Stockton-on-Tees
BOROUGH COUNCIL

Supplementary Planning Document 1: Sustainable Design Guide

Habitat Regulations Assessment Screening Report

Stockton-on-Tees Borough Local Development Framework

October 2011

Contents

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.

1.2 The requirement came into force in October 2005 following a ruling by the European Court of Justice. This requirement is included in the Conservation of Habitats and Species Regulations 2010, which consolidates all the amendments made to the Conservation (Natural Habitats &c.) Regulations 1994 for England and Wales.

1.3 The Regulations require that a competent authority, before deciding to undertake or give any consent, permission or other authorisation for, a plan or project which;

a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and
b) is not directly connected with or necessary to the management of that site,

must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.

1.4 Two types of European site 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 Habitat Regulations 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. Assessment of the implications of the effects of the plan for the conservation objectives of sites likely to be significantly affected;
- 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 stage 1 (Screening).and will determine whether the Sustainable Design Guide SPD is likely to have any significant impacts upon a European site and, therefore, require an appropriate assessment.

2 Initial Screening

2.1 The initial screening process aims to consider all of the European sites that the proposed Sustainable Design Guide SPD could possibly affect. Table 1 shows the locations of the European sites that lie within Stockton on Tees Borough, and also includes sites that 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[1]

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

[1] 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 *Sterna albifrons*, whilst in winter the mixture of rocky and sandy shore supports large number of Turnstone *Arenaria interpres* and Purple Sandpiper *Calidris maritima*.

2.4 Map 1 shows the locations of the sites considered in this assessment.

Table 2: Natura 2000 Sites that could possibly be affected by the Sustainable Design Guide SPD

Site Name and Status	Qualifying Features	Conservation Objectives
Teesmouth and Cleveland Coast (Ramsar, SPA)	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. 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[2]. 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.	Focus on maintaining favourable conservation status[3], 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)	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 *Calluna*, 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. 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.	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.

[2] 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.

[3] 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.

Site Name and Status	Qualifying Features	Conservation Objectives
Thrislington (SAC)	Semi natural dry grasslands and scrubland facies on calcareous substrates. Contains the largest of the few surviving strands of CG8 *Sesleria albicans – Scabiosa columbaria* 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[4]*, in favourable condition, the unimproved calcareous grassland, with particular reference to semi-natural dry grasslands and scrubland facies on calcareous substrates (CG8[5] grasslands)
Castle Eden Dene (SAC)	Represents the most extensive northerly native occurrence of yew *Taxus baccata* woods in the UK. Extensive yew groves are found in association with ash-elm *Fraximus-Ulmus* woodland and it is the only site selected for yew woodland on Magnesian Limestone in north-east England.	To maintain in favourable condition the *Taxus baccata* 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 phytogeographic 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)	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: **During the breeding season;** Little Tern *Sterna albifrons*, 40 pairs representing at least 1.7% of the breeding population in Great Britain (5 year peak mean 1992/3 - 1996/7) 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: **Over winter;** Purple Sandpiper *Calidris maritima*, 763 individuals representing at least 1.5% of the Eastern Atlantic - wintering population (5 year peak mean 1992/3 - 1996/7); Turnstone *Arenaria interpres*, 1,456 individuals representing at least 2.6% of the Western Palearctic - wintering population (5 year peak mean 1992/3 - 1996/7)	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 *Sterna albifrons*), under the Birds Directive, in particular the sandy beaches 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

[4] Maintain implies restoration if feature is not currently in favourable condition. This applies to all sites.
[5] CG8 Grasslands is Sesleria albicans and Scabiosa columbaria grassland.

Site Name and Status	Qualifying Features	Conservation Objectives
		Calidris maritime and Turnstone *Arenaria interpres*, under the Birds directive, in particular rocky shores with associated bounder and cobble beaches, and artificial high tide roost sites.

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

Site Name and Status	Requirement
Teesmouth and Cleveland Coast (Ramsar, SPA)	• Food availability • Vegetation structure • Hydrology/flow • Water depth • No disturbance • Extent and distribution of habitat • Open landscape • Safe high tide roost sites
North Yorkshire Moors (SAC/SPA)	• No reduction in area of any of the habitat types and any consequent fragmentation • No artificial drains/grips especially in wetter areas • No erosion associated with human impacts (e.g. fires vehicles, livestock grazing, recreational activities) • No large scale peat extraction • No overgrazing • No overburning • Appropriate grazing and burning (provides for diversity of heather) • Limited air pollution • Open landscape • Lack of disturbance and persecution
Thrislington (SAC)	• No reduction in extent • Continuous management by seasonally adjusted grazing • No fertiliser input • Control of invasive features • Control of over grazing
Castle Eden Dene (SAC)	• No loss of ancient semi-natural stands • 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) • Limited air pollution • Limited grazing by ungulates where it leads to undesirable shifts in the composition/structure of the stand
Durham Coast	The communities present on the sea cliffs are largely maintained by natural processes including: • Exposure to sea spray

Site Name and Status	Requirement
(SAC)	• Erosion and slippage of the soft Magnesian Limestone bedrock and overlying glacial drifts, localised flushing by calcareous water. There should be no increase in area constrained by introduced structures or landforms
Northumbria Coast (SPA/Ramsar)	• Food availability • Disturbance • Extent of habitat, both sandy beaches and rocky shores • Safe high tide roost sites • Vegetation cover

Conclusions of Initial Screening

2.5 Although not specifically mentioned in Table 3 as a requirement for maintenance in a favourable condition, previous consultation with Natural England has indicated that all of the sites considered could be at risk from air pollution. Therefore, all the sites will be carried forward for consideration 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 assessment 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[6] 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.

North York Moors SAC and SPA

2.8 The SAC/SPA lies to the south east if 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.

[6] The identification and classification of Special Protection Areas for rare or vulnerable bird species listed in Annex 1 of the Birds Directive

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.

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 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 site lies to the north west of the Borough, in Sedgefield 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 localised 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. Both the Durham coast SAC and the Northumbria Coast SPA (see below) run along the coast northwards from Hartlepool Headland.

Northumbrian 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 Turnstone over the winter.

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). 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	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: • Sand and shingle • Intertidal sandflat and mudflat • Shallow coastal waters	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,
Internationally important populations of regularly occurring migratory bird species. Knot occurs in internationally important numbers in winter; Redshank occurs in	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: • Rocky shores • Intertidal sandflat and mudflat	

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
internationally important numbers during moult and migration in late summer and autumn.	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).	• Saltmarsh	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, 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.
	Saltmarsh: roosting for Redshank (the margins of Greatham Creek and part of Seal Sands)		
	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: • Rocky shores • Intertidal sandflat and mudflat • Saltmarsh	
	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 gazing marsh habitats outside the European Marine Site.		

Table 5: Qualifying Features of North York Moors SAC

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
This site in north-east Yorkshire within the North York Moors National Park contains the largest continuous tract of upland heather moorland in England. North Atlantic wet heaths with *Erica tetralix*, for which this is considered to be one of the best areas in the UK.	M16 *Erica tetralix* – *Sphagnum compactum* 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 *Molinia caerulea* and heath rush *Juncus squarrosus* are also common within this community. In the wettest stands bog-mosses, including *Sphagnum tenellum*, occur, and the nationally scarce Creeping Forget-me-not *Myosotis stolonifera* can be found in acid moorland streams and shallow pools.	To maintain* in favourable condition the: • European dry heath • Northern Atlantic wet heath with *Erica tetralix* • Blanket bog *Maintain implies restoration if feature is not currently in favourable condition	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.
European dry heaths, for which this is considered to be one of the best areas in the UK.	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 *Calluna vulgaris – Deschampsia flexuosa*, with some H10 *Calluna vulgaris – Erica cinerea* heath on well-drained areas throughout the site, and large areas of H12 *Calluna vulgaris – Vaccinium myrtillus* heath on steeper slopes.		
Blanket bogs, for which the area is considered to support a significant presence.	Upland bog		

Table 6: Qualifying Features of North York Moors SPA

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
Internationally important populations of the regularly occurring Annex 1 species. • Golden Plover • Merlin	Upland Moor Merlin feed on small birds such as meadow pipit and Skylark which nest on the moors. Golden Plover nest on the moors and feed on invertebrates on the moors. Both species require the moorland habitat to be managed.	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: • upland moorland. *Maintain implies restoration if feature is not currently in favourable condition	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 keepering 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.
Internationally important populations of regularly occurring migratory bird species. • Golden Plover • Merlin			

Table 7: Qualifying Features of Castle Eden Dene SAC

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

Table 8: Qualifying Features of Thrislington SAC

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
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

Qualifying Feature	Key Sub Feature	Conservation Objectives	Vulnerabilities
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
Internationally important populations of the regularly occurring Annex 1 species, during the breeding season. • Little Tern	Cliffs, Coastal, Estuary, Intertidal rock, Intertidal sediments (including sandflat/mudflat), Open coast (including bay), Pools	Subject to natural change, to maintain, in favourable condition	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. Over-wintering migratory species are highly sensitive to removal or smothering of algal mats along the shore, and removal of their favoured roosts. However, there is currently low exposure to this operation. Physical damage reduces food availability to birds or changes to the suitability of habitats for roosting and feeding. Most intertidal communities tend to be more resilient to physical damage because of their adaptation to the physical processes to which they are normally subjected. Over wintering waterfowl are moderately sensitive to noise and visual disturbance. Toxic contamination may also affect bird populations indirectly, by affecting the abundance of food items. However, there is no evidence to show there is a problem with this site. However, because of the location of the Tees to the south of the SPA, prevailing currents and winds make exposure to this minimal.
Internationally important populations of regularly occurring over-wintering bird species. • Purple Sandpiper • Turnstone			

3 Screening Analysis of Supplementary Planning Document 1: Sustainable Design Guide.

Description of the Sustainable Design Guide SPD

3.1 The purpose of the Sustainable Design Guide is to amplify policies set out within the Councils adopted Core Strategy and to provide advice and guidance to the public and developers on improving the design standards and sustainability of new developments. It will encourage attractive and inclusive neighbourhoods and promote high quality design, energy efficiency and environmental sustainability.

3.2 The SPD provides advice, for example, on site selection and development settings, design principles for built development, open space and landscaping, ecology, environmental sustainability, energy generation and renewable technologies, water efficiency, waste management and sustainable urban drainage techniques.

3.3 The main objectives of the SPD are:

- To ensure high quality design, providing safe, attractive, functional and inclusive neighbourhoods.
- To minimise the impact of new development upon the environment through the reduction of waste, resource use and greenhouse gas emissions.
- To ensure developments have good links to public transport services and cycle and pedestrian routes, to reduce the reliance of residents upon private vehicles.
- To protect historic and distinctive character within the Borough by ensuring that new developments are fully integrated with their surroundings and respectful of the character of their location within the Borough.
- To support the enhancement and creation of multifunctional green infrastructure, delivering health, social and environmental benefits for the Borough.
- To encourage developments to mitigate and react to climate change through the use of sustainable drainage systems.

3.4 The SPD does not propose any new development or allocate land for development. It is intended to encourage developers to improve the quality of design of their proposal and to improve its sustainability. The SPD, therefore, seeks to reduce the environmental impacts of development within the Borough.

Potential impacts upon European sites.

3.5 Projects, plans and programmes have the potential to impact upon sites of European importance in many ways. It is identified that the Stockton SPD could have the following impacts upon the identified sites.

- Changes to key elements of the site e.g. water and air quality, that may affect the vegetation and species of the site;

- Habitat loss from land take for development;

- Damage to undesignated foraging and roost sites for qualifying species;

- Disturbance of fauna and damage to habitats;
- Changes to hydrology resulting in drought or flooding;
- Climate Change - This can lead to changes that will require habitats to be able to adapt. For example, sea level rise will require habitats to be able to move landward and development could prevent this movement, leading to coastal squeeze.

Assessment of Likely Significance

3.6 The Initial Screening stage has identified the European sites with the potential to be affected by the Sustainable Design Guide SPD. Tables 11 to 16 consider the potential impacts of the SPD against each of these identified sites to assess whether there are any potentially significant detrimental impacts that would require an appropriate assessment.

Table 11: Analysis of the potential impacts of the SPD on the Teesmouth and Cleveland Coast SPA.

Site	Potential Issues	Likelihood of Impact from SPD
Teesmouth and Cleveland Coast SPA	Water Quality	The SPD advises on the use of sustainable drainage systems, which reduce pollution from runoff and drainage. It is not likely that the SPD will result in significant impacts upon water quality.
	Air Quality	The SPD seeks to reduce car use within the Borough and proposes measures to reduce resource use and greenhouse gas emissions from new developments. It is not likely that the SPD will result in significant impacts upon air quality.
	Habitat Loss from Land Take	The SPD does not propose any new development and does not allocate land for development. It is not likely to result in any habitat loss.
	Damage to undesignated roosting and foraging sites.	The SPD does not propose any new development and does not allocate land for development. It is not likely to lead to loss of, or damage to, undesignated sites, through either land take for development or increased disturbance.
	Disturbance	The SPD does not propose any new development and does not allocate land for development. It is not likely to cause disturbance from construction or increased visitor numbers.

	Hydrology	In supporting water efficiency and sustainable drainage, the SPD will mitigate against changes to hydrology and water quality resulting from new development. No detrimental impacts have been identified.
	Climate Change	The advice in the SPD will reduce the environmental impact of developments within the Borough. The SPD also encourages climate change mitigation and adaptation. No detrimental impacts have been identified.

Table 12: Analysis of the potential impacts of the SPD on the Teesmouth and Cleveland Coast Ramsar Site.

Site	Potential Issues	Likelihood of Impact from SPD
Teesmouth and Cleveland Coast Ramsar	Water Quality	The SPD advises on the use of sustainable drainage systems, which reduce pollution from runoff and drainage. It is not likely that the SPD will result in significant impacts upon water quality.
	Air Quality	The SPD seeks to reduce car use within the Borough and proposes measures to reduce resource use and greenhouse gas emissions from new developments. It is not likely that the SPD will result in significant impacts upon air quality.
	Habitat Loss from Land Take	The SPD does not propose any new development and does not allocate land for development. It is not likely to result in any habitat loss.
	Damage to undesignated roosting and foraging sites.	The SPD does not propose any new development and does not allocate land for development. It is not likely to lead to loss of, or damage to, undesignated sites, through either land take for development or increased disturbance.
	Disturbance	The SPD does not propose any new development and does not allocate land for development. It is not likely to cause disturbance from construction or increased visitor numbers.
	Hydrology	In supporting water efficiency and sustainable drainage, the SPD will mitigate against changes to hydrology and water quality resulting from new development. No detrimental impacts have been identified.

	Climate Change	The advice in the SPD will reduce the environmental impact of developments within the Borough. The SPD also encourages climate change mitigation and adaptation. No detrimental impacts have been identified.

Table 13: Analysis of the potential impacts of the SPD on Castle Eden Dene SAC.

Site	Potential Issues	Likelihood of Impact from SPD
Castle Eden Dene SAC	Water Quality	The SPD advises on the use of sustainable drainage systems, which reduce pollution from runoff and drainage. It is not likely that the SPD will result in significant impacts upon water quality.
	Air Quality	The SPD seeks to reduce car use within the Borough and proposes measures to reduce resource use and greenhouse gas emissions from new developments. It is not likely that the SPD will result in significant impacts upon air quality.
	Disturbance	The SPD does not propose any new development and does not allocate land for development. It is not likely to cause disturbance from construction or increased visitor numbers.
	Hydrology	In supporting water efficiency and sustainable drainage, the SPD will mitigate against changes to hydrology and water quality resulting from new development. No detrimental impacts have been identified.
	Climate Change	The advice in the SPD will reduce the environmental impact of developments within the Borough. The SPD also encourages climate change mitigation and adaptation. No detrimental impacts have been identified.

Table 14: Analysis of the potential impacts of the SPD on Thrislington SAC.

Site	Potential Issues	Likelihood of Impact from SPD
Thrislington SAC	Water Quality	The SPD advises on the use of sustainable drainage systems, which reduce pollution from runoff and drainage. It is not likely that the SPD will result in significant impacts upon water quality.

	Air Quality	The SPD seeks to reduce car use within the Borough and proposes measures to reduce resource use and greenhouse gas emissions from new developments. It is not likely that the SPD will result in significant impacts upon air quality.
	Disturbance	The SPD does not propose any new development and does not allocate land for development. It is not likely to cause disturbance from construction or increased visitor numbers.
	Hydrology	In supporting water efficiency and sustainable drainage, the SPD will mitigate against changes to hydrology and water quality resulting from new development. No detrimental impacts have been identified.
	Climate Change	The advice in the SPD will reduce the environmental impact of developments within the Borough. The SPD also encourages climate change mitigation and adaptation. No detrimental impacts have been identified.

Table 15: Analysis of the potential impacts of the SPD on Durham Coast SAC.

Site	Potential Issues	Likelihood of Impact from SPD
Durham Coast SAC	Water Quality	The SPD advises on the use of sustainable drainage systems, which reduce pollution from runoff and drainage. It is not likely that the SPD will result in significant impacts upon water quality.
	Air Quality	The SPD seeks to reduce car use within the Borough and proposes measures to reduce resource use and greenhouse gas emissions from new developments. It is not likely that the SPD will result in significant impacts upon air quality.
	Disturbance	The SPD does not propose any new development and does not allocate land for development. It is not likely to cause disturbance from construction or increased visitor numbers.
	Hydrology	In supporting water efficiency and sustainable drainage, the SPD will mitigate against changes to hydrology and water quality resulting from new development. No detrimental impacts have been identified.

	Climate Change	The advice in the SPD will reduce the environmental impact of developments within the Borough. The SPD also encourages climate change mitigation and adaptation. No detrimental impacts have been identified.

Table 16: Analysis of the potential impacts of the SPD on Northumbria SPA/Ramsar.

Site	Potential Issues	Likelihood of Impact from SPD
Northumbria SPA/Ramsar	Water Quality	The SPD advises on the use of sustainable drainage systems, which reduce pollution from runoff and drainage. It is not likely that the SPD will result in significant impacts upon water quality.
	Air Quality	The SPD seeks to reduce car use within the Borough and proposes measures to reduce resource use and greenhouse gas emissions from new developments. It is not likely that the SPD will result in significant impacts upon air quality.
	Disturbance	The SPD does not propose any new development and does not allocate land for development. It is not likely to cause disturbance from construction or increased visitor numbers.
	Hydrology	In supporting water efficiency and sustainable drainage, the SPD will mitigate against changes to hydrology and water quality resulting from new development. No detrimental impacts have been identified.
	Climate Change	The advice in the SPD will reduce the environmental impact of developments within the Borough. The SPD also encourages climate change mitigation and adaptation. No detrimental impacts have been identified.

In Combination Assessment

3.7 A plan may have a significant impact upon a European site in combination with other projects, plans or programmes, even when it is not found to have any significant impacts on its own. However, as the Sustainable Design Guide SPD is not found to have any impacts at all, it is not necessary to consider in combination impacts. It is stated "if the plan plus existing trends alone are unlikely to significantly affect a site, then the effects of other plans and projects do not need to be considered." (Levett-Therivel et al, 2006:24)[7].

[7] Levett-Therivel et al, 2006, *Appropriate Assessment of Plans.*

4. Screening and Finding of No Significant Effects Report Matrices

4.1 The screening analysis of the Sustainable Design Guide SPD has been used to complete the following Screening Matrix.

Table 17: Screening Matrix

Brief Description of the Project or Plan
The Sustainable Design Guide amplifies policies set out within the Councils adopted Core Strategy and provides advice and guidance to the public and developers on improving the design standards and sustainability of new developments. It sets out what developers are expected to do to achieve attractive and inclusive neighbourhoods and it promotes high quality design, energy efficiency and environmental sustainability.
Brief Description of the Natura 2000 Sites
The following sites have been considered in the Habitat Regulations Screening for the Sustainable Design Guide SPD: • Teesmouth and Cleveland Coast SPA and Ramsar – The site supports internationally important populations of Annex 1 and migratory birds and an internationally important assemblage of water birds. It comprises of intertidal sand and mudflats, rocky shore, sand dunes, salt marsh and freshwater marsh. • North York Moors SPA and SAC – The site contains the largest continuous tract of upland heather moorland in England and includes North Atlantic wet heaths, European dry heaths and blanket bog. • Castle Eden Dene SAC – The site is the largest area of natural woodland in North East England and represents the most extensive northerly native occurrence of Yew woods in the UK. • Thrislington SAC – The site is unimproved calcareous grassland and comprises of semi-natural dry grasslands and scrubland. • Durham Coast SAC – The site is the only example of vegetated sea cliffs on Magnesian Limestone exposures in the UK. • Northumbria Coast SPA and Ramsar – The site supports internationally important populations of Annex 1 species and comprises of cliffs, coastal, estuary, intertidal rock, intertidal sand and mudflats, open coast and pool habitats.

Assessment Criteria	
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites.	The SPD promotes the use of high quality sustainable design in new developments in the Borough. It does not establish the principle of development or propose any new developments. The Sustainable Design Guide SPD is not likely to give rise to any impacts upon the Natura 2000 sites.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura sites by virtue of: • Size and Scale; • Land take; • Distance from the designated site and key features of the site; • Resource requirements (water abstraction etc); • Emissions (disposal to land, water or air); • Excavation requirements; • Duration of construction, operation, decommissioning etc; • Other.	The Sustainable Design Guide SPD is not likely to give rise to any impacts upon the Natura 2000 sites.
Describe any likely changes to the sites arising as a result of: • Reduction of habitat area; • Disturbance to key species; • Habitat or species fragmentation;	The SPD promotes the use of high quality sustainable design in new developments and promotes energy efficiency and environmental sustainability. The SPD will reduce the environmental impacts of new developments within the Borough and is not likely to

• Reduction in species density; • Changes in key indicators of conservation value (water quality etc); • Climate change.	give rise to any impacts upon the Natura 2000 sites.
Describe any likely impacts on the Natura 2000 sites as a whole in terms of: • Interference with the key relationships that define the structure of the sites; • Interference with key relationships that define the function of the sites.	The Sustainable Design Guide SPD is not likely to give rise to any impacts upon the Natura 2000 sites.
Provide indicators of significance as a result of the identification of effects set out above in terms of: • Loss; • Fragmentation; • Disruption; • Disturbance; • Change to key elements of the site (e.g. water quality etc.).	Not applicable.
Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.	No likely significant effects have been identified.

4.2 The screening analysis and assessment of likely significance has not identified any significant effects upon the Natura 2000 sites from the Sustainable Design Guide. As a result, the Finding of No Significant Effects Report Matrix has been completed.

Table 18: Finding of No Significant Effects Report Matrix

Name of project or plan	Sustainable Design Guide SPD
Name and location of Natura 2000 sites	• Teesmouth and Cleveland Coast SPA and Ramsar- Stockton-on-Tees, Hartlepool, Redcar and Cleveland. • North York Moors SAC and SPA – North Yorkshire Moors National Park • Castle Eden Dene SAC - Easington • Thrislington SAC – Sedgefield • Durham Coast SAC – Easington • Northumbria Coast SPA and Ramsar – Coastline between Tweed and Tees Estuaries.
Description of the project or plan	The Sustainable Design Guide amplifies policies set out within the Councils adopted Core Strategy and provides advice and guidance to the public and developers on improving the design standards and sustainability of new developments. It sets out what developers are expected to do to achieve attractive and inclusive neighbourhoods and it promotes high quality design, energy efficiency and environmental sustainability.
Is the project or plan directly connected with or necessary to the management of the site?	No
Are there other projects or plans that together with the project or plan being assessed could affect the site?	No

5 Conclusions of the Screening Exercise.

5.1 On the basis of the information included in the screening exercise it is the conclusion of the Council that there are not likely to be significant effects on the Natura 2000 sites from the adoption of the Sustainable Design Guide SPD. Accordingly, an appropriate assessment, under the Conservation of Habitats and Species Regulations 2010, will not be required.

Appendix 1: Favourable Condition Table – Teesmouth Cleveland Coast SPA and Ramsar Site.

Feature	Sub-Feature	Attribute	Measure	Target	Comments
Internationally important populations of regularly occurring Annex 1 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<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 >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.

Feature	Sub-Feature	Attribute	Measure	Target	Comments
Internationally important populations of regularly occurring migratory species (knot (winter), redshank (autumn)) and of the internationally important assemblage of waterbirds		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
		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.	Mytilus spat 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.

Feature	Sub-Feature	Attribute	Measure	Target	Comments
		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 Hydrobia, Macoma, Corophium, Nereis (redshank and shelduck), Macoma, Mytilus/Cerastoderma spat, Hydrobia (knot), Bathyporeia, Nerine, Mytilus, wrack flies, sanhoppers (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
		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 <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.	Hydrobia, Corophium 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.	Salicornia and Atriplex are important for teal during the non-breeding season (November – March), while Salicornia 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 Condition Table –North York Moors SAC and SPA Site.

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
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 (eg - footpaths).
		Dwarf shrub cover	% of dwarf shrub cover	Minimum of 75% cover of dwarf shrubs	Excluding recently burnt stands. Includes all H10 (*Calluna vulgaris-Erica cinerea* heath) and H12 (*Calluna vulgaris – Vaccinium myrtillus* 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 Calluna	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 (eg - footpaths).
		Dwarf shrub cover	%age of dwarf shrub cover	Minimum of 75% cover of dwarf shrubs	

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 Polytrichum spp. and/or Campylopus spp.) and/or Cladonia 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 Calluna	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 (eg- footpaths).
		Bryophyte abundance	Bryophyte cover especially Sphagnum spp	Bryophytes (excluding Polytrichum spp., Campylopus spp. and Racomitrium lanuginosum on bare ground) should be abundant and must include Sphagnum spp	Sphagnum spp must be both frequent and widespread in the stand and restricted to hollows, forming at least occasional lawns or hummocks. Pleurocarpous 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 Sphagnum spp are abundant and forming lawns although this wetness is not a general feature of the Moors.
		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	

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
		Graminoid cover	% cover of grasses and related species	Total cover of graminoids/ Eriophorum should not exceed 50% unless Sphagnum spp are abundant/co-dominant and forming lawns below the grasslands i.e. in waterlogged conditions	Eriophorum 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 Polytrichum spp, Campylopus 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 eg fires, vehicles, livestock grazing, recreational activities	See notes. Except very localised - eg - 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.
		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.
	Annex 1 populations of European Importance: 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	Vegetation Characteristics	Extent and proportions of short, medium and tall vegetation, measured	xxx% of moorland with short vegetation with patches of taller vegetation for nesting	Using SAC targets, at least 75% of the shorter vegetation currently used by golden plovers can be retained. The requirement for 25% taller vegetation

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
	of European Importance: golden plover, merlin		periodically (frequency to be determined).	(short grassland, grasslands 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.	could be met away from high density breeding areas. Scattered tree/shrub is acceptable to meet other SPA and SAC objectives. 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. 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 (eg 5% of area) as currently defined. Vegetation height required for merlin: a ground layer of heather at > 20cm height with >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 (eg tops of catchments). Methodology for assessing target to be determined. Reference levels (i.e. proportion of moorland with appropriate vegetation heights) to be determined. xxx% of moorland with short vegetation with patches

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
					of taller vegetation for nesting (short grassland, grasslands with bracken, burnt heather) for golden plover. xxx% of moorland with short vegetation for feeding and patches of longer vegetation for nesting for curlew. xxx% of moorland with medium to tall ground vegetation plus scattered (tall heather, low trees/scrub) for Merlin. xxx% of moorland with tall heather/young forestry (nesting and roosting), plus grasslands, bracken or low trees/scrub (feeding) for Hen Harrier
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.	Earthworm, leatherjackets, beetles, spiders are important for Golden plover. Maintain or increase existing areas of grassland (within 10-15km) without pesticide use (effective field size should be at least 10ha). 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. Reference level to be determined. Methodology for assessing target to be determined.

Appendix 3: Favourable Condition Table – Castle Eden Dene SAC.

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
Semi-natural woodland	Taxus baccata woodland (National Vegetation Classification W13)	Area	Extent/location of stands	No loss of ancient semi-natural stands At least current area of recent semi-natural stands maintained, although their location may alter. At least the area of ancient woodland retained (Details of stands contained in National Nature Reserve plan)	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. 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.
		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	At least the current level of structural diversity maintained. (See NNR plan for current state) Canopy cover present over 30-90 % of stand area 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[8].	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. The ground flora and shrub layer are frequently totally absent over most of the stand, so no target is set for them. 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. 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. Assess this attribute by field survey.
		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 maintain canopy density over a 20 yr period (or equivalent	A proportion of gaps at any one time may develop into permanent open space; equally some current permanent open space/glades may in time regenerate to closed canopy. Regeneration may often occur on the edges of

[8] 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
				regrowth from coppice stumps). No planting except where necessary to restore former plantation areas.	woods rather then 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.
		Composition	Cover of native versus non-native species (all layers) Death, destruction or replacement of native woodland species through effects of non-native fauna or external unnatural factors	At least the current level of site-native species maintained. (Details of current composition given in management plan.) At least 90% of cover in any one layer of site-native or acceptable naturalised species. At least 50% of canopy or understorey comprised of yew 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.	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 (eg 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.
		Species, habitats, structures characteristic of the site.	Distinctive and desirable elements for a given site Patches of associated habitats and transitions eg to ash woodland, or to species-rich grassland	Distinctive elements maintained at current levels and in current locations (where appropriate). Transitions to other woodland types (ash-elm, acid oak) and	Changes leading to these targets not being met may be acceptable where this is due to natural processes. 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

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
				open space maintained in extent and where appropriate location.(See NNR plan for current state).	cannot be assessed directly on a general site visit then surrogate features should be given where possible, eg dead wood concentrations for associated invertebrates.

Appendix 4: Favourable Condition Table – 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. *Sesleria albicans, Anthyllis vulneraria, Gallium Verum, Gentianella spp., Heliansthemum nummularium, Hypericum Pulchrum, Linum Cartharticum, Listeria Ovata, Lotus Corniculatus, Pimpinella Saxifragum, Plantago Media, Polygala spp., Primula Verus, Sanguisorba minor, Scabiosa columbaria, Stachys Officinalis, Succisa pratensis, Thymus*	*Sesleria albicans* frequent plus at least two species frequent and four occassional 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.

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
			polythricus, Viola hirta.		
		*Sward composition: Negative indicator species	Record the frequency and % cover of negative indicator species. Record in period mid May to end July, measured annually if possible. *Chamerion Angustifolium, Cirsium arvense, Cirsium vulgare, Galium Aparine, Sonchus spp., Senecio Jacobaea, Urtica Dioica.*	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.
		*Sward composition: Negative indicator species	Record the frequency and % cover of all tree and scrub species, except *Rosa spp.,* 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 *Rosa* spp., Measure annually if possible.	No more than 10% cover.	*Rosa* 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.	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
			Antennaria dioica, Epipacdis atrorubens, Linum anglicum, Hypericum montanum, Parnassia palustris, Pinguicula vulgaris, Plantago maritima, Primula farinose, Selaginella selaginoides, Trollius europaeus.		
		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.	**Requires up to date NVC mapping to provide accurate base line.** 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 cliffs 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 characteristic of the site.	Presence of vegetation communities characteristic of maritime grassland. These are likely to cinsist of NVC communities MC8-MC12 characterised by the dominance of *Festuca rubra, with Armeria maritima, Silene*	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 surveys to assess which communities have been previously recorded on the site. Some of these communities can be difficult to assess because of

Operational Feature	Criteria Feature	Attribute	Measure	Target	Comments
			Vulgaris maritima, Holcus lanatus, Plantago lanceolata, P. maritama, P. coronopus, Dactylis glomerata, Daucus carota, Rumex acetosa, Hyacynthoides non-scriptus. Assess at least one reporting cycle.		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 least once per reporting cycle.	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. *Cirsium arvense, Senecio jacobaea, Urtica dioica.* Together with non native species. Some tall ruderal communities may be present naturally on a cliff site.

Appendix 6: Favourable Condition 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.