified as an SPA in May 2000 because of the site's European ornithological importance. The SPA contains the largest continuous tract of heather moorland in England. It displays a wide range of high quality dry heathland and blanket bog vegetation dominated by <i>Calluna</i>, with wet heath in the transition areas. The site is of European importance because it is regularly used by 1% or more of the Great Britain population of two species listed in Annex 1 in any season: Merlin and Golden Plover. In addition, the site supports a breeding population which includes Short-eared Owl, Peregrine and Hen Harrier.</p> <p>Also designated an SAC in April 2005 as it hosts habitats of blanket bog, European dry heaths and Northern Atlantic wetland, with cross-leaved heath which are listed in Annex 1.</p>	To maintain in favourable condition the habitats for the populations of Annex 1 species of European importance and to maintain in favourable condition the Annex 1 habitats.
Thrislington (SAC)	Semi natural dry grasslands and scrubland facies on calcareous substrates. Contains the largest of the few surviving strands of CG8 <i>Sesleria albicans</i> – <i>Scabiosa columbaria</i> grassland. This form of calcareous grassland is confined to the Magnesian Limestone of County Durham and Tyne and Wear, and is found mainly as small scattered strands.	To maintain <sup>4*</sup> , in favourable condition, the unimproved calcareous grassland, with particular reference to semi-natural dry

<sup>2</sup> The species listed in Annex 1 of the Birds Directive are the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. Species listed on Annex 1 are in danger of extinction, rare or vulnerable.

<sup>3</sup> Favourable conservation status - natural range and area are stable or increasing, and specific structure and functions which are necessary for its long term maintenance exist and are likely to continue for the foreseeable future.

<sup>4</sup> Maintain implies restoration if feature is not currently in favourable condition. This applies to all sites.

## INITIAL SCREENING

Site Name and Status	Qualifying Features	Conservation Objectives
		grasslands and scrubland facies on calcareous substrates (CG8 <sup>5</sup> grasslands)
Castle Eden Dene (SAC)	Represents the most extensive northerly native occurrence of yew <i>Taxus baccata</i> woods in the UK. Extensive yew groves are found in association with ash-elm <i>Fraxinus-Ulmus</i> woodland and it is the only site selected for yew woodland on Magnesian Limestone in north-east England.	To maintain in favourable condition the <i>Taxus baccata</i> wood
Durham Coast (SAC)	Only example of vegetated sea cliffs on Magnesian Limestone exposures in the UK. These cliffs extend along the North Sea coast for over 20km from South Shields to Blackhall Rocks. Within these habitats rare species of contrasting phylogeographic distributions often grow together forming unusual and species-rich communities of high scientific interest.	Subject to natural change, to maintain, in favourable condition, the vegetated sea cliffs:
Northumbria Coast (SPA/Ramsar)	<p>The site consists of mainly discrete sections of rocky shore with associated boulder and cobble beaches. 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:</p> <p><b>During the breeding season;</b> Little Tern <i>Sterna albifrons</i>, 40 pairs representing at least 1.7% of the breeding population in Great Britain (5 year peak mean 1992/3 - 1996/7)</p> <p>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:</p> <p><b>Over winter;</b> Purple Sandpiper <i>Calidris maritima</i>, 763 individuals representing at least 1.5% of the Eastern Atlantic - wintering population (5 year peak mean 1992/3 - 1996/7); Turnstone <i>Arenaria interpres</i>, 1,456 individuals representing at least 2.6% of the Western Palearctic - wintering population (5 year peak mean 1992/3 - 1996/7)</p>	Subject to natural change, to maintain in favourable condition the habitats for the internationally important populations of the regularly occurring Annex 1 bird species (Little Tern <i>Sterna albifrons</i> ), under the Birds Directive, in particular the sandy beaches at Low Newton and shallow inshore waters at Low Newton; and, subject to natural change, maintain in favourable condition the habitats for the internationally important populations of regularly occurring migratory bird species Purple Sandpiper <i>Calidris maritima</i> and Turnstone <i>Arenaria interpres</i> , under the Birds directive, in particular rocky shores with associated boulder and cobble beaches, and artificial high tide roost sites.

<sup>5</sup> CG8 Grasslands is *Sesleria albicans* and *Scabiosa columbaria* grassland.



**Table 3: Key Requirements for Maintenance of Sites in a Favourable Condition**

Site Name and Status	Requirement	Initial Assessment of effects of Core Strategy
Teesmouth and Cleveland Coast (Ramsar, SPA)	<ul style="list-style-type: none"> <li>• Food availability</li> <li>• Vegetation structure</li> <li>• Hydrology/flow</li> <li>• Water depth</li> <li>• No disturbance</li> <li>• Extent and distribution of habitat</li> <li>• Open landscape</li> <li>• Safe high tide roost sites</li> </ul>	<p>Potential for impact on water quality and hydrological changes; potential to affect food availability.</p> <p>Impact in land use change, habitat loss or fragmentation uncertain.</p> <p>Potential for damage to undesignated land linked to the SPA, e.g. roost sites and foraging areas used by SPA birds.</p> <p>Potential for limited disturbance due to growing population and increase in visitor trips.</p> <p>Potential for disturbance to SPA species caused by the construction and operation of developments.</p> <p>Potential for disturbance from road upgrades in the vicinity.</p> <p>Impact from wind energy development, e.g. collision mortality, disturbance and displacement, infrastructure for power networks and service access.</p> <p>Coastal squeeze caused by a combination of sea level rise and fixed coastal defences.</p> <p>Potential for disturbance from water based and shoreline recreation.</p>
North Yorkshire Moors (SAC/SPA)	<ul style="list-style-type: none"> <li>• No reduction in area of any of the habitat types and any consequent fragmentation</li> <li>• No artificial drains/grips especially in wetter areas</li> <li>• No erosion associated with human impacts (e.g. fires vehicles, livestock grazing, recreational activities)</li> <li>• No large scale peat extraction</li> <li>• No overgrazing</li> <li>• No overburning</li> <li>• Appropriate grazing and burning (provides for diversity of heather)</li> <li>• Limited air pollution</li> <li>• Open landscape</li> <li>• Lack of disturbance and persecution</li> </ul>	<p>No impact on land management</p> <p>Potential for impact on air quality</p> <p>No impact in land use change, habitat loss or fragmentation</p> <p>Potential for limited disturbance due to growing population and increase in visitor trips</p>
Thrislington (SAC)	<ul style="list-style-type: none"> <li>• No reduction in extent</li> <li>• Continuous management by seasonally adjusted grazing</li> <li>• No fertiliser input</li> <li>• Control of invasive features</li> <li>• Control of over grazing</li> </ul>	<p>No impact on land management</p> <p>No impact in land use change, habitat loss or fragmentation</p> <p>No impact on control of invasive species</p>
Castle Eden Dene (SAC)	<ul style="list-style-type: none"> <li>• No loss of ancient semi-natural stands</li> <li>• Site management to maintain current level of structural diversity (Age/size class variation within and between stands; presence of open space and old trees; dead wood lying on the ground; standing dead trees)</li> <li>• Limited air pollution</li> <li>• Limited grazing by ungulates where it leads to undesirable shifts in the</li> </ul>	<p>No impact on land management</p> <p>Potential for impact on air pollution</p>

## INITIAL SCREENING

Site Name and Status	Requirement	Initial Assessment of effects of Core Strategy
	composition/structure of the stand	
Durham Coast (SAC)	<p>The communities present on the sea cliffs are largely maintained by natural processes including:</p> <ul style="list-style-type: none"> <li>• Exposure to sea spray</li> <li>• Erosion and slippage of the soft Magnesian Limestone bedrock and overlying glacial drifts, localised flushing by calcareous water.</li> </ul> <p>There should be no increase in area constrained by introduced structures or landforms</p>	No impact on natural processes/structure and landforms.
Northumbria Coast (SPA/Ramsar)	<ul style="list-style-type: none"> <li>• Food availability</li> <li>• Disturbance</li> <li>• Extent of habitat, both sandy beaches and rocky shores</li> <li>• Safe high tide roost sites</li> <li>• Vegetation cover</li> </ul>	No impact on food availability, extent of habitat, high tide roosts or vegetation cover, owing to distance in combination with southerly currents along the north east coast. Some potential for increased disturbance due to growing population and increase in visitor trips. However, Policy 16 of RSS makes a commitment to ensure that tourism enhances the region's natural environment and refers specifically to internationally designated site of nature conservation importance.

### Conclusions of initial screening

2.5 Although not specifically mentioned in Table 3 as a requirement for maintenance in a favourable condition, consultation with Natural England indicated that all of the sites considered could be at risk from air pollution. Therefore, all the sites will be carried forward to be considered as to whether any of the potential impacts are likely to be significant. The favourable conditions tables, which should be used to inform the scope of the AA are attached as Appendices 1, 2, 3, 4, 5, and 6.

### Teesmouth and Cleveland Coast SPA and Ramsar Site

2.6 The SPA is a wetland of international importance comprising intertidal sand and mudflats, rocky shore, sand dunes, salt marsh, and freshwater marsh. All habitats are used for breeding, feeding and roosting. Large numbers of waterfowl feed and roost on the site in winter and during passage periods. It qualifies under the Birds Directive by supporting internationally important populations of regularly occurring Annex 1<sup>6</sup> species and migratory species, and an internationally important assemblage of water birds. A number of sites which are part of the SPA and Ramsar Site lie within the Borough.

2.7 Table 4 provides details of the qualifying features of the SPA, alongside key sub features, the conservation objectives for the site, and a brief description of the site's vulnerabilities. The favourable conditions table, which should be used to inform the scope of the AA is attached at Appendix 1.

<sup>6</sup> The identification and classification of Special Protection Areas for rare or vulnerable bird species listed in Annex 1 of the Birds Directive

## North York Moors SAC and SPA

- 2.8 The SAC/SPA lies to the south east of the Borough, partly in Redcar and Cleveland Borough and partly in North Yorkshire. This upland landscape is regarded as one of the best areas in the UK for heathland, containing the largest continuous tract of upland heather moorland in England. The North Atlantic wet heaths in the northern and eastern moors account for a high proportion of the European distribution of this habitat, and are a primary reason for its selection as an SAC. On the western, southern and central moors the principal type of heathland is European dry heaths, reflecting the underlying sandstone and limestone geology of the area. Blanket bog is also a significant presence in the North York Moors, and is an important priority habitat within the UK due to the abundance of bogs found in the UK compared to their comparative scarcity in the rest of Europe.
- 2.9 The mosaic of dry and wet heaths on the moors supports an important assemblage of moorland breeding birds, including Merlin and Golden Plover.
- 2.10 Tables 5 and 6 provide details of the qualifying features of the SAC/SPA, alongside key sub features, the conservation objectives for the site, and a brief description of the site's vulnerabilities. The favourable conditions table, which should be used to inform the scope of the AA is attached at Appendix 2.

## Castle Eden Dene SAC

- 2.11 Castle Eden Dene is the largest area of natural woodland in North East England. It occupies a deep, steep-sided ravine formed in the Magnesian Limestone and boulder clay of this area of County Durham. The dene vegetation is a survivor of the wild wood which once covered most of Britain. Even today it remains relatively undisturbed by humans due to the difficult terrain of the steep sided ravines. Over 450 species of plants have been recorded in the wood, many of which are typical of ancient woodlands that date back to pre - medieval times. The favourable conditions table, which should be used to inform the scope of the AA is attached at Appendix 3. The site lies to the north, in Easington District.

## Thrislington SAC

- 2.12 This small site was selected due to the fact that it contains the largest of a few surviving strands of *Sesleria albicans-Scabiosa columbaria* grassland. This form of calcareous grassland is confined to the Magnesian Limestone of north east England. It is found mainly as small scattered strands. The site comprises semi-natural dry grasslands and scrubland. Table 8 provides details of the qualifying features of the SAC, alongside key sub-features, the conservation objectives for the site, and a brief description of the site's vulnerabilities. The favourable conditions table, which should be used to inform the scope of the AA is attached at Appendix 4. The site lies to the north west of the Borough, in Sedgfield District.

## Durham Coast SAC

- 2.13 The Durham coast is the only example of vegetated sea cliffs on Magnesian Limestone exposures in the UK. Their vegetation is unique in the British Isles. The plant communities present on the sea cliffs are largely maintained by natural

processes including exposure to sea spray, erosion and slippage of the soft Magnesian Limestone bedrock and overlying glacial drifts, as well as localized flushing by calcareous water. Table 9 provides details of the qualifying features of the SAC, alongside key sub features, the conservation objectives for the site, and a brief description of the site's vulnerabilities. The favourable conditions table, which should be used to inform the scope of the AA, is attached at Appendix 5. Both the Durham coast SAC and the Northumbria Coast SPA (see below) run along the coast northwards from Hartlepool Headland.

### **Northumbria Coast SPA and Ramsar Site**

2.14 The Northumbria Coast SPA and Ramsar Site includes much of the coastline between the Tweed and Tees Estuaries in north-east England. The site consists of mainly discrete sections of rocky shore with associated boulder and cobble beaches. The SPA also includes parts of three artificial pier structures and a small section of sandy beach. It qualifies under the Birds Directive by supporting populations of species of European importance listed on Annex I of the Directive, including Little Tern during the breeding season, and Purple Sandpiper and Trunstone over the winter. The favourable conditions table, which should be used to inform the scope of the AA, is attached at Appendix 6.

Table 4: Qualifying features of Teesmouth and Cleveland Coast SPA and Ramsar Site

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
Internationally important populations of the regularly occurring Annex 1 species. Teesmouth and Cleveland Coast is of importance for internationally important populations of breeding Little Tern and migrant Sandwich Tern, both of which are listed on Annex 1. (English Nature's advice under regulation 33(2) for the European Marine Site (November 2000).	Sand and shingle: nesting area for Little Tern (colonies at e.g. Seaton Dunes, South Gare and Coatham Sands).	Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of the regularly occurring Annex 1 bird species, under the Birds Directive, in particular: <ul style="list-style-type: none"> <li>• Sand and shingle</li> <li>• Intertidal sandflat and mudflat</li> <li>• Shallow coastal waters</li> </ul>	The natural incursion of coarse marine sediments into the estuary and the eutrophication of sheltered mudflats leading to the spread of dense Enteromorpha beds may impact on invertebrate density and abundance, and hence on waterfowl numbers. Indications are that the observed sediment changes derive from the reassertion of natural coastal processes within the context of an estuary much modified by human activity. An extensive long-term monitoring programme is investigating the effects of the Tees Barrage, while enrichment from sewage discharges should be ameliorated by the planned introduction of improved treatment facilities and the Environment Agency's acceptance of Seal Sands as a candidate Sensitive Area to eutrophication. Aside from the eutrophication issue, water quality has shown considerable and sustained improvement, leading to the re-establishment of migratory fish populations and the growth of Cormorant and common seal populations. The future development of port facilities in areas adjacent to the site, and in particular of deep water frontages with associated capital dredging, has the potential to cause adverse effect; These nutrient issues will be addressed through the planning system/Habitats Regulations, as will incompatible coastal defence schemes. Other issues on this relatively robust site include scrub encroachment on dunes (addressed by Site Management Statements with owners) and recreational.
	Intertidal sand and mudflat: roosting and loafing sites for Sandwich Tern during the post-breeding period (July and August) prior to autumn migration, and Little Tern in summer (May to August). (North Gare Sands, Seal Sands, Bran Sands and Coatham Sands).		
	Shallow coastal waters: the main feeding areas for Little Tern and Sandwich Tern, both of which species feed almost exclusively on fish		
Internationally important populations of regularly occurring migratory bird species. Knot occurs in internationally important numbers in winter; Redshank occurs in internationally important numbers during moult and migration in late summer and autumn.	Rocky shores: vital food resource for the wintering Knot population; also used by a small proportion of the autumn Redshank population. Rocky shores at higher tidal levels are also used as high water roosting sites. (South Gare, Hartlepool Headland / North Sands, Seaton Snook and Coatham and Redcar Rocks).	Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of regularly occurring migratory bird species, under the Birds Directive, in particular: <ul style="list-style-type: none"> <li>• Rocky shores</li> <li>• Intertidal sandflat and mudflat</li> <li>• Saltmarsh</li> </ul>	
	Intertidal sandflat and mudflat: these support high densities of invertebrates which are important as food for Knot and Redshank. (Redshank primarily at Seal Sands, North Tees mudflat and Greatham Creek; Knot primarily at Seal Sands and Hartlepool North Sands. Knot also roost at higher tidal levels at North Gare Sands, Bran Sands and Hartlepool North Sands).		

## INITIAL SCREENING

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
	Saltmarsh: roosting for Redshank (the margins of Greatham Creek and part of Seal Sands)		Statements with owners) and recreational, bait-gathering and other disturbance/damage to habitats/species (addressed by WCA 1981, NNR Byelaws and the Tees Estuary Management Plan). In view of the importance of adjacent areas for process industries, the area may be at risk from land-take for development and disturbance related to road upgrades associated with further development in the area.
	Grazing marsh: A small proportion of the Redshank population utilize grazing marsh habitats outside the European Marine Site.		
Internationally important assemblage of water birds The large areas of intertidal mudflats and sandflats at Teesmouth and Cleveland Coast support dense populations of marine invertebrate species, which in turn support dense populations of water birds.	Rocky shores: very important feeding habitats; invertebrates are eaten by Knot and wintering Redshank.	Subject to natural change, maintain in favourable condition the habitats for the internationally important assemblage of waterbirds, under the Birds Directive, in particular: <ul style="list-style-type: none"> <li>• Rocky shores</li> <li>• Intertidal sandflat and mudflat</li> <li>• Saltmarsh</li> </ul>	
	Intertidal sandflat and mudflat: invertebrates in these areas are important as winter food for Knot, Redshank, Shelduck and Sanderling.		
	Saltmarsh: feeding and roosting for many species, in particular Redshank, Shelduck and Teal.		
	Grazing marsh: a high proportion of the assemblage also utilise grazing marsh habitats outside the European Marine Site.		

Table 5: Qualifying features of North York Moors SAC

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
<p>This site in north-east Yorkshire within the North York Moors National Park contains the largest continuous tract of upland heather moorland in England.</p> <p>North Atlantic wet heaths with <i>Erica tetralix</i>, for which this is considered to be one of the best areas in the UK.</p>	<p>M16 <i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath is the second most extensive vegetation type on the site and is predominantly found on the eastern and northern moors where the soil is less free-draining. Purple moor-grass <i>Molinia caerulea</i> and heath rush <i>Juncus squarrosus</i> are also common within this community. In the wettest stands bog-mosses, including <i>Sphagnum tenellum</i>, occur, and the nationally scarce Creeping Forget-me-not <i>Myosotis stolonifera</i> can be found in acid moorland streams and shallow pools.</p>	<p>To maintain* in favourable condition the:</p> <ul style="list-style-type: none"> <li>• European dry heath</li> <li>• Northern Atlantic wet heath with <i>Erica tetralix</i></li> <li>• Blanket bog</li> </ul> <p>*Maintain implies restoration if feature is not currently in favourable condition</p>	<p>This habitat is very sensitive to any changes to the existing moorland management regime, which is currently carried out mainly for sheep and grouse shooting purposes. Changes to grazing levels will impact upon the diversity of the heather found, with overgrazing leading to direct heather loss and undergrazing allowing scrub to encroach. The wetter habitats are vulnerable to changes in drainage that can lead to a loss in structural diversity as well as the loss of mosses and lichens. Overburning or accidental fires, the risk of which can be exacerbated by increasing visitor numbers, may also detrimentally impact upon these habitats. Any increase in air pollution may also have an impact.</p>
<p>European dry heaths, for which this is considered to be one of the best areas in the UK.</p>	<p>Dry heath covers over half the site and forms the main vegetation type on the western, southern and central moors where the soil is free-draining and has only a thin peat layer. The principal NVC type present is H9 <i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i>, with some H10 <i>Calluna vulgaris</i> – <i>Erica cinerea</i> heath on well-drained areas throughout the site, and large areas of H12 <i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> heath on steeper slopes.</p>		
<p>Blanket bogs, for which the area is considered to support a significant presence.</p>	<p>Upland bog</p>		

## INITIAL SCREENING

**Table 6: Qualifying features of North York Moors SPA**

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
<p>Internationally important populations of the regularly occurring Annex 1 species.</p> <ul style="list-style-type: none"> <li>Golden Plover</li> <li>Merlin</li> </ul>	<p>Upland Moor</p> <p>Merlin feed on small birds such as meadow pipit and Skylark which nest on the moors.</p> <p>Golden Plover nest on the moors and feed on invertebrates on the moors. Both species require the moorland habitat to be managed.</p>	<p>To maintain, in favourable condition, the habitats for the populations of Annex 1 species of European importance, with particular reference to Merlin and Golden Plover, the:</p> <ul style="list-style-type: none"> <li>upland moorland.</li> </ul> <p>*Maintain implies restoration if feature is not currently in favourable condition</p>	<p>The value of the North York Moors in providing suitable habitat for breeding Merlin and Golden Plover is dependent on the moorland management that is carried out by farmers and gamekeepers to maintain the moorland plant communities and grouse populations. The most vulnerable plant communities are the heaths and mires which are susceptible to overgrazing, gripping and too frequent heather burning leading to species impoverishment and a loss of structural diversity. A lack of keeping and undergrazing on some moors has resulted in large areas of undermanaged old heather lacking structural diversity that reduces the suitability of the habitat for Merlin and Golden Plover. This is being addressed by looking at payments for positive heather management, such as cutting and burning. The majority of the site is being managed in a desirable way with pressures being largely restricted to small areas.</p>
<p>Internationally important populations of regularly occurring migratory bird species.</p> <ul style="list-style-type: none"> <li>Golden Plover</li> <li>Merlin</li> </ul>			

**Table 7: Qualifying features of Castle Eden Dene SAC**

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
<p>Castle Eden Dene represents the most extensive northerly native occurrence of Yew <i>Taxus baccata</i> woods in the UK. Extensive Yew groves are found in association with Ash-Elm <i>Fraxinus-Ulmus</i> woodland and it is the only site selected for Yew woodland on magnesian limestone in north-east England.</p>	<p>Not applicable</p>	<p>To maintain, in favourable condition, the <i>Taxus baccata</i> wood.</p>	<p>Loss of ancient semi-natural stands of Yew trees</p>



**Table 8: Qualifying features of Thrislington SAC**

<b>Qualifying Feature</b>	<b>Key Sub Feature</b>	<b>Conservation Objectives</b>	<b>Vulnerabilities</b>
Unimproved calcareous grassland	Not Applicable	To maintain, in favourable condition, unimproved calcareous grassland with particular reference to semi natural dry grasslands and scrubland facies on calcareous substrates.	Loss of extent of sward composition due to inappropriate land management, for example through over and under grazing and use of fertilizers. Inappropriate control of invasive species. Potential susceptibility of species to air pollution.

**Table 9: Qualifying features of Durham Coast SAC**

<b>Qualifying Feature</b>	<b>Key Sub Feature</b>	<b>Conservation Objectives</b>	<b>Vulnerabilities</b>
Vegetated Sea Cliff	Not applicable	To maintain in favourable condition the vegetated sea cliffs of the Atlantic and Baltic coasts.	Modification of vegetation patterns through natural and geomorphological processes without constraints. Land slippage and more constant erosion maintain the mobility of the cliffs and promote dynamic systems and a range and variety of successive communities. The introduction of, or increase in physical restraints would reduce the mobility of the cliffs. Potential susceptibility of species to air pollution.

**Table 10 Qualifying Features of Northumbria Coast SPA and Ramsar Site**

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
<p>Internationally important populations of the regularly occurring Annex 1 species, during the breeding season.</p> <ul style="list-style-type: none"> <li>• Little Tern</li> </ul>	<p>Cliffs, Coastal, Estuary, Intertidal rock, Intertidal sediments (including sandflat/mudflat), Open coast (including bay), Pools</p>	<p>Subject to natural change, to maintain, in favourable condition</p>	<p>Little Terns are vulnerable to disturbance by tourists in the summer causing reduced breeding success. The National Trust employs wardens each summer to protect the Little Tern colony at Beadnell Bay. The sandy beach at Low Newton is an important breeding area for Little Tern and the shallow inshore waters are used for feeding. The birds are highly sensitive to loss of habitat, beach and inshore waters which could damage their long-term condition.</p>
<p>Internationally important populations of regularly occurring over-wintering bird species.</p> <ul style="list-style-type: none"> <li>• Purple Sandpiper</li> <li>• Turnstone</li> </ul>			

### 3 SCREENING ANALYSIS OF THE STOCKTON ON TEES BOROUGH CORE STRATEGY

#### Scale of development

3.1 In general terms, the Core Strategy will provide for:

- An additional 9000 – 11,000 new homes between 2004 and 2021
- Employment provision to include:
- mixed use development on key regeneration sites in the core urban area;
- utilising undeveloped land on existing industrial estates;
- uses related to the chemical cluster at Billingham and Seal Sands.

3.2 Stockton's Core Strategy Preferred Options for the spatial strategy considered four options:

- Option 1: Concentrating development in the core urban area focused on the river corridor between Stockton and Middlesbrough and Stockton town centre, with Billingham, Thornaby and Yarm playing a supportive role
- Options 2: Spreading development evenly between the four settlements of Stockton, Billingham, Thornaby and Yarm
- Option 3: Providing for a dispersed pattern of development
- Option 4: Allowing market forces to decide (that is, an unplanned approach).

3.3 All of these options had the potential to impact on Natura sites in the following ways:

- More activity, noise, light
- Increased traffic, leading to increased air pollution
- Water quality and hydrological changes including increased use of water and increased run-off of surface water
- Increased visits to the European sites, possibly with associated disturbance of fauna and impacts on habitats (for example, through trampling).
- Damage to undesignated land functionally linked to sites, e.g. roost sites and foraging areas used by SPA birds
- Wind energy developments, e.g. collision mortality, disturbance and displacement.
- Disturbance to SPA species caused by the construction and operation of developments
- Land take for transport schemes and development

3.4 However, there were subtle differences between the options.

3.5 The main impacts of concentrating development in the core area are likely to be in the form of Option 1:

- Greater concentration in activity, traffic generation, surface water run-off and use of resources. However, land take involves the use of previously developed land, mainly within the urban core. In terms of sustainability, this option should lead to the lowest increase in car journeys, as journey distances to jobs, services and facilities should be minimised, therefore reducing the increase in CO<sub>2</sub>, NO<sub>x</sub> and PM<sub>10</sub> emissions.

## SCREENING ANALYSIS

- Potential impact on the River Tees, in the form of greater urbanisation; hard surfacing close to the river; increased run-off directly into the river; increasing flood risk potential.
  - Potential to affect the water quality of the Tees through increased pollution due to increased surface water run-off.
  - Loss of or damage to undesignated land with functional importance to SPA species.
  - Concentration in the core urban area is unlikely to cause any loss or fragmentation of habitat area, or direct disturbance.
  -
- 3.6 The main impacts of concentrating development in the wider urban area are likely to be in the form of Option 2:
- Concentration in activity, traffic generation, surface water run-off and use of resources. However, land take involve the use of previously developed land, mainly within the urban core. This option could lead to a greater increase in CO<sub>2</sub>, NO<sub>x</sub> and PM<sub>10</sub> emissions, as longer journeys to jobs, services and facilities might be involved.
  - Surface water run-off would be dispersed to a wider range of water courses initially. However, all flow into the River Tees, and could potentially impact upon the hydrology of the river.
  - Concentration in the wider urban area is unlikely to cause any loss or fragmentation of habitat area, or disturbance.
- 3.7 A dispersed strategy for development, throughout the Borough would have the likely impacts of Option 3:
- Greater use of greenfield land
  - A more dispersed pattern of development could lead to a greater increase (or less reduction) in CO<sub>2</sub>, NO<sub>x</sub> and PM<sub>10</sub> emissions and this will impact on air quality.
  - Surface water run-off would be dispersed to a wider range of water courses, before eventually entering the River Tees. Potential to have less impact on water quality of the Tees as greater opportunity for “natural “ cleansing before tributaries reach the main river.
  - Although it is unlikely that any development would cause loss of habitat or fragmentation of a European site, disturbance could occur if development takes place in close proximity.
- 3.8 With an unplanned approach (Option 4), it is difficult to say with any certainty what the likely impacts of development might be. However, all of the impacts listed above have the potential to occur. Although it is unlikely that any development would cause loss of habitat or fragmentation of a European site, disturbance could occur if development takes place in close proximity.
- 3.9 The Core Strategy, as submitted, includes elements of the first three options. Emphasis is on the core area, supported by development in the remainder of the conurbation. The exception to this is the safeguarding of land at Seals Sands for expansion of the chemical processing industries.

**Screening analysis of the Stockton on Tees Council Core Strategy Policies.**

3.10 This section considers each of the policies put forward in the Core strategy.

**Table 11. Policy Analysis of potential impacts upon Teesmouth and Cleveland Coast SPA**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough.	Focuses development in the Core Area, along the river corridor, where regeneration opportunities exist. Also supports regionally significant employment clusters at Billingham and Seal Sands, which may impact on the SPA site.	Yes
CS2	<b>Sustainable Transport</b> Identifies improvements to the transport infrastructure and promotes the location of development to improve accessibility and reduction of use of the private car.	Should help to reduce the impact of development on the environment. However, specific road schemes to improve accessibility, particularly in relation to the East Billingham Transport Corridor, may have the potential to impact upon the SPA site	Yes
CS3	<b>Climate Change and Sustainable Living</b> Policy sets the sustainable criteria against which development proposals will be considered	This policy is intended to promote sustainable development and ensure that concepts of sustainability are embraced in all development. However, schemes for renewable energy generation have the potential to impact upon the SPA site.	Yes
CS4	<b>Economic Regeneration</b> Policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment locations, development at North Shore, and elsewhere in the Core Area, could potentially be adjacent to the River Tees.  Also supports regionally significant employment clusters at Billingham and Seal Sands, port related industries at Haverton Hill and Port Clarence, and river-based recreation, which may impact on the SPA site.  Expansion of Durham Tees Valley Airport and growth in employment uses (already with benefit of planning permission) has the potential to lead to an increase in air pollution.	Yes
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	The promotion of the development of a cultural sector includes land along the River Tees.	Yes
CS6	<b>Community Facilities</b> Policy sets out the Council's support for providing facilities	Although aspects of this policy will be implemented through other Development Plan Documents, the	Yes

## SCREENING ANALYSIS

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
	to support sustainable communities.	importance of the River Tees as a key location for cultural, sport, recreation and leisure uses, including the Green Blue Heart, is highlighted.	
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	The identification of broad locations for new housing development includes brownfield sites along the river.	Yes
CS8	<b>Housing Mix and Affordable Housing Provision</b> Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing.	Yes
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No
CS10	<b>Environmental Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	This policy actively protects the environment, specifically referencing designated sites, and seeking to limit the impact of development on water resources and flood risk. However, it will be necessary to ensure that this policy affords adequate protection to the SPA.	Yes
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

**Table 12 Policy analysis of potential impacts upon Teesmouth and Cleveland Coast Ramsar site**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough.	Focuses development in the Core Area, along the river corridor, where regeneration opportunities exist. Also supports regionally significant employment clusters at Billingham and Seal Sands, which may impact on the Ramsar site.	Yes
CS2	<b>Sustainable Transport</b> Identifies improvements to the transport infrastructure and promotes the location of development to improve accessibility and reduction of use of the private car.	Should help to reduce the impact of development on the environment. However, specific road schemes to improve accessibility, particularly in relation to the East Billingham Transport Corridor, may have the potential to impact upon the Ramsar site	Yes
CS3	<b>Climate Change and</b>	This policy is intended to promote	Yes

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
	<b>Sustainable Living</b> Policy sets the sustainable criteria against which development proposals will be considered	sustainable development and ensure that concepts of sustainability are embraced in all development.  However, schemes for renewable energy generation have the potential to impact upon the Ramsar site.	
CS4	<b>Economic Regeneration</b> Policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment locations, development at North Shore, and elsewhere in the Core Area, could potentially be adjacent to the River Tees.  Also supports regionally significant employment clusters at Billingham and Seal Sands, which may impact on the Ramsar site.  Expansion of Durham Tees Valley Airport and growth in employment uses (already with benefit of planning permission) has the potential to lead to an increase in air pollution.	Yes
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	The promotion of the development of a cultural sector includes land along the River Tees.	Yes
CS6	<b>Community Facilities</b> Policy sets out the Council's support for providing facilities to support sustainable communities.	Although aspects of this policy will be implemented through other Development Plan Documents, the importance of the River Tees as a key location for cultural, sport, recreation and leisure uses, including the Green Blue Heart, is highlighted.	Yes
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	The identification of broad locations for new housing development includes brownfield sites along the river.	Yes
CS8	<b>Housing Mix and Affordable Housing Provision</b> Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing.	Yes
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No

## SCREENING ANALYSIS

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS10	<b>Environmental Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	This policy actively protects the environment, specifically referencing designated sites. However, it will be necessary to ensure that this policy affords adequate protection to the Ramsar site.	Yes
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

**Table 13: Policy Analysis of potential impacts upon North York Moors SPA**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough	Focuses development in the core area where regeneration opportunities exist. Development is unlikely to have a potential impact upon the SPA. An underlying principal of the Core Strategy is to continue population growth in the area, thus reducing pressure development elsewhere closer to the SPA	No
CS2	<b>Sustainable Transport</b> Identifies improvements to the transport infrastructure and promotes the location of development to improve accessibility and reduction of use of the private car.	Should help to reduce the impact of development on the environment. Any road proposals are remote from the SPA  Policy is unlikely to have a potential impact upon the SPA	No
CS3	<b>Climate change and Sustainable Living</b> Policy sets the sustainable criteria against which development proposals will be considered	This policy is intended to promote sustainable development and ensure that concepts of sustainability are embraced in all development.  Any potential schemes for wind energy generation would be remote from the SPA.	No
CS4	<b>Economic Regeneration</b> This policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment land identified, sites in the core area, the wider urban area and regionally significant employment clusters are remote from the SPA.  However, expansion of Durham Tees Valley Airport and growth in employment uses (already with benefit of planning permission) has the potential to lead to an increase in air pollution.	Yes



Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	Proposal aim to concentrate town centre uses within existing centres, and resist expansion/development of out-of- town centres such as Teesside Retail Park.	No
CS6	<b>Community Facilities</b> This policy sets out the Council's support for providing facilities to support sustainable communities.	The general location of facilities to support existing communities is unlikely to impact on the SPA	No
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	Although this policy identifies broad locations for new housing development, these are remote from the SPA	No
CS8	<b>Housing Mix and Affordable Housing Provision</b> Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing, but these are remote from the SPA.	No
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No
CS10	<b>Environmental Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	This policy actively protects the environment, specifically referencing designated sites, and seeking to limit the impact of development on water resources and flood risk.	No
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

**Table 14: Policy Analysis of potential impacts upon North York Moors SAC**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough	Focuses development in the core area where regeneration opportunities exist. Development is unlikely to have a potential impact upon the SAC. An underlying principal of the Core Strategy is to continue population growth in the area, thus reducing pressure development elsewhere closer to the SAC	No
CS2	<b>Sustainable Transport</b> Identifies improvements to the transport infrastructure and	Should help to reduce the impact of development on the environment. Any road proposals are remote from the SAC	No

## SCREENING ANALYSIS

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
	promotes the location of development to improve accessibility and reduction of use of the private car.	Policy is unlikely to have a potential impact upon the SAC	
CS3	<b>Climate change and Sustainable Living</b> Policy sets the sustainable criteria against which development proposals will be considered	This policy is intended to promote sustainable development and ensure that concepts of sustainability are embraced in all development.  Any potential schemes for wind energy generation would be remote from the SAC.	No
CS4	<b>Economic Regeneration</b> This policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment land identified, sites in the core area, the wider urban area and regionally significant employment clusters are remote from the SAC.  There is a small risk that air pollution from any expansion of the chemical industries may affect the SAC. However, given the distance from the SAC and the prevailing wind direction, it is considered that any impact will be minimal.  However, expansion of Durham Tees Valley Airport and growth in employment uses (already with benefit of planning permission) has the potential to lead to an increase in air pollution.	Yes
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	Proposal aim to concentrate town centre uses within existing centres, and resist expansion/development of out-of- town centres such as Teesside Retail Park.	No
CS6	<b>Community Facilities</b> This policy sets out the Council's support for providing facilities to support sustainable communities.	The general location of facilities to support existing communities is unlikely to impact on the SAC	No
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	Although this policy identifies broad locations for new housing development, these are remote from the SAC	No
CS8	<b>Housing Mix and Affordable Housing Provision</b>	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing, but these are	No

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
	Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	remote from the SAC.	
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No
CS10	<b>Environmental Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	This policy actively protects the environment, specifically referencing designated sites, and seeking to limit the impact of development on wildlife, water resources and flood risk.	No
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

**Table 15: Policy Analysis of potential impacts upon Castle Eden Dene SAC**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough	Focuses development in the Core Area of the Borough where regeneration opportunities exist. Development is unlikely to have a potential impact upon the SAC.  However, across the Tees Valley, regeneration and growth generally could lead to an increase in traffic travelling into and out of the Borough, leading to traffic growth on the A19 which crosses the western edge of the site which is recognised as sensitive to air quality issues.	Yes (in combination with other plans).
CS2	<b>Sustainable Transport</b> Identifies improvements to the transport infrastructure and promotes the location of development to improve accessibility and reduction of use of the private car.	Should help to reduce the impact of development on the environment, and any road improvement schemes are remote from the SAC.	No
CS3	<b>Climate change and Sustainable Living</b> Policy sets the sustainable criteria against which	This policy is intended to promote sustainable development and ensure that concepts of sustainability are embraced in all development.	No

## SCREENING ANALYSIS

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
	development proposals will be considered	Any potential schemes for wind energy generation would be remote from the SAC.	
CS4	<b>Economic Regeneration</b> This policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment land identified, sites in the core area, the wider urban area are remote from the SAC.  There is a small risk that air pollution from any expansion of the chemical industries may affect the SAC. However, given the distance from the SAC and the prevailing wind direction, it is considered that any impact will be minimal.	No
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	Proposal aim to concentrate town centre uses within existing centres, and resist expansion/development of out-of- town centres such as Teesside Retail Park.  More detailed proposals will come forward in other Development Plan Documents.	No
CS6	<b>Community Facilities</b> This policy sets out the Council's support for providing facilities to support sustainable communities.	The general location of facilities to support existing communities is unlikely to impact on the SAC	No
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	This identifies broad locations for new housing development, but sites are remote from the SAC	No
CS8	<b>Housing Mix and Affordable Housing Provision</b> Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing but these are remote from the SAC.	No
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No
CS10	<b>Environmental Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	This policy actively protects the environment, specifically referencing designated sites, and seeking to limit the impact of development on water resources and flood risk.	No

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

**Table 16: Policy Analysis of Potential Impacts upon Thrislington SAC**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough.	Focuses development in the Core Area, along the river corridor, where regeneration opportunities exist. Development is unlikely to have a potential impact on the SAC.	No
CS2	<b>Climate Change and Sustainable Transport</b> Identifies improvements to the transport infrastructure and promotes the location of development to improve accessibility and reduction of use of the private car.	Should help to reduce the impact of development on the environment and any road improvement schemes are remote from the SAC.	No
CS3	<b>Sustainable Living</b> Policy sets the sustainable criteria against which development proposals will be considered	This policy is intended to promote sustainable development and ensure that concepts of sustainability are embraced in all development.  Any potential schemes for wind energy generation would be remote from the SAC.	No
CS4	<b>Economic Regeneration</b> Policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment land identified, sites in the core urban area and the wider urban area are remote from the SAC.  There is a small risk that air pollution from any expansion of the Chemical industries may affect the SAC. However, given the distance from the SAC and the prevailing wind direction, it is considered that any impact will be minimal.	No
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	Proposal aim to concentrate town centre uses within the existing centres and resist expansion/development of out of town centres such as Teesside Retail Park.  More detailed proposals will come forward in other Development Plan Documents.	No
CS6	<b>Community Facilities</b> Policy sets out the Council's support for providing facilities to support sustainable	The general location of facilities to support existing communities is unlikely to impact on the SAC.	No

## SCREENING ANALYSIS

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
	communities.		
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	This identifies of broad locations for new housing development, but sites are remote from the SAC.	No
CS8	<b>Housing Mix and Affordable Housing Provision</b> Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing but these are remote from the SAC.	No
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No
CS10	<b>Environmental Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	This policy actively protects the environment, specifically referencing designated sites, and seeking to limit the impact of development on water resources and flood risk.	No
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

**Table 17: Policy Analysis of Potential Impacts On Durham Coast SAC**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough.	Focuses development in the Core Area, along the river corridor, where regeneration opportunities exist. Development is unlikely to have a potential impact on the SAC.	No
CS2	<b>Climate Change and Sustainable Transport</b> Identifies improvements to the transport infrastructure and promotes the location of development to improve accessibility and reduction of use of the private car.	Should help to reduce the impact of development on the environment and any road improvement schemes are remote from the SAC.	No

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS3	<b>Sustainable Living</b> Policy sets the sustainable criteria against which development proposals will be considered	This policy is intended to promote sustainable development and ensure that concepts of sustainability are embraced in all development.  Any potential schemes for wind energy generation would be remote from the SAC.	No
CS4	<b>Economic Regeneration</b> Policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment land identified, sites in the core urban area and the wider urban area are remote from the SAC.  There is a small risk that air pollution from any expansion of the Chemical industries may affect the SAC. However, given the distance from the SAC and the prevailing wind direction, it is considered that any impact will be minimal.	No
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	Proposal aim to concentrate town centre uses within the existing centres and resist expansion/development of out of town centres such as Teesside Retail Park.  More detailed proposals will come forward in other Development Plan Documents.	No
CS6	<b>Community Facilities</b> Policy sets out the Council's support for providing facilities to support sustainable communities.	The general location of facilities to support existing communities is unlikely to impact on the SAC.	No
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	This identifies of broad locations for new housing development, but sites are remote from the SAC.	No
CS8	<b>Housing Mix and Affordable Housing Provision</b> Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing but these are remote from the SAC.	No
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No
CS10	<b>Environmental</b>	This policy actively protects the environment,	No

## SCREENING ANALYSIS

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
	<b>Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	specifically referencing designated sites, and seeking to limit the impact of development on wildlife, water resources and flood risk.	
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

**Table 18: Policy Analysis of Potential Impacts On Northumbria Coast SPA/Ramsar**

Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
CS1	<b>Spatial Strategy</b> Identifies the locational priority for development in the Borough.	Focuses development in the Core Area, along the river corridor, where regeneration opportunities exist. Development is unlikely to have a potential impact on the SPA.	No
CS2	<b>Climate Change and Sustainable Transport</b> Identifies improvements to the transport infrastructure and promotes the location of development to improve accessibility and reduction of use of the private car.	Should help to reduce the impact of development on the environment and any road improvement schemes are remote from the SPA.	No
CS3	<b>Sustainable Living</b> Policy sets the sustainable criteria against which development proposals will be considered	This policy is intended to promote sustainable development and ensure that concepts of sustainability are embraced in all development. Any development to generate renewable energy will be sufficiently distant so as not to affect the SPA/Ramsar site.	No
CS4	<b>Economic Regeneration</b> Policy provides the strategic context for future economic development and identifies general quantities and locations of development	Of the general employment land identified, sites in the core urban area and the wider urban area are remote from the SPA.  There is a small risk that air pollution from any expansion of the Chemical industries may affect the SPA. However, given the distance from the SPA and the prevailing wind direction, it is considered that any impact will be minimal.	No
CS5	<b>Town Centres</b> Relates in the main to maintaining and enhancing the vitality and viability of town and district centres.	Proposal aim to concentrate town centre uses within the existing centres and resist expansion/development of out of town centres such as Teesside Retail Park.  More detailed proposals will come forward in	No



Policy	Policy	Issues likely to affect site integrity	Further Assessment Required
		other Development Plan Documents.	
CS6	<b>Community Facilities</b> Policy sets out the Council's support for providing facilities to support sustainable communities.	The general location of facilities to support existing communities is unlikely to impact on the SPA.	No
CS7	<b>Housing Distribution and Phasing</b> Policy sets out in terms of quantity and location, broadly where housing development will take place in the Borough.	This identifies of broad locations for new housing development, but sites are remote from the SPA.	No
CS8	<b>Housing Mix and Affordable Housing Provision</b> Provides more detail relating to the provision of housing and the creation of mixed sustainable communities	Main aim of this policy is to deal with providing quality housing stock, including the provision of affordable housing but these are remote from the SPA.	No
CS9	<b>Provision for Gypsies and Travellers</b> Provides a policy framework for considering the needs of Gypsies and Travellers	The policy itself does not identify locations for sites for gypsies and travellers. As such, it is not possible to identify any impacts. These will need to be considered if sites are either identified in other Development Plan Documents or they come forward as proposals.	No
CS10	<b>Environmental Protection and Enhancement</b> This policy seeks to protect the environment from inappropriate development.	This policy actively protects the environment, specifically referencing designated sites, and seeking to limit the impact of development on wildlife, water resources and flood risk.	No
CS11	<b>Planning Obligations</b> Provides the context within which developer contributions will be sought.	The policy will not in itself, or in combination, lead to development.	No

## 4 IN COMBINATION ASSESSMENT

**Table 19: Analysis of the Core Strategy in combination with other plans and projects**

Plan	Proposals	In Combination Effect
Hartlepool Local Plan	Employment policies and proposals have potential to affect the T+CC SPA/Ramsar site. Other development is focused away from the T+CC SPA/Ramsar site. Policy to protect international nature conservation sites is included and will ensure integrity of T+CC SPA/Ramsar site is maintained.	Yes – potential for traffic growth on the A19, and a consequent increase in air pollution affecting the Castle Eden Dene SAC.
Redcar and Cleveland LDF Core Strategy	This, together with Development Policies, was adopted in July 2007. The Core Strategy was subject to a rigorous assessment under the Habitats Regulations. A number of changes were made to the policies to incorporate mitigation measures to ensure that the integrity of the designated sites is maintained.	Yes – potential for traffic growth on the A19, and a consequent increase in air pollution affecting the Castle Eden Dene SAC.
Middlesbrough LDF Core Strategy	This plan has been submitted to the Secretary of State, and has been the subject of an Appropriate Assessment. Amendments have been made to both spatial objectives and policies, taking a precautionary approach through incorporating safeguards into the policy framework.	Yes – potential for traffic growth on the A19, and a consequent increase in air pollution affecting the Castle Eden Dene SAC.
Hambleton LDF Core Strategy	This plan has been adopted and has been assessed through the Sustainability Appraisal/Strategic Environmental Assessment process. The spatial strategy identifies an area of restraint for residential and employment development in the north of the district, extending south from the boundary with the Tees Valley south to near Northallerton. The focus for development is away from both Stockton and the North York Moors SAC and SPA.	No
Sedgefield LFD Core	Consultation on Preferred	Yes – potential for traffic growth on the A19,

Plan	Proposals	In Combination Effect
Strategy	Options took place in summer 2007, and was the subject of a screening report. This concluded that there are no likely significant effects of the Core Strategy in combination with other plans and trends on European Sites after avoidance measures have been implemented.	and a consequent increase in air pollution affecting the Castle Eden Dene SAC.
Darlington Local Plan	. Most development proposals are in and around Darlington itself, with the exception of employment land at Darlington Tees Valley Airport. Expansion of the Airport together with the provision of general employment land may lead to increased air pollution.	Yes – potential for increase in air pollution affecting both the Teesmouth and Cleveland Coast SAP and Ramsar and the North York Moors SPA and SAC.
Other Stockton Borough Council Strategies and Plans  Sustainable Community Strategy Local Transport Plan Climate Change Action Plan Regeneration Strategy Housing Strategy	The LDF is the vehicle for delivering the spatial aspects of these strategies. Any proposals contained in these strategies that would either impact or maintain the integrity of protected sites have been incorporated into the Core Strategy.	No
Shoreline Management Plan 2	The aim of the SMP has been 'to provide the basis for sustainable coastal defence policies within a sediment cell and to set objectives for the future management of the shoreline.' Among the objectives are 'to comply with the statutory obligations of sites such as...SPA and SAC'.	No
Tees Tidal Flood Risk Management Strategy (March 2006)	This Strategy sets out the Environment Agency's plan for sustainable management of flood risk to people, property and the environment over the next 100 years. Identifies the amount of land that will be lost to both coastal squeeze and climate change over the next 50 years. However, the Environment Agency has identified a managed realignment site adjacent to Greatham Creek on the northern boundary of	No

## SCREENING ANALYSIS

Plan	Proposals	In Combination Effect
	<p>Stockton-on-Tees where replacement intertidal habitat will be provided. It is anticipated that these mitigation measures will be sufficient to meet current predictions.</p>	
<p>River Tees Catchment Flood Management Plan</p>	<p>This will provide a strategic framework within which a plan can be drawn up of the actions that are likely to modify the level of flood risk both now and in the future'. 'Catchment policies would need to consider the potential implications for nature conservation. Potential opportunities also exist to support the conservation management of protected species'.</p>	<p>No</p>
<p>Northumbria River Basin District River Basin Management Plan (consultation draft)</p>	<p>This plan will set out a series of objectives and actions for the "protection, improvement and sustainable use of the water environment". The actions include the reduction of impacts from the built environment and an emphasis upon the sustainable management of surface water drainage.</p>	<p>No</p>
<p>European Marine Site Management Plans</p>	<p>Key requirements for the management of European Marine Sites are:</p> <ul style="list-style-type: none"> <li>• Management of the sites should contribute to maintaining or achieving favourable conservation status of their natural habitats and species;</li> <li>• Steps must be taken to avoid the deterioration or disturbance of the habitats and species for which the site has been designated.</li> <li>• Activities, plans or projects, whether inside or outside the site, which are likely to have a significant effect upon the site features, must be subject to an assessment.</li> <li>• Monitoring must be undertaken to assess the</li> </ul>	<p>No</p>

Plan	Proposals	In Combination Effect
	<p>conservation status of the site interest features and to assess the effectiveness of management.</p> <ul style="list-style-type: none"> <li>• Management of the site must take into account the economic, social, cultural and recreational needs of the local people.</li> </ul>	

**Projects**

4.1 Following the guidance in DCLG (2006), only the most relevant projects are considered here.

4.2 The following projects are proposed within or adjacent to the Borough and have undergone assessment for their potential to affect the integrity of the SPA. The projects have undergone Appropriate Assessment for their potential effects on the interest features of the SPA and have required, or are requiring, the application of mitigation measures. Some projects are still under discussion. Once the concerns of interested parties have been met, the potential is significantly reduced or removed for any in-combination effects of existing projects with the new policies in the Core Strategy.

- Northern Gateway Container Terminal. A deep sea container terminal is proposed on the south bank of the Tees on the site of the existing Teesport Container Terminal 1, the redundant former Shell jetty and the Riverside Ro-Ro no 3 at Teesport. The conclusion of the Appropriate Assessment (September 2006) carried out for this project was that the proposal would not have an adverse effect on the integrity of the SPA.
- Construction, repair, refurbishment and decommissioning of ships and other vessels at Seaton Channel. The development includes, among others, the construction of quays, a cofferdam, dock gates, railway track, buildings, holding tanks and clay bund, and involves dredging works and engineering works associated with the mooring bollard and sheet piling. The conclusion reads as follows: ‘Although certain of the effects being considered might have the potential to have a significant adverse effect prior to mitigation, the EIA and supplementary documentation for this application outline a series of mitigation strategies which will be implemented as appropriate to avoid any potential adverse effects. After consideration of the information supplied by the applicant it is considered that the project will not adversely affect the integrity of the European site’.
- Teesside GasPort, located to north and south of the River Tees within the Teesmouth industrial complex. The construction of a natural gas delivery and conditioning facility, associated pipeline and other infrastructure. The conclusion reads: ‘mitigation measures are available that will entirely avoid the risk of disturbance to the SPA wintering bird population’ and to ground-nesting birds, ‘and it is anticipated that these would be implemented through a condition on planning permission involving avoidance of construction works during the period of greatest sensitivity’.

## SCREENING ANALYSIS

- Tees Barrage. Monitoring of the effects of the barrage by the Environment Agency is continuing but it may be difficult to gauge clear cause and effect e.g. changes in currents and the effects on sediment patterns and rates of sedimentation.

### Consideration of 'in combination' effects

- 4.3 A number of plans and policies contained within the plans of neighbouring authorities have the potential, "in combination" with Stockton's proposals, to have an impact on designated sites. This is particular for the proposals within the authorities of Hartlepool, Middlesbrough, and Redcar and Cleveland. All adopted plans contain mitigating measures to ensure that the integrity of the site is maintained. This should prevent proposals coming forward that would be to the detriment of the designated site.
- 4.4 Additionally, there are some significant projects within the Tees Valley, as set out in paragraph 4.2, that have the potential to impact upon the Teesmouth and Cleveland Coast SPA/Ramsar site. As demonstrated above, however, mitigation measures have been, or will be incorporated into proposals to ensure the integrity of the SPA/Ramsar is not damaged.
- 4.5 "In combination " effects could result from proposals as set out below.
- 4.6 Proposed growth across the region as a whole could lead to a cumulative increase in traffic on the A19 leading to increased air pollution that could impact on the Castle Eden Dene SAC. The trunk road runs close to the western edge of the SAC.
- 4.7 The planned expansion of Durham Tees Valley Airport, which straddles the boundary of Stockton and Darlington Boroughs, could lead to increased air pollution that could affect both the Teesmouth and Cleveland Coast SPA and Ramsar, and the North York Moors SPA and SAC.

### Conclusions of the Screening Exercise

- 4.8 The conclusions of the screening exercise are as follows:
- 4.9 Expansion of the chemical processing industries at Seal Sands, in particular, and proposals for employment uses within the area in general, could potentially have an impact upon the integrity of the Teesmouth and Cleveland Coast SPA and Ramsar site.
- 4.10 Proposals for renewable energy generation on the urban /rural fringe, as set out in Policy 41 of Regional Spatial Strategy, could impact on the Teesmouth and Cleveland Coast SPA and Ramsar.
- 4.11 Cumulative traffic growth on the A19 could impact on Castle Eden Dene SAC.
- 4.12 Expansion of Durham Tees Valley Airport has the potential to impact on both the Teesmouth and Cleveland Coast SPA/Ramsar site and the North York Moors SPA/SAC.

- 4.13 From this screening exercise, it is proposed that further assessment is required for Policies CS1 Spatial Strategy, CS2 Sustainable Transport, CS3 Climate Change and Sustainable Living (in respect of potential renewable energy schemes), CS4 Economic Regeneration (with particular reference to the expansion of Durham Tees Valley Airport), CS5 Town Centres, CS6 Community Facilities, and CS7 Housing Distribution and Phasing, to explore in more detail the potential impacts on the Teesmouth and Cleveland Coast SPA and Ramsar Site. No further assessment of other policies, is required for Thrislington SAC, Durham Coast SAC or the Northumbria Coast SPA and Ramsar Site. Potential impacts on the North York Moors SPA/SAC, of CS4 Economic Regeneration ( in relation to the expansion of Durham Tees Valley Airport) will also be considered.
- 4.14 Additionally, Policy 10 Environmental Protection and Enhancement will need to be assessed to identify likely significant effect and ensure that it will afford adequate protection to sites designated as of European importance for their nature conservation value, as intended.

## 5 DETAILED POLICY ASSESSMENT

5.1 Each of the policies identified in paragraphs 4.13 and 4.14 as requiring further assessment is considered below in relation to the potential resulting effects of the policy against the sensitivities of the Teesmouth and Cleveland Coast SPA and Ramsar Site.

**Table 20: Policy Assessment of Potential Impact on the Teesmouth and Cleveland Coast SPA**

<b>Policy and change it provides for</b>	<b>Locations</b>	<b>How the Teesmouth and Cleveland Coast SPA site might be affected (possible ecological outcomes)</b>
Policy CS1 Spatial Strategy Provides the overall spatial strategy for the Borough	<ul style="list-style-type: none"> <li>• Concentration of development in the Core Area on previously developed land, including North Shore, and later in the plan period, the Green Blue Heart</li>   <li>• Support for regionally important employment clusters, including the chemical industry at Seal Sands</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of soil and surface water quality through remediation of contaminated sites, with the potential for improvement in water quality of the River Tees</li> <li>• Increase in disturbance affecting sensitive wildlife, as a result of increasing visitor numbers, due to a growing population</li> <li>• Increase in air pollution</li> <li>• Increase in surface water run-off into the River Tees</li> <li>• Eutrophication on sensitive habitats from NO<sub>2</sub> deposition from increased industrial activity and emissions.</li> <li>• Disturbance during construction and operation</li> <li>• Increase in use of water resources</li> <li>• Loss of undesignated areas with functional importance for SPA species e.g. foraging and roosting sites</li> <li>• Impacts on water quality and hydrology, including release of contaminants into watercourses</li> <li>• Potential for coastal squeeze and other impacts related to climate change.</li> </ul>
Policy CS2 Sustainable Transport Provides framework	<ul style="list-style-type: none"> <li>• Borough-wide, largely making use of the existing infrastructure, but particular schemes include the creation of an East Billingham Transport corridor (EBTC)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in air pollution as a result of reduction in use of the private car, and increased number of journeys by public transport</li> </ul>



<b>Policy and change it provides for</b>	<b>Locations</b>	<b>How the Teesmouth and Cleveland Coast SPA site might be affected (possible ecological outcomes)</b>
for developing an integrated sustainable transport system within and beyond the Borough.		<ul style="list-style-type: none"> <li>• Disturbance during improvements to create the EBTC, but precise proposals not yet known</li> <li>• Increased air pollution as a result of the creation of the EBTC.</li> <li>• Loss or damage to habitats used by SPA birds during and after EBTC construction phase.</li> <li>• Disturbance to SPA species during the EBTC construction phase.</li> <li>• Disturbance of SPA/Ramsar site species due to increased traffic related to EBTC.</li> </ul>
Policy CS3 Sustainable Living and Climate Change	<ul style="list-style-type: none"> <li>• Promotes energy efficiency, sustainable construction and design, and generation of renewable energy</li> <li>• Supports RSS Policy 40 which identifies the urban/rural fringe as having potential for medium scale wind energy generation</li> </ul>	<ul style="list-style-type: none"> <li>• Increased disturbance during construction</li> <li>• Disturbance during operation</li> <li>• Habitat loss or damage (both direct or indirect)</li> <li>• Collision.</li> </ul>
Policy CS4 Economic Regeneration Provision for employment land in the Borough.	<ul style="list-style-type: none"> <li>• Identifies general employment land within the urban area</li> <li>• Support for chemical industries at Seal Sands and former ICI, Billingham</li> <li>• Engineering and ancillary uses at Port Clarence and Haverton Hill</li> <li>• Port related uses at Port Clarence and Haverton Hill</li> <li>• Waste management technology and energy from waste installations at Billingham and Seal Sands</li> <li>• Recognises the role of the river as an economic driver and potential for tourism-related development, including the International Nature Reserve at Teesmouth</li> <li>• Supports existing permissions relating to the expansion of Durham Tees Valley Airport</li> </ul>	<ul style="list-style-type: none"> <li>• Habitat loss through land take</li> <li>• Increase in disturbance affecting fauna</li> <li>• Increase in air pollution</li> <li>• Reduction in water quality and quantity</li> <li>• Decontamination of polluted land with the potential improvement in water quality</li> <li>• Impact of channel dredging on intertidal habitats</li> <li>• Eutrophication on sensitive habitats from NO<sub>2</sub> deposition from increased industrial activity and emissions</li> <li>• Potential for coastal squeeze and other impacts related to climate change.</li> </ul>
Policy CS5 Town Centres Main thrust of policy	<ul style="list-style-type: none"> <li>• Stockton, Billingham, Thornaby and Yarm are regarded as the key retail centres</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in air pollution, although this could be offset by increased accessibility to facilities reducing the need for car travel</li> </ul>

## DETAILED POLICY ASSESSMENT

Policy and change it provides for	Locations	How the Teesmouth and Cleveland Coast SPA site might be affected (possible ecological outcomes)
is to concentrate development in town and district centres to enhance their vitality and viability		
Policy CS6 Community Facilities Provision of facilities, including open space and recreation, to meet the needs of the community	<ul style="list-style-type: none"> <li>• Development of uses within the river corridor and the Green Blue Heart</li> <li>• Creation of network of diverse, connected green corridors</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in water pollution</li> <li>• Increase in use of water resources</li> <li>• Potential for disturbance from water based and shoreline recreation</li> </ul>
Policy CS7 Housing Distribution and Phasing Sets out the quantity of housing to be provided in key locations	<ul style="list-style-type: none"> <li>• Key regeneration sites including North Shore and Boathouse Lane</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of soil and surface water quality through remediation of contaminated sites, with the potential for improvement in water quality of the River Tees</li> <li>• Increase in disturbance affecting sensitive wildlife, as a result of increasing visitor numbers, due to a growing population</li> <li>• Increase in air pollution</li> <li>• Increase in surface water run-off into the River Tees</li> <li>• Impacts on water quality and hydrology, including release of contaminants into watercourses.</li> </ul>
Policy 10 Environmental Protection and Enhancement. Seeks to protect the environment from inappropriate development.	<ul style="list-style-type: none"> <li>• Borough-wide, with particular reference to the river corridor and Seal Sands.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of the integrity of sites</li> <li>• Protection and enhancement of biodiversity, geodiversity and landscape</li> <li>• Creation and management of habitats which may form part of the roosting/foraging areas associated with the SPA</li> <li>• Improvements to habitat networks is the vicinity of the SPA</li> </ul>

**Table 21: Policy Assessment of Potential Impact on the Teesmouth and Cleveland Coast Ramsar site**

Policy and change it provides for	Locations	How the Teesmouth and Cleveland Coast Ramsar site might be affected (possible ecological outcomes)
<p>Policy CS1 Spatial Strategy Provides the overall spatial strategy for the Borough</p>	<ul style="list-style-type: none"> <li>• Concentration of development in the Core Area on previously developed land, including North Shore, and later in the plan period, the Green Blue Heart</li>   <li>• Support for regionally important employment clusters, including the chemical industry at Seal Sands</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of soil and surface water quality through remediation of contaminated sites, with the potential for improvement in water quality of the River Tees</li> <li>• Increase in disturbance affecting sensitive wildlife, as a result of increasing visitor numbers, due to a growing population</li> <li>• Increase in air pollution</li> <li>• Increase in surface water run-off into the River Tees</li> <li>• Eutrophication on sensitive habitats from NO<sub>2</sub> deposition from increased industrial activity and emissions.</li> <li>• Disturbance during construction and operation</li> <li>• Increase in use of water resources</li> <li>• Loss of undesignated areas with functional importance for SPA species e.g. foraging and roosting sites</li> <li>• Impacts on water quality and hydrology including release of contaminants into watercourses</li> <li>• Potential for coastal squeeze and other impacts related to climate change.</li> </ul>
<p>Policy CS2 Sustainable Transport Provides framework for developing an integrated sustainable transport system within and beyond the Borough.</p>	<ul style="list-style-type: none"> <li>• Borough-wide, largely making use of the existing infrastructure, but particular schemes include the creation of an East Billingham Transport corridor (EBTC)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in air pollution as a result of reduction in use of the private car, and increased number of journeys by public transport</li> <li>• Disturbance during improvements to create the EBTC, but precise proposals not yet known</li> <li>• Increased air pollution as a result of the creation of the EBTC.</li> <li>• Loss or damage to habitats used by SPA</li> </ul>

## DETAILED POLICY ASSESSMENT

Policy and change it provides for	Locations	How the Teesmouth and Cleveland Coast Ramsar site might be affected (possible ecological outcomes)
		<ul style="list-style-type: none"> <li>birds during EBTC construction phase.</li> <li>• Disturbance to Ramsar site species during the EBTC construction phase.</li> <li>• Disturbance of Ramsar site species due to increased traffic related to EBTC.</li> </ul>
<p>Policy CS4 Economic Regeneration Provision for employment land in the Borough.</p>	<ul style="list-style-type: none"> <li>• Identifies general employment land within the urban area</li> <li>• Support for chemical industries at Seal Sands and former ICI, Billingham</li> <li>• Engineering and ancillary uses at Port Clarence and Haverton Hill</li> <li>• Port related uses at Port Clarence and Haverton Hill</li> <li>• Waste management technology and energy from waste installations at Billingham and Seal Sands</li> <li>• Recognises the role of the river as an economic driver and potential for tourism-related development, including the International Nature Reserve at Teesmouth</li> <li>• Supports existing permissions relating to the expansion of Durham Tees Valley Airport</li> </ul>	<ul style="list-style-type: none"> <li>• Habitat loss through land take</li> <li>• Increase in disturbance affecting fauna</li> <li>• Increase in air pollution</li> <li>• Reduction in water quality and quantity</li> <li>• Decontamination of polluted land with the potential improvement in water quality</li> <li>• Impact of channel dredging on intertidal habitats.</li> <li>• Eutrophication on sensitive habitats from NO<sub>2</sub> deposition from increased industrial activity and emissions</li> <li>• Potential for coastal squeeze and other impacts related to climate change.</li> </ul>
<p>Policy CS5 Town Centres Main thrust of policy is to concentrate development in town and district centres to enhance their vitality and viability</p>	<ul style="list-style-type: none"> <li>• Stockton, Billingham, Thornaby and Yarm are regarded as the key retail centres</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in air pollution, although this could be offset by increased accessibility to facilities reducing the need for car travel</li> </ul>
<p>Policy CS6 Community Facilities Provision of facilities, including open space and recreation, to meet the needs of the community</p>	<ul style="list-style-type: none"> <li>• Development of uses within the river corridor and the Green Blue Heart</li> <li>• Creation of network of diverse, connected green corridors</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in water pollution</li> <li>• Increase in use of water resources</li> <li>• Potential for disturbance from water based recreation.</li> </ul>

<b>Policy and change it provides for</b>	<b>Locations</b>	<b>How the Teesmouth and Cleveland Coast Ramsar site might be affected (possible ecological outcomes)</b>
<p>Policy CS7 Housing Distribution and Phasing Sets out the quantity of housing to be provided in key locations</p>	<ul style="list-style-type: none"> <li>• Key regeneration sites including North Shore and Boathouse Lane</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of soil and surface water quality through remediation of contaminated sites, with the potential for improvement in water quality of the River Tees</li> <li>• Increase in disturbance affecting sensitive wildlife, as a result of increasing visitor numbers, due to a growing population</li> <li>• Increase in air pollution</li> <li>• Increase in surface water run-off into the River Tees</li> <li>• Impacts on water quality and hydrology including release of contaminants into watercourses.</li> </ul>
<p>Policy 10 Environmental Protection and Enhancement. Seeks to protect the environment from inappropriate development.</p>	<ul style="list-style-type: none"> <li>• Borough-wide, with particular reference to the river corridor and Seal Sands.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of the integrity of sites</li> <li>• Protection and enhancement of biodiversity, geodiversity and landscape</li> <li>• Creation and management of habitats which may form part of the roosting/foraging areas associated with the SPA</li> <li>• Improvements to habitat networks is the vicinity of the Ramsar site</li> </ul>

**Table 22: Policy Assessment of Potential Impact on the North York Moors SPA/SAC**

<b>Policy and change it provides for</b>	<b>Locations</b>	<b>How the North York Moors SPA/SAC might be affected (possible ecological outcomes)</b>
Policy CS4 Economic Regeneration. Expansion of Durham Tees Valley Airport.	<ul style="list-style-type: none"> <li>Recognises the existing permissions for the expansion of general employment land at Durham Tees Valley Airport.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in disturbance affecting fauna</li> <li>Increase in air pollution</li> </ul>
Policy 10 Environmental Protection and Enhancement. Seeks to protect the environment from inappropriate development.	<ul style="list-style-type: none"> <li>Borough-wide, with particular reference to the river corridor and Seal Sands.</li> </ul>	<ul style="list-style-type: none"> <li>Protection of the integrity of sites</li> </ul>

**Table 23: Policy Assessment of Potential Impact on the Castle Eden Dene SAC**

<b>Policy and change it provides for</b>	<b>Locations</b>	<b>How the Castle Eden Dene SAC might be affected (possible ecological outcomes)</b>
Policy CS2 Sustainable Transport Provides framework for developing an integrated sustainable transport system within and beyond the Borough.	<ul style="list-style-type: none"> <li>Cumulative increase in traffic on A19 adjacent to SAC</li> </ul>	<ul style="list-style-type: none"> <li>Increase in air pollution</li> </ul>

<b>Policy and change it provides for</b>	<b>Locations</b>	<b>How the Castle Eden Dene SAC might be affected (possible ecological outcomes)</b>
Policy 10 Environmental Protection and Enhancement. Seeks to protect the environment from inappropriate development.	<ul style="list-style-type: none"> <li>• Borough-wide, with particular reference to the river corridor and Seal Sands.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of the integrity of site</li> </ul>

## 6 CONCLUSIONS

### Impact of traffic growth on Castle Eden Dene SAC.

- 6.1 In terms of pollution from vehicular emissions, the concentrations decline exponentially from the edge of the road. Though it varies with a range of factors, and from pollutant to pollutant, the concentration of pollutants from roads can be said to have localised impacts up to 200 metres from the roadside.<sup>7</sup> Although the SAC lies close to the A19, its extent runs from the A19 eastwards to the coast. Therefore, the effect on the site will be minimal. Secondly, emerging plans and policies promote the use of more sustainable forms of transport, and therefore, any increase in journeys may be offset by the use of more sustainable modes of transport. Finally, it is unlikely that the growth in traffic on the A19 will be significant in terms of the existing traffic volumes.
- 6.2 In conclusion, there will be no significant impact on Castle Eden Dene SAC.

### Impact of the Spatial Strategy on Teesmouth and Cleveland Coast SPA and Ramsar Site

- 6.3 From the assessment, there are four key areas which could give rise to potential impacts on the Teesmouth and Cleveland Coast SPA and Ramsar Site:
- Development along the River Tees, reflecting the concentration of growth and development in the Core Area. These impacts can be attributed to the following:
    - a. Changes to the hydrology of the River Tees upstream of the SPA/Ramsar site, including water quality and quantity, surface water runoff and channel dredging, which could affect the hydrology of the river and consequently impact on the feeding activities of the bird life.
    - b. Recreational activities associated with new developments (such as watersports) along and adjacent to the River Tees could cause disturbance.
    - c. Increase in disturbance through noise.
    - d. Any indirect effects of an increase in air pollution and deposition from emissions.
    - e. Loss of or damage to undesignated land functionality, e.g. land used by roosting or feeding SPA/Ramsar site species, or cause disturbance to birds using either designated or undesignated land for feeding or roosting.
  - Expansion of the chemical clusters and heavy engineering activities at Billingham and Seal Sands  
These impacts can be attributed to the following:
    - a. Increase in disturbance through noise
    - b. Any indirect effects of an increase in air pollution and deposition from emissions.
    - c. Loss of or damage to undesignated land functionality, e.g. land used by roosting or feeding SPA/Ramsar site species, or cause disturbance to birds using either designated or undesignated land for feeding or roosting. Particularly land adjacent to inter-tidal areas.
    - d. Impacts of water quality/pollution.

<sup>7</sup> Draft Appropriate Assessment of the Regional spatial Strategy for the North East, page 21. Treweek Environmental Consultants. February 2007.



e. Coastal squeeze.

- Development of an East Billingham Transport Corridor to improve accessibility
  - a. Increase in disturbance through noise and construction activity
  - b. Any indirect effects of an increase in air pollution and deposition of vehicle related pollutants.
  - c. Habitat loss through land take for both development and transport schemes.
- Renewable energy development, both windfarm and biomass cultivation may have the following impacts:
  - a. Land take in undesignated land thereby reducing extent of foraging and nesting areas
  - b. Increased disturbance and noise through construction activity
  - c. Potential for increase in bird fatalities from wind turbine operation and structures
  - d. Potential for alteration of hydrological flow
  - e. Changes in water quantity and quality.

6.4 However, it is considered that some of the potential impacts are already addressed through the Core Strategy, other legislation<sup>8</sup> and proposals.

- Coastal squeeze is to be ameliorated through the proposals to provide managed realignment site adjacent to Greatham Creek on the northern boundary of Stockton-on-Tees;
- Any potential for an increase in air pollution resulting from population growth will be addressed through the use of improved public transport provision (Core Strategy Policy 2 Sustainable Transport) and the preparation of Green Travel plans;
- Use of sustainable construction and SuDS in all new development (Core Strategy Policy 3 Sustainable Living and Climate Change);
- Proposals for the increased use of the river for leisure and recreation pursuits within the Borough will mainly be upstream of the Tees Barrage, and distant from key foraging and roosting areas.
- Industrial discharges will be dealt with through the Environment Agency's consenting procedures
- Increased nutrient content of waste water is addressed through Policy 24 of the Regional spatial Strategy that links development with the appropriate provision of infrastructure including water supply and waste treatment

### **Impact of the expansion of Durham Tees Valley Airport on North York Moors SPA/SAC, and Teesmouth and Cleveland Coast SPA/Ramsar site**

<sup>8</sup> PPS9 already affords protection to sites of European importance, as follows "The most important sites for biodiversity are those identified through international Conventions and European Directives. Local planning authorities should identify these sites on proposals maps and may need to cross-refer to the statutory protection given to these sites in the explanatory texts in local development documents. Since they enjoy statutory protection specific polices in respect of these sites should not be included in local development documents (see also Part I of ODPM/Defra Circular ODPM 06/2005, Defra 01/2005).

## CONCLUSIONS

- 6.5 The expansion of Durham Tees Valley Airport is linked to a developing Travel Plan with targets aimed at reducing airport-related car traffic. Better bus services to and from the Airport and greater use of the airport railway station to provide regular train connections would be beneficial. Other authorities are considering the feasibility of developing park and ride facilities with modern express coach service to Durham Tees Valley Airport. Schemes such as these will serve to mitigate the impact of economic development at the Airport. Additionally, in the case of the North York Moors SPA/SAC, as a result of the distance of the airport from the coupled with the prevailing wind direction, any adverse effect is likely to be minimal.
- 6.6 Any proposed growth in flights to and from the airport is not a spatial planning issue, and therefore, is not considered in this assessment.

### **Policies and proposals within the Core Strategy.**

- 6.7 At this point in time, it is not possible to quantify the precise levels, types, phasing and location of development. This will be the subject of more detailed plans and proposals. It will be necessary for subsequent policies included within the Regeneration DPD to be rigorously assessed to identify potential impacts in greater detail. Further detailed policies on the protection of biodiversity sites will be contained in the Environment Development Plan Document. However, at this stage, it is best to take a precautionary approach.
- 6.8 All the policies identified for further assessment derive from Policy CS1 Spatial Strategy, underpinned by Policy CS2 Sustainable Transport, and supported by Policy CS3 Sustainable Living. It is not considered necessary to amend all of the policies referred to in paragraphs 4.13 and 4.14. The Core Strategy should be read as a whole, as none can be implemented in isolation. Policy 10, in seeking to protect and enhance the environment, is considered to be the place to reinforce the need to protect sites of nature conservation importance. However, additional wording has been included in the justifications of Policies 1 and 2, to highlight the relationship of proposals with the Teesmouth and Cleveland Coast SPA and Ramsar site.
- 6.9 In view of the potential impact of plans and proposals on the Teesmouth and Cleveland Coast SPA and Ramsar Site, Policy 10 Environmental Enhancement has been amended to ensure that there are no adverse impacts. This will have the effect of strengthening the protection offered to biodiversity and geodiversity at European sites and to the Core Strategy as a whole. Although it is difficult, at this stage, to quantify any potential impacts upon the Teesmouth and Cleveland Coast SPA and Ramsar Site, the requirement that development should not pose a negative impact upon Natura 2000 sites has, therefore, been addressed.

## Assessment of Policy 10

6.10 Policy 10 includes wording to prevent harm to the integrity of sites recognised as being of European importance for their nature conservation interest. It also recognises that in some instances, mitigation measures may be necessary. These could include some the following:

- Provision of alternative roosting sites;
- Use of cleanest technologies available to reduce air pollution;
- Management of visitor numbers/diversion of visitors to areas of less sensitivity;
- Additional landscaping and water storage features to provide additional roosting/foraging areas/habitat;
- Phasing of development to reduce noise and disturbance during construction.

6.11 This list is not exhaustive.

6.12 Table 24 sets out the changes to the Core Strategy which have resulted from this Habitats Regulations Assessment.

**Table 24 Amendments to the Core Strategy to reflect the Habitats Regulations Assessment**

<b>Policy</b>	<b>Amendments</b>	<b>Reason</b>
Policy 1 The Spatial Strategy, justification	Add "A close relationship exists between the chemical processing industries at Seal Sands and the Teesmouth and Cleveland Coast SPA and Ramsar site. The industries work in partnership with nature conservation interests through the Industry Nature Conservation Association, to facilitate discussion and achieve consensus on economic development where development proposals may impact upon the natural environment and protected nature conservation sites in particular. Policy 10 recognises this potential conflict, in paragraph 13.2 of the justification."	To highlight the close relationship of the chemical processing industries at Seal Sands with the Teesmouth and Cleveland Coast SPA and Ramsar site, and to cross reference this policy with Policy 10, which seeks to ensure that the integrity of European Sites is not adversely affected by development proposals.
Policy 2 Sustainable Transport, justification	Add "The East Billingham Transport Corridor runs through an environmentally sensitive location where road developments could result in impacts on the Teesmouth and Cleveland Coast SPA and Ramsar site, and on the RSPB Saltholme Nature Reserve. This has been taken into account in proposed route, to minimise the adverse effects on biodiversity and natural resources."	To highlight the close relationship of the proposed route for the East Billingham Transport Corridor with the Teesmouth and Cleveland Coast SPA and Ramsar site.
Policy 3 Sustainable Living and Climate change	No change	Consideration of renewable energy generation in Policy 3 refers to Policy 40 of RSS. The criteria referred to already state that the effect of development on nature conservation sites and features, biodiversity and geodiversity, including internationally designated and other sites of nature conservation importance, and potential effects on settings, habitats, species and the water supply and hydrology of such sites should be taken into account. Therefore, there is no need to repeat this.
Policy 4 Economic Regeneration	No change	Potential for conflict between the expansion of chemical production and processing and the Teesmouth and Cleveland Coast SPA/Ramsar has already been recognised in Policies 1 and 10. There is no need to repeat here.
Policy 5 Town Centres	No change	Wording included into Policy 10.
Policy 6 Community Facilities	No change	Wording included into Policy 10.
Policy 7 Housing phasing and Distribution	No change	Wording included into Policy 10.
Policy 10 Environmental Protection and	Amend bullet point 1 of policy to read "In taking forward development, particularly	To protect sites which have been designated of European

<p>Enhancement</p>	<p>along the river corridor and at Seal Sands, proposals will need to demonstrate that there will be no adverse impact on the integrity of the Teesmouth and Cleveland Coast SPA and Ramsar site, and other European sites, either alone or in combination with other plans and programmes. Any proposed mitigation measures will need to be agreed with Natural England and the Royal Society for the Protection of Birds.”</p>	<p>Importance for the nature conservation value.</p>
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## APPENDIX 1: FAVOURABLE CONDITIONS TABLE – TEESMOUTH AND CLEVELAND COAST SPA AND RAMSAR SITE

Feature	Sub-Feature	Attribute	Measure	Target	Comments
Internationally important populations of regularly occurring Annex 1 of the Birds' Directive bird species (Little Tern, Sandwich Tern)		Disturbance	Reduction or displacement of birds.	No significant reduction in numbers or displacement of wintering birds attributable to disturbance from an established baseline, subject to natural change.	Significant disturbance attributable to human activities can result in increased energy expenditure (light and/or reduced food intake, displacement to areas of poorer feeding conditions).
		Extent and distribution of habitat	Area (ha) measured once during reporting cycle.	No decrease in extent from an established baseline, subject to natural change.	These habitats provide both breeding and roosting sites for Terns.
	Sand and shingle	Vegetation characteristics	Predominantly open ground with sparse/short vegetation and bare surfaces (colonial nesting).	Vegetation height and density at nesting sites should not deviate significantly from an established baseline, subject to natural change.	Vegetation cover less than 10% required throughout the areas used for nesting by Little Tern.
	Intertidal sand and mudflats	Absence of obstructions to bird sight lines.	Openness of terrain unrestricted by obstructions.	No increase in obstructions to existing bird sight lines, subject to natural change.	Sandwich Terns require views more than 200m to allow early detection of predators at roost sites.
	Shallow coastal waters	Food availability	Presence and abundances of marine fish, crustaceans, worms and molluscs. Measured periodically (frequency to be determined).	Presence and abundance of prey species should not deviate significantly from an established baseline, subject to natural change.	Crustacea, annelids, sand eel, and sprats are important for feeding Little and Sandwich Terns.
Internationally important populations of regularly occurring migratory species		Disturbance	Reduction or displacement of birds.	No significant reduction in numbers or displacement of wintering birds attributable to disturbance from an established baseline, subject to natural change.	Significant disturbance attributable to human activities can result in reduced food intake and/or increased energy expenditure

Feature	Sub-Feature	Attribute	Measure	Target	Comments
(Knot (winter), Redshank (autumn)) and of the internationally important assemblage of waterbirds		Extent and distribution of habitat	Area (ha) measured once during reporting cycle.	No decrease in extent from an established baseline, subject to natural change.	Rocky shores have particular significance for feeding Knot at Teesmouth. Existing saltmarsh habitats are mere remnants of those of the original Tees Estuary.
	Rocky shores	Absence of obstructions to bird sight lines.	Openness of terrain unrestricted by obstructions.	No increase in obstructions to existing bird sight lines, subject to natural change.	Waders require views over 200m to allow early detection of predators when feeding and roosting during the non-breeding season (at Teesmouth July-March inclusive)
		Food availability	Presence and abundances of marine fish, crustaceans, worms and molluscs. Measured periodically (frequency to be determined).	Presence and abundance of prey species should not deviate significantly from an established baseline, subject to natural change.	<i>Mytilus spat</i> are important prey for Knot.
	Intertidal sand and mudflats	Absence of obstructions to bird sight lines.	Openness of terrain unrestricted by obstructions.	No increase in obstructions to existing bird sight lines, subject to natural change.	Waders require views over 200m to allow early detection of predators when feeding and roosting
		Food availability	Presence and abundances of marine fish, crustaceans, worms and molluscs. Measured periodically (frequency to be determined).	Presence and abundance of prey species should not deviate significantly from an established baseline, subject to natural change.	Prey items include <i>Hydrobia</i> , <i>Macoma</i> , <i>Corophium</i> , <i>Nereis</i> (Redshank and Shelduck), <i>Macoma</i> , <i>Mytilus/Cerastoderma spat</i> , <i>Hydrobia</i> (Knot), <i>Bathyporeia</i> , <i>Nerine</i> , <i>Mytilus</i> , wrack flies, sandhoppers (Sanderling).
	Saltmarsh	Absence of obstructions to bird sight lines.	Openness of terrain unrestricted by obstructions.	No increase in obstructions to existing bird sight lines, subject to natural change.	Waders require views over 200m to allow early detection of predators when feeding and roosting

## APPENDIX 1

Feature	Sub-Feature	Attribute	Measure	Target	Comments
		Vegetation characteristics	Open, short vegetation or bare ground predominating (feeding and roosting)	Vegetation height throughout areas used for roosting should not deviate significantly from an established baseline, subject to natural change.	Vegetation of less than 10cm is required throughout area used for roosting.
		Food availability	Presence and abundance of aquatic invertebrates. Measured periodically (frequency to be determined).	Presence and abundance of prey species should not deviate significantly from an established baseline, subject to natural change.	<i>Hydrobia</i> , <i>Corophium</i> are important for Redshank, Shelduck and Teal. These habitats provide supplementary feeding opportunities especially at high water.
			Presence and abundance of seed-bearing plants. Measured periodically (frequency to be determined).	Presence and abundance of prey species should not deviate significantly from an established baseline, subject to natural change.	<i>Salicornia</i> and <i>Atriplex</i> are important for Teal during the non-breeding season (November – March), while <i>Salicornia</i> seeds may be taken by Shelduck.
NB Extreme events (such as storms reducing or increasing salinities, exceptionally cold winters or warm summers) also need to be recorded as they may be critical in influencing ecological issues on the Teesmouth and Cleveland coast and may well be missed by routine monitoring.					



**APPENDIX 2 FAVOURABLE CONDITIONS TABLE – NORTH YORK MOORS SAC AND SPA SITE**

<b>Operational feature</b>	<b>Criteria feature</b>	<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Comments</b>
Upland Heath	European dry heath	Extent	Total area mapped in relation to baseline	No reduction in area and any consequent fragmentation	Small losses related to management may be acceptable (e.g. - footpaths).
		Dwarf shrub cover	% of dwarf shrub cover	Minimum of 75% cover of dwarf shrubs	Excluding recently burnt stands. Includes all H10 ( <i>Calluna vulgaris-Erica cinerea</i> heath) and H12 ( <i>Calluna vulgaris – Vaccinium myrtillus</i> heath)
		Dwarf shrub diversity	Number of different species of dwarf shrubs and frequency in sward	At least two species of dwarf shrub species should be widespread and frequent in the sward	Aim is for diversity of shrubs especially along valleys and steeper slopes, but also on some of the flatter land. Merlin are believed to favour the upper parts of the catchment/ valleys so taller heather here would be preferable
		Age structure	Presence of age classes of <i>Calluna</i>	All age classes present with at least 25% of the management unit in the late mature/degenerate age class or excluded from the burning rotation.	Stand which are never burnt should be present on level or gently sloping ground , not entirely confined to steep slopes.
		Grazing impact	Indicators of light grazing	A maximum of 5% of the grazing unit may show signs of current moderate or heavy grazing. Foddering sites should be no greater in their immediate impact of 30 metres of heather lost to grass.	See guidance notes for indicators.
Upland Heath	Northern Atlantic wet dwarf shrub heath	Extent	Total area mapped in relation to baseline	No reduction in area and any consequent fragmentation	Small losses related to management may be acceptable (e.g. - footpaths).
		Dwarf shrub cover	%age of dwarf shrub cover	Minimum of 75% cover of dwarf shrubs	

**APPENDIX 2**

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
		Dwarf shrub diversity	Number of different species of dwarf shrubs and frequency in sward	At least two species of dwarf shrub species should be widespread and frequent in the sward	Much of the dry and wet heath forms an intimate mosaic which is currently managed as one by moorland owner/ occupiers. It is very difficult delineating distinct zones of each habitat type on the moors.
		Bryophyte/ lichen abundance	Frequency of bryophytes and lichens in the sward	Bryophytes (excluding <i>Polytrichum</i> spp. and/or <i>Campylopus</i> spp.) and/or <i>Cladonia</i> spp. Lichens should be occasional to frequent and forming patches below, or in more open swards, between the dwarf shrubs	Bryophyte levels have been found to be only occasional in some areas.
		Age structure	Presence of age classes of <i>Calluna</i>	All age classes present with at least 33% of the management unit in the late mature/degenerate age class or excluded from the burning cycle.	Stand which are never burnt should be present on level or gently sloping ground , not entirely confined to steep slopes.
Upland bog	Blanket and upland raised mire	Extent	Total area mapped in relation to baseline.	No reduction in area and any consequent fragmentation	Small losses/ flux in surface vegetation may be acceptable, esp. for management (e.g.- footpaths)
		Bryophyte abundance	Bryophyte cover especially <i>Sphagnum</i> spp	Bryophytes (excluding <i>Polytrichum</i> spp., <i>Campylopus</i> spp. and <i>Racomitrium lanuginosum</i> on bare ground) should be abundant and must include <i>Sphagnum</i> spp	<i>Sphagnum</i> spp must be both frequent and widespread in the stand and restricted to hollows, forming at least occasional lawns or hummocks. <i>Pleurocarpus</i> mosses may make up a significant proportion of the bryophyte layer in the Moors. Reference level of bryophytes needs to be determined.
		Dwarf shrub cover	%age of dwarf shrub cover	Cover of dwarf shrubs must be greater than 33%	Less than 33% cover is acceptable in wetter areas where <i>Sphagnum</i> spp are abundant and forming lawns although this wetness is not a general feature of the Moors.

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
		Dwarf shrub diversity	Number of different species and frequent within sward	At least two species of dwarf shrub species should be widespread and frequent in the sward	
		Graminoid cover	% cover of grasses and related species	Total cover of graminoids/ <i>Eriophorum</i> should not exceed 50% unless <i>Sphagnum</i> spp are abundant/co-dominant and forming lawns below the grasslands i.e. in waterlogged conditions	<i>Eriophorum</i> tends to be favoured over dwarf shrubs where burning is relatively intense.
		Extent of bare ground covered by algal mats	Amount of bare ground or ground covered by algal mats	Little or no ground, or bare ground carpeted by <i>Polytrichum</i> spp, <i>Campylopus</i> spp crust forming lichens or algal mats	Bare ground present rather than eroded surfaces. Some areas have remained as bare ground since previous severe fires, some dating back to the 1930's.
		Erosion features associated with human impacts	Presence of erosion features	No artificial drains/ grips or erosion associated with human impacts e.g. fires, vehicles, livestock grazing, recreational activities	See notes. Except very localised - e.g. - around tracks, footpaths, grouse butts, etc.
		Active peat extraction	Presence of active peat extraction	Large scale (commercial) peat extraction absent. Some small-scale hand-cut peat. turve cutting may be acceptable provided that it does not make up more than 2% of the moorland area.  Acceptable levels to be defined.	Many areas which have been cut in the past have now revegetated with good mire vegetation which meets the other attributes for favourable vegetation. Many farms retain their rights to cut peat/ turves. The numbers carrying out this activity is a key element to acceptability. Recovery times are thought to be 20 years plus.

**APPENDIX 2**

<b>Operational feature</b>	<b>Criteria feature</b>	<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Comments</b>
		Grazing impact	Indicators of light grazing	A maximum of 5% of the grazing unit may show signs of current moderate or heavy grazing	See guidance notes

## SPA Features

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Moorland (For Birds)	Annex 1 and migratory populations of European Importance:  Golden Plover, Merlin	Disturbance	Reduction or displacement of birds, measured periodically (frequency to be determined).	No significant displacement of birds attributable to human disturbance in relation to reference level.	Potential sources of disturbance include heather burning, heather cutting, vehicles, stock, dogs and walkers, especially from April to mid-July. Disturbance caused by predation and the effects on the qualifying bird species is an area that requires further assessment. Reference level to be determined. Methodology for assessing target to be determined.
		Extent and distribution of habitat	Area (ha), measured periodically (frequency to be determined).	No significant decrease from reference level.	Reference level to be determined. Methodology for assessing target to be determined.
	Annex 1 and migratory populations of European Importance: Golden Plover	Landscape	Open terrain relatively free of obstructions (feeding, anti-predator, roosting), measured periodically (frequency to be determined).	No significant reduction in view-lines in feeding and roosting areas.	Golden Plover require views over 200m At least 80% of current moorland area (and all flatter plateaux) open, e.g. without new walls or trees. New fences only where essential for conservation land management. Some loss of view, to trees and shrubs, acceptable in low density breeding areas to benefit other bird and habitat interests. Methodology for assessing target to be determined.
	<u>Annex 1 populations of European Importance:</u>  Merlin	Food Availability	Abundance of birds, day flying moths and mammals, measured periodically (frequency to be determined).	No significant reduction in presence and abundance of prey species in relation to reference level.	Small birds - Pipits to waders and moths are important for Merlin. Effects of bracken spraying on Meadow Pipit abundance not fully assessed but needs to be quantified. Reference level to be determined. Methodology for assessing target to be determined. Data from Merlin Group suggests that male and female may hunt in different areas and on different types of prey during the breeding (incubation period) season, the female taking larger prey, more widely afield, post hatching, but this has yet to be confirmed.
Moorland [For Birds]	Annex 1 and migratory populations of European	Vegetation Characteristics	Extent and proportions of short, medium and tall vegetation, measured periodically (frequency to	xxx% of moorland with short vegetation with patches of taller vegetation for nesting (short grassland, grasslands	Using SAC targets, at least 75% of the shorter vegetation currently used by Golden Plovers can be retained. The requirement for 25% taller vegetation could be met away from high density breeding

**APPENDIX 2**

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
	Importance: Golden Plover, Merlin		be determined).	with bracken, tall heather, low trees/scrub) for Merlin. Once a reference level has been established then there should be no significant reduction in extent from that level.	<p>areas. Scattered tree/shrub is acceptable to meet other SPA and SAC objectives.</p> <p>Vegetation height require for Golden Plover: mix of short (feeding) (less than 5cm ) and patches of taller ( up to 15 cm for nesting) during the breeding season. Burnt are favoured over cut area. Nesting appears to be largely just below the plateau between catchments, on the tops of moors and centred on blanket bog areas.</p> <p>Burning management on grouse moors, which currently produces much of the short vegetation providing suitable habitat for Golden Plover, is considered unlikely to be compatible with achieving favourable condition on blanket bog or for other interest features of the SPA. Retention of small areas of acidic grassland can provide valuable nesting habitat, compatible with SAC targets (e.g. 5% of area) as currently defined.</p> <p>Vegetation height require for Merlin: a ground layer of heather at &gt; 20cm height with &gt;80% heather cover, in a minimum of 15m x 15m heather 'blocks' and with burns (for feeding/ plucking) within a minimum of 5 metres of the nest site (average 10 metres). Heather in late mature to degenerate stages of growth. Nest site preference is generally on the level up to a 10 degree slope (though 20-30 degrees are recorded). No preference for aspect has been recorded. There is no evidence of tree nesting in the Moors despite intense ornithological work. All gills with some trees and shrub (variable densities). Some patches of trees at moor boundary. Aim to increase areas of tall heather in locations suitable for Merlin nesting (e.g. tops of catchments).</p> <p>Methodology for assessing target to be determined. Reference levels (i.e. proportion of moorland with appropriate vegetation heights) to be determined.</p>

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
					<p>xxx% of moorland with short vegetation with patches of taller vegetation for nesting (short grassland, grasslands with bracken, burnt heather) for Golden Plover.</p> <p>xxx% of moorland with short vegetation for feeding and patches of longer vegetation for nesting for Curlew.</p> <p>xxx% of moorland with medium to tall ground vegetation plus scattered (tall heather, low trees/scrub) for Merlin.</p> <p>xxx% of moorland with tall heather/young forestry (nesting and roosting), plus grasslands, bracken or low trees/scrub (feeding) for Hen Harrier</p>
Moorland and adjacent wet pastures [For Birds]	Annex 1 and migratory populations of European Importance: Golden Plover	Food Availability	Abundance of soil and ground surface invertebrates, measured periodically (frequency to be determined).	No significant reduction in presence and abundance of food species in relation to reference level.	<p>Earthworm, leatherjackets, beetles, spiders are important for Golden Plover.</p> <p>Maintain or increase existing areas of grassland (within 10-15km) without pesticide use (effective field size should be at least 10ha).</p> <p>Although important to the condition of the site, it may not prove possible to obtain a meaningful measure of prey availability by directly sampling invertebrate prey populations.</p> <p>Reference level to be determined. Methodology for assessing target to be determined.</p>

### APPENDIX 3: CASTLE EDEN DENE SAC

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Semi-natural woodland	<i>Taxus baccata</i> woodland (National Vegetation Classification W13)	Area	Extent/location of stands	<p>No loss of ancient semi-natural stands</p> <p>At least current area of recent semi-natural stands maintained, although their location may alter.</p> <p>At least the area of ancient woodland retained (Details of stands contained in National Nature Reserve plan)</p>	<p>Stand loss due to natural processes e.g. in minimum intervention stands may be acceptable. Stand destruction may occur if the understorey and ground flora are irretrievably damaged even if the canopy remains intact.</p> <p>20% canopy cover is conventionally taken as the lower limit for an area to be considered as woodland. Area and location of stands may be assessed remotely or by site visit.</p>
		Natural processes and structural development	Age/size class variation within and between stands; presence of open space and old trees; dead wood lying on the ground; standing dead trees	<p>At least the current level of structural diversity maintained. (See NNR plan for current state)</p> <p>Canopy cover present over 30-90 % of stand area</p> <p>A minimum of 3 fallen lying trees less than 20 cm diameter per ha. At least 20 trees per ha left to grow on to become veterans<sup>9</sup>.</p>	<p>Any changes leading to exceeding these limits due to natural processes are likely to be acceptable. There is generally a good structural variety in these stands.</p> <p>The ground flora and shrub layer are frequently totally absent over most of the stand, so no target is set for them.</p> <p>See JNCC guidance note for the sorts of age structure likely to be appropriate for different types of management regime. Compared to other woodland types the degree of variation in structure may be very low.</p> <p>Much of the interest in yew woods is in the very old trees - hence a higher figure is set than for other types for trees to grow on to become veterans.</p> <p>Assess this attribute by field survey.</p>
		Regeneration potential	Successful establishment of young stems in gaps or on the edge of a stand	Signs of seedlings growing through to saplings to young trees at sufficient density to	A proportion of gaps at any one time may develop into permanent open space; equally some current permanent open space/glades may in time

<sup>9</sup> Veteran trees are trees which, because of their great age, size and condition, are of exceptional value culturally, in the landscape or for wildlife.



Operational feature	Criteria feature	Attribute	Measure	Target	Comments
				<p>maintain canopy density over a 20 yr period (or equivalent regrowth from coppice stumps).</p> <p>No planting except where necessary to restore former plantation areas.</p>	<p>regenerate to closed canopy. Regeneration may often occur on the edges of woods rather than in gaps within it. See Joint Nature Conservation Council Guidance Note on likely desirable levels of regeneration. In yew woods the proportion of gaps is frequently lower than for other woodland types and the long-life span of the tree means that it is almost impossible to give a minimum level for regeneration. Assess this attribute by walking through the wood in spring/summer.</p>
		Composition	<p>Cover of native versus non-native species (all layers)</p> <p>Death, destruction or replacement of native woodland species through effects of non-native fauna or external unnatural factors</p>	<p>At least the current level of site-native species maintained. (Details of current composition given in management plan.)</p> <p>At least 90% of cover in any one layer of site-native or acceptable naturalised species.</p> <p>At least 50% of canopy or understorey comprised of yew</p> <p>Death, destruction or replacement of native woodland species through effects of introduced fauna or other external unnatural factors not more than 10% by number or area in a five year period.</p>	<p>In sites where there might be uncertainty as to what counts as site-native or as an acceptable naturalised species this must be made clear. Where cover in any one layer is less than 100% then the 90% target applies to the area actually covered by that layer. Factors leading to the death or replacement of woodland species could include pollution, including eutrophication from adjacent farmland; new diseases . Damage to species by non-native species that does not lead to their death or replacement by non woodland species (e.g. damage from squirrels to trees that none-the-less survive) is not necessarily unacceptable in nature conservation terms. Excessive browsing/grazing by even native ungulates may be considered an unnatural external factor where it leads to undesirable shifts in the composition/structure of the stand, although this may be picked up by attributes 2 or 5 anyway. Assess this attribute by a walk through the site.</p>
		Species, habitats, structures	Distinctive and desirable elements for a given site	Distinctive elements maintained at current levels and in current locations	Changes leading to these targets not being met may be acceptable where this is due to natural processes.

## APPENDIX 3

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
		characteristic of the site.	Patches of associated habitats and transitions e.g. to Ash woodland, or to species-rich grassland	(where appropriate).  Transitions to other woodland types (Ash-Elm, acid oak) and open space maintained in extent and where appropriate location. (See NNR plan for current state).	Distinctive elements and patches should be marked on maps for ease of checking in the field wherever possible.  If there are species groups/assemblages that cannot be assessed directly on a general site visit then surrogate features should be given where possible, e.g. dead wood concentrations for associated invertebrates.

#### APPENDIX 4: FAVOURABLE CONDITIONS THRISLINGTON SAC

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Unimproved calcareous grassland	CG8	Extent	Total Area (ha), mapped in relation to reference level, in period mid May to end July, measured annually if possible.	No reduction in area and any consequent fragmentation without prior consent.	Reference Level to be determined.
		Sward composition: grass/herb ratio	Proportion of non-Graminae (herbs) in period mid May to end July measured annually if possible.	30%-90%	Low proportion outside target indicates eutrophication, usually from fertilisers, or insufficient removal of biomass, leading to dominance by grasses.
		*Sward composition: Positive indicator species	Record the frequency of positive indicator species in the period mid May to end of July, measured annually if possible. <i>Sesleria albicans</i> , <i>Anthyllis vulneraria</i> , <i>Gallium Verum</i> , <i>Gentianella spp.</i> , <i>Helianthemum nummularium</i> , <i>Hypericum Pulchrum</i> , <i>Linum Cartharticum</i> , <i>Listeria Ovata</i> , <i>Lotus Corniculatus</i> , <i>Pimpinella Saxifragum</i> , <i>Plantago Media</i> , <i>Polygala spp.</i> , <i>Primula Verus</i> , <i>Sanguisorba minor</i> , <i>Scabiosa columbaria</i> , <i>Stachys Officinalis</i> , <i>Succisa pratensis</i> , <i>Thymus polythricus</i> , <i>Viola hirta</i> .	<i>Sesleria albicans</i> frequent plus at least two species frequent and four occasional throughout sward.	Choice of species related to NVC type and restriction to unimproved grassland, considered satisfactory when inside target. Among possible species that could be used, choice further restricted by ease of identification, visibility in recording period.
		*Sward composition: Negative indicator	Record the frequency and % cover of negative indicator species. Record in period mid May to end July,	No species/taxa more than occasional throughout the sward on singly or together more than 5% cover.	Invasive species chosen to indicate problems of eutrophication and disturbance from various sources when outside target, e.g. poaching, stock feeding.

APPENDIX 4

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
		species	measured annually if possible. <i>Chamerion Angustifolium, Cirsium arvense, Cirsium vulgare, Galium Aparine, Sonchus spp., Senecio Jacobaea, Urtica Dioica.</i>		
		*Sward composition: Negative indicator species	Record the frequency and % cover of all tree and scrub species, except <i>Rosa spp.</i> , consider together, measured annually if possible. Nb, if scrub/tree species are more than occasional throughout the sward but less than 5%, they are soon likely to become a problem if grazing levels are not sufficient or if scrub control is not being carried out.	No more than 5% cover.	Invasive species outside target shows that habitat is not being managed sufficiently e.g. undergrazed
		*Sward composition: negative indicator species	Record % cover of <i>Rosa spp.</i> , Measure annually if possible.	No more than 10% cover.	<i>Rosa</i> species are often an important component of the habitat, although they can out compete grassland plants if management is insufficient e.g. under grazing.
		Sward Composition: Rare and scarce species.	Record community rare/scarce species (specific to site, maybe none), In period mid May to end July, measured annually if possible.  <i>Antennaria dioica, Epipacdis atrorubens, Linum anglicum, Hypericum montanum, Parnassia</i>	One or more present.	Some sites have rare and scarce species, often with very small populations. Continued presence gives an indication that conditions e.g. grazing levels remains suitable.

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
			<i>palustris</i> , <i>Pinguicula vulgaris</i> , <i>Plantago maritima</i> , <i>Primula farinose</i> , <i>Selaginella selaginoides</i> , <i>Trollius europaeus</i> .		
		Sward structure: Average Height	Record sward height in period Mid May to end July, measured annually if possible.	Sward 2-15cm	Outside target indicates insufficient grazing or overgrazing.
		Sward structure: litter	Record cover of litter where a more or less continuous layer distributed either in patches or in one larger area. Measured annually if possible.	Total extent no more than 25% of the sward.	Outside target indicates biomass removal is insufficient e.g. undergrazed.
		Sward structure: Bare ground	Record extent of bare ground (not rock) distributed through the sward, noticeable without disturbing the vegetation. Measure in period end mid May to end July, annually if possible.	No more than 10% of the sward	Outside target indicates management problems, e.g. over grazing.

## APPENDIX 5: FAVOURABLE CONDITION TABLE – DURHAM COAST SAC

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
Maritime Cliff	Vegetated sea cliffs on the Atlantic and Baltic Coasts	Extent of cliff	Approximately 30% of sea cliff supporting or capable of supporting vegetated sea cliff communities. (Baseline figure taken from survey maps) Measure at least once per reporting cycle.	The overall length and /or area of the cliff habitat of the site is maintained taking into account natural variation.	<b>Requires up to date NVC mapping to provide accurate base line.</b> This attribute will be important for all cliff types. On near vertical cliffs it may be difficult to assess area, and a length measurement may be more appropriate. On less steep cliffs area may be measurable. Area of suitable habitat behind a receding cliff line may also be important.
		Mobility	Percentage of linear extent and area of cliff structure and geomorphological processes not immediately constrained by introduced structures or landforms. Measured once per reporting cycle.	No increase in linear extent or area constrained by introduced structures or landforms.	An important aspect of this habitat is the modification of vegetation patterns in response to natural and geomorphological coastal processes without constraints. Introduction of or increase in physical constraints would reduce the mobility of the cliff and reduce the range of communities which represent this interest feature. Information on existing coast protection should be available from the SMP.
		Physical features supporting vegetation patterns/zonation	Assessment of distribution of main zones in relation to cliff behavioural units and distance from maritime influence. Measured once per reporting cycle.	Maintain the range of physical conditions arising from variation in geology and geomorphology, profile, stability, degree of maritime exposure, drainage, aspect, geographical location and history of management. Local targets will need to be established. Physical conditions should be able to support the full range of vegetation communities characteristic of the site.	Changes in patterns are reflected in changes to the profile and stability of the supporting cliff face which will vary from site to site and vary over time. Some cliff exhibit long term stability, with episodic landslide movement, others erode more continually. Changes to patterns are to be expected, especially in dynamic systems. Can be assessed from air photographs and site based surveys and will need information on geomorphological aspect of cliffs.
		Vegetation composition maritime grassland communities	Presence of vegetation communities characteristic of maritime grassland. These are likely to consist of NVC communities MC8-	Maintain range of maritime grassland communities, taking account of natural variation.	Individual sites will exhibit different patterns and range of vegetation types depending on site characteristic and management history. Surveys may be needed to establish the full range for each site. Reference should be made to dates of previous

Operational feature	Criteria feature	Attribute	Measure	Target	Comments
		characteristic of the site.	MC12 characterised by the dominance of <i>Festuca rubra</i> , with <i>Armeria maritima</i> , <i>Silene Vulgaris maritima</i> , <i>Holcus lanatus</i> , <i>Plantago lanceolata</i> , <i>P. maritima</i> , <i>P. coronopus</i> , <i>Dactylis glomerata</i> , <i>Daucus carota</i> , <i>Rumex acetosa</i> , <i>Hyacinthoides non-scriptus</i> . Assess at least one reporting cycle.		surveys to assess which communities have been previously recorded on the site. Some of these communities can be difficult to assess because of their inaccessibility.
		Vegetation of soft cliffs and other communities characteristic of the site	Vegetation composition of other communities forming a complex pattern reflecting different degrees and stages of instability, drainage and other physical characteristics. The components of this pattern may include wet flush/seepage/mire communities, scrub/woodland communities, ruderal and bracken communities. Assess at least once per recording cycle.	Maintain range of transitions and other communities previously recorded on the site, taking account of natural variation. Targets will need to be set locally, taking account of the maritime influence and coastal processes.	Vegetated sea cliff sites on soft geology in more sheltered locations are likely to support variants of wet flush/seepage/mire communities, scrub/woodland communities, ruderal and bracken communities, which may be subject to maritime influence. Some or all of these may also occur on relatively hard rock cliffs with a less extreme maritime influence. The diversity of habitats on sea cliffs is promoted by the inherent instability of the substrata which maintains a range of successional stages. Reference should be made to dates of previous surveys to assess which communities have been previously recorded on the site.
		Vegetation negative indicators	Presence of negative indicator species including non native species, invasive species indicative of changes in nutrient status and species not characteristic of typical communities. Assess at	No further increase in species not typically associated with the communities that define the feature. Local targets will need to be defined. These will vary from site to site and locally-significant species will need to be defined.	Changes in the extent and cover of invasive species usually indicate a change in conditions on a site, often as a result of anthropogenic activities, which may promote rapid expansion or increase in cover. Such species may include those identified as negative indicators for grass lands e.g. <i>Cirsium arvense</i> , <i>Senecio jacobaea</i> , <i>Urtica dioica</i> . Together with non native species. Some tall ruderal

**APPENDIX 5**

<b>Operational feature</b>	<b>Criteria feature</b>	<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Comments</b>
			least once per reporting cycle.		communities may be present naturally on a cliff site.



## APPENDIX 6: FAVOURABLE CONDITIONS TABLE - NORTHUMBRIA COAST SPA and Ramsar SITE

Feature	Sub-Feature	Attribute	Measure	Target	Comments
Internationally important populations of regularly occurring Annex 1 and migratory bird species	All habitats	Disturbance	Reduction or displacement of birds	No significant reduction in numbers or displacement of wintering birds attributable to disturbance from an established baseline, subject to natural change.	Significant disturbance attributable to human activities can result in reduced food intake and/or increased energy expenditure.  Disturbance is minimised through wardening of the tern breeding colony.
Internationally important populations of regularly occurring Annex 1 bird species	Shallow inshore waters	Extent of habitat	Area (ha) measured once during the reporting cycle.	No decrease in extent from an established baseline, subject to natural change.	Little terns feed in the shallow inshore waters and the Long Nanny estuary near the Low Newton colony.
		Food availability	Presence and abundance of marine fish, crustaceans, worms, and molluscs. Measured periodically (frequency to be determined).	Presence and abundance of food species during the breeding period should not deviate significantly from established baseline, subject to natural change.	Crustaceans, annelids, sandeel and clupeidae are important for Little Tern.

**MAP 1: LOCATION OF EUROPEAN SITES CONSIDERED IN THE APROPRIATE ASSESSMENT**