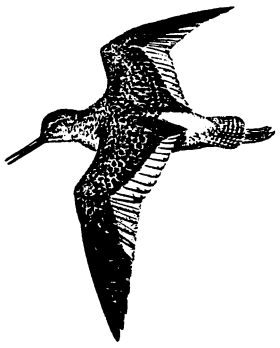
ENGLISH NATURE

TEESMOUTH AND CLEVELAND COAST

European marine site

English Nature's advice given under Regulation 33(2) of the Conservation (Natural Habitats, &c.) Regulations 1994



Issued 6 November 2000

[Issued 6 November 2000]

English Nature's advice for Teesmouth and Cleveland Coast European marine site given under Regulation 33(2) of the Conservation (Natural Habitats, &c.) Regulations 1994

Preface

This document provides English Nature's advice to other relevant authorities as to (a) the conservation objectives and (b) any operations which may cause deterioration to the natural habitats or the habitat of species, or disturbance of species for the Teesmouth and Cleveland Coast European marine site. This advice has been prepared to fulfill English Nature's obligations under Regulation 33(2) of the Conservation (Natural Habitats, &c.) Regulations 1994.

The Teesmouth and Cleveland Coast Special Protection Area is a European marine site. European marine sites are defined in the Conservation (Natural Habitats, &c.) Regulations 1994 as any part of a European site covered (continuously or intermittently) by tidal waters or any part of the sea in or adjacent to Great Britain up to the seaward limit of territorial waters. European sites include Special Areas of Conservation (designated under the Habitats Directive, which support certain natural habitats and species of European importance), and Special Protection Areas (designated under the Birds Directive which support significant numbers of internationally important wild birds).

This 'Regulation 33 package' is designed to help relevant and competent authorities, who have responsibilities to implement the Habitats Directive, to:

- understand the international importance of the site, underlying physical processes and the ecological requirements of the habitats and species involved;
- advise relevant authorities as to the conservation objectives for the site and operations which may cause deterioration or disturbance;
- set the standards against which the condition of the site's interest features can be determined and undertake compliance monitoring to establish whether they are in favourable condition; and
- develop, if deemed necessary, a management scheme to ensure that the features of the site are maintained.

In addition, the Regulation 33 package will provide a basis to inform the scope and nature of 'appropriate assessment' required in relation to plans and projects (Regulations 48 & 50 and by English Nature under Regulation 20). English Nature will keep this advice under review and may update it every six years or sooner, depending on the changing circumstances of the European marine site. In addition, we will provide more detailed advice to competent and relevant authorities to assess the implications of any given plan or project under the Regulations, where appropriate, at the time a plan or project is being considered. If as a result of the UK SPA Network Review (led by JNCC) interest features are added to this European marine site or the site boundaries change, English Nature will amend this advice as appropriate.

Tim Bines
General Manager, English Nature

6 November 2000

[Issued 6 November 2000]

English Nature's advice for Teesmouth and Cleveland Coast European marine site given under Regulation 33(2) of the Conservation (Natural Habitats, &c.) Regulations 1994

Contents

List of Figures and Tables

Acknowledgements

English Nature would like to acknowledge the assistance of the following individuals and organizations who have provided advice at various times to help prepare parts of this package.

Cindy Peters	Department of Environment, Transport and the Regions
Carol Gray	Ministry of Agriculture, Fisheries and Food
Dr Malcolm Vincent	Joint Nature Conservation Committee
Sarah Peaty	Environment Agency (Northumbria Area)
Professor Peter Evans	Department of Biological Sciences, University of Durham
Cliff Shepherd	Industry Nature Conservation Association (INCA)
Jeremy Garside	Tees Valley Wildlife Trust

[Issued 6 November 2000]

English Nature's draft advice for Teesmouth and Cleveland Coast European marine site given under Regulation 33(2) of the Conservation (Natural Habitats, &c.) Regulations 1994

1. Introduction

1.1 Natura 2000

The European Union Habitats[1] and Birds[2] Directives are international obligations which set out a number of actions to be taken for nature conservation. The Habitats Directive aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements, and sets out measures to maintain or restore, natural habitats and species of European Union interest at favourable conservation status[3]. The Birds Directive protects all wild birds and their habitats within the European Union, and there are special measures for migratory birds and those that are considered rare or vulnerable.

The Habitats and Birds Directives include requirements for the designation of conservation areas. In the case of the Habitats Directive these are Special Areas of Conservation (SACs) which support certain natural habitats or species, and in the Birds Directive, Special Protection Areas (SPAs) which support wild birds of European Union interest. These sites will form a network of conservation areas across the EU to be known as "Natura 2000". Where SACs or SPAs consist of areas continuously or intermittently covered by tidal waters or any part of the sea in or adjacent to Great Britain up to the limit of territorial waters, they are referred to as European marine sites.

Further guidance on European marine sites is contained in the Department of the Environment Transport and Regions/Welsh Office document: ***European marine sites in England & Wales: A guide to the Conservation (Natural Habitats &c.) Regulations 1994 and to the preparation and application of management schemes.***

1.2 English Nature's role

The Conservation (Natural Habitats, &c.) Regulations 1994 translate the Habitats Directive into law in Great Britain. It gives English Nature a statutory responsibility to advise relevant authorities as to the conservation objectives for European marine sites in England and to advise relevant authorities as to any operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species for which the sites have been designated. This information will be a key component of any of the management schemes which may be developed for these sites.

This document is English Nature's advice for the Teesmouth and Cleveland Coast European marine site which is issued in fulfilment of Regulation 33(2) of the Conservation (Natural Habitats, &c.) Regulations 1994 (the 'Regulation 33 package'). Copies of key references quoted in this document are held at the

---

1 Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

2 Council Directive 79/409/EEC on the conservation of wild birds

3 A habitat or species is defined as being at favourable conservation status when its natural range and the areas it covers within that range are stable or increasing and the specific structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future.

English Nature Northumbria Team local office.

In addition to providing such advice, the Regulation 33 package informs the scope and nature of 'appropriate assessment' which the Directive requires to be undertaken for plans and projects (Regulations 48 & 50 and by English Nature under Regulation 20). English Nature may also provide more detailed advice to competent and relevant authorities to assess the implications of any such plans or projects.

1.3 The role of relevant authorities

The Conservation (Natural Habitats, &c.) Regulations 1994 require relevant authorities to exercise their functions so as to secure compliance with the Habitats Directive. This European marine site does not have a significant subtidal component, and is managed through existing SSSI mechanisms under the Wildlife and Countryside Act 1981, as amended 1985. However, relevant authorities may, if deemed necessary, draw up a management scheme under Regulation 34 for the European marine site component of Teesmouth and Cleveland Coast SPA. If such a management scheme is developed, it would provide the framework through which relevant authorities exercise their functions so as to secure compliance with the Habitats Directive and must be based on the advice in this package. Irrespective of this decision, relevant authorities must, within their areas of jurisdiction, have regard to both direct and indirect effects on an interest feature of the site as well as cumulative effects. This may include consideration of features and issues outside the boundary of the European marine site and above the highest astronmomical tide.

Relevant authorities should ensure that all plans for the area integrate with any management scheme for the European marine site. Such plans may include shoreline management plans, CHaMPs (Coastal Habitat Management Plans), local Environment Agency plans, SSSI management plans, local BAP plans and estuary management plans. This must occur to ensure that there is only a single management scheme through which all relevant authorities exercise their duties under the Conservation (Natural Habitats, &c.) Regulations 1994.

Relevant authorities also need to have regard to changing circumstances of the SPA and may therefore need to modify the management scheme and/or the way in which they exercise their functions so as to maintain the favourable condition of interest features concerned in the long term. There is no requirement for relevant authorities to take any actions outside their statutory functions.

Under certain circumstances, where another relevant authority is unable to act for legal reasons, or where there is no other relevant authority, English Nature is empowered to use its byelaw-making powers for Marine Nature Reserves (MNR) for use in European marine sites.

1.4 Activity outside the control of relevant authorities

Nothing within this Regulation 33 package will require relevant authorities to undertake any actions or ameliorate changes in the condition of interest features if it is shown that the changes result wholly from natural causes[4]. This also applies if the changes, although causing deterioration or disturbance to the interest features, are the result of human or natural events outside their control. Having issued Regulation 33 advice for European marine sites, English Nature will work with relevant authorities and others to agree, within a defined time frame, a protocol for evaluating all observed changes to baselines and to develop an understanding of natural change and provide further guidance as appropriate and possible.

On the Teesmouth and Cleveland Coast European marine site a management group may be set up and if so

[4] Determination of what constitutes natural change will be based on the best available information and scientific opinion at the time.

should be used to alert English Nature to such issues so that they may be assessed and any appropriate measures taken. This does not, however, preclude relevant authorities from taking action to prevent deterioration to the interest features, for example by introducing or promoting codes of practice through the management group.

1.5 Responsibilities under other conservation designations

In addition to its SPA status, parts of Teesmouth and Cleveland Coast are also designated and subject to agreements under other conservation legislation (eg. SSSIs notified under the Wildlife and Countryside Act 1981 as amended 1985, Ramsar Convention). The obligations of relevant authorities and other organisations under such designations are not affected by the advice contained in this document.

1.6 Role of conservation objectives

Section 4 of this document sets out the conservation objectives for the Teesmouth and Cleveland Coast European marine site. They are the starting point from which management schemes and monitoring programmes may be developed, as they provide the basis for determining what is currently causing or may in future cause a significant effect, and for informing competent authorities on the scope of appropriate assessments of plans or projects. The conservation objectives set out what needs to be achieved and thus deliver the aims of the Habitats Directive.

1.7 Role of advice on operations

The advice on operations set out in Section 6 provides the basis for discussion about the nature and extent of the operations taking place within or close to the site and which may have an impact on its interest features. It is given on the basis of the working assumption that sites were in favourable condition at the time they were identified. In the 2000-2006 reporting period an assessment of the condition of the site will be made to support this assumption. However, in compiling this advice it has already become apparent that some key parts of the site are in unfavourable condition. The advice should also be used to identify the extent to which existing measures of control, management and use are, or can be made, consistent with the conservation objectives. The advice will thereby focus the attention of relevant authorities and surveillance to areas that may need management measures.

This operations advice will need to be supplemented through further detailed discussions with the management and advisory groups in formulating and agreeing a management scheme, where required, to agreed timescales for the European marine site.

2. Identification of interest features under the EU Birds Directive

Teesmouth and Cleveland Coast is a Special Protection Area (SPA) and its marine component qualifies as a European marine site. The boundary of the Teesmouth and Cleveland Coast SPA is shown in Figure 1.

Teesmouth and Cleveland Coast SPA qualifies under Article 4.1 of the EU Birds Directive by supporting:

- Internationally important populations of regularly occurring Annex 1 species.

It also qualifies under Article 4.2 of the EU Birds Directive in that it supports:

- Internationally important populations of regularly occurring migratory species; and
- An internationally important assemblage of waterbirds.

Teesmouth and Cleveland Coast was first classified as an SPA in 1995. The SPA was significantly extended in area with a new citation issued in March 2000, and it is this latter citation on which this advice is based.

Teesmouth and Cleveland Coast was also designated as a Ramsar site under the Ramsar Convention in 1995 for its status as an internationally important wetland. The Ramsar site boundary was also extended in March 2000, and is coincident with that of the SPA. The complete boundary of the March 2000 SPA and Ramsar site, of which the European marine site is a component, is given in Figure 1.

3. SPA interest features

Teesmouth and Cleveland Coast SPA includes both marine areas (ie. land covered continuously or intermittently by tidal waters) and land which is not subject to tidal influence. The marine part of the SPA is termed a European marine site. The extent of the Teesmouth and Cleveland Coast European marine site is illustrated in Figure 2. The seaward boundary of the European marine site is concurrent with that of the SPA. The landward boundary of the European marine site is the upper boundary of the SPA, or where that extends above land covered continuously or intermittently by tidal waters it is at the limit of the marine habitats.

Where SPA qualifying species occur within the European marine site they are referred to as interest features. Sub-features (habitats) have also been identified to highlight the ecologically important components of the European marine site for each interest feature. The interest features and sub-features for the Teesmouth and Cleveland Coast European marine site are described below and the sub-features are mapped at Figure 2 to show their distribution and extent.

3.1 Background and context

A major aim of the Birds Directive is to take special measures to conserve the habitats of Annex 1 and migratory birds in order to ensure their survival and reproduction within the European Union. A key mechanism in achieving this is the classification by Member States of the most suitable sites as SPAs.

English Nature's conservation objectives at a site level focus on maintaining the condition of the habitats used by the qualifying species. Habitat condition will be delivered through appropriate site management including the avoidance of damaging disturbance. In reporting on Favourable Conservation Status, account will need to be taken both of habitat condition and the status of the birds on the SPA.

Accordingly, English Nature will use annual counts, in the context of five year mean peaks for qualifying species, together with available information on population and distribution trends, to assess whether an SPA is continuing to make an appropriate contribution to the Favourable Conservation Status of the species. Count information will be assessed in combination with information on habitat condition, at the appropriate time within the reporting cycle, in order to report to the European Commission

English Nature's advice focuses on the qualifying species for which the SPA was originally classified despite the fact that numbers and species composition may have changed on this site since that time. Such population and species composition changes are being documented through the UK SPA Network Review, led by JNCC, which will provide advice to Ministers on any changes required in SPA citations. Depending on the review and decisions from DETR, English Nature may reissue this advice.

In addition to focussing on avoiding deterioration to the habitats of the qualifying species, the Habitats Directive also requires that actions are taken to avoid significant disturbance to the species for which the site was designated. Such disturbance may lead to alterations in population trends and/or distribution patterns. Avoiding disturbance to species requirements is mentioned in the favourable condition table underpinning the conservation objectives for the SPA. In this context, five year mean peak information on populations will be used as the basis for assessing whether disturbance is damaging.

Attention is, however, also directed to the inclusion of disturbance in the advice on operations provided in Section 6 . Where disturbance is highlighted in such advice, relevant authorities need to avoid damaging disturbance to qualifying species when exercising their functions under the Directive.

3.2 Reductions in organic inputs

Under the Urban Waste Water Treatment (UWWT) Directive all coastal discharges above a certain volume must have secondary treatment installed by the end of 2000. Secondary treatment of sewage will significantly reduce organic loading and to a lesser extent reduce concentrations of dissolved nutrients. The effects of these reductions on coastal features and the birds they support at Teesmouth and Cleveland Coast are difficult to predict. On the one hand, it might be expected that there would be a redistribution of feeding birds or a reduction in the overall capacity of a coastal area to support bird populations. On the other hand, where bird populations are currently adversely affected by eutrophication, cleaner discharges may contribute to improving site condition.

English Nature supports the cleaning up of coastal discharges. On balance, the overall ecological benefits of cleaner discharges are likely, in general, to outweigh any subsequent local decline in bird numbers, although there is presently insufficient knowledge to predict accurately the effects in general or for individual SPA sites. Consequently, English Nature, with input from the Countryside Council for Wales and the Environment Agency, is commissioning a related research project to study the relationship between birds and organic nutrient levels, the overall effects on the ecosystem and thereby the effects of the clean-up programme under the UWWT and Bathing Water Directives.

Under the Habitats Regulations, if significant effects are likely from such activities, the competent authority (in this case the Environment Agency) will be required to undertake an appropriate assessment to determine whether there is an adverse effect on site integrity.

3.3 General description

In recognition that bird populations may change as a reflection of national or international trends or events, this advice on the bird interests of the European marine site focuses on the condition of the habitats necessary to support the bird populations. Sub-features are identified which describe the key habitats within the European marine site necessary to support the birds that qualify within the SPA. Detailed information and targets for habitat condition are listed in the favourable condition table in Section 5. Bird usage of the site varies seasonally, with different areas being favoured over others at certain times of the year. However, English Nature will use five year mean peaks derived from annual counts of qualifying species, together with available information on UK population and distribution trends, to assess whether this SPA is continuing to make an appropriate contribution to the Favourable Conservation Status of the qualifying species across Europe.

Bird communities are highly mobile and exhibit patterns of activity related to tidal water movements and many other factors. Different bird species exploit different parts of a marine area and different prey species. Changes in the habitat may therefore affect them differently. The important bird populations require a functional ecosystem which is capable of supporting intertidal habitat for feeding and roosting. The most important factors related to this are:

- Current extent and distribution of suitable breeding, feeding and roosting habitat (e.g. sand and shingle, intertidal sandflat and mudflat, rocky shore, saltmarsh);
- Sufficient prey availability (e.g. small fish, crustaceans, molluscs and worms);
- Minimal levels of disturbance;
- Water quality necessary to maintain intertidal plant and animal communities; and
- Water quantity and salinity gradients necessary to maintain saltmarsh conditions suitable for bird feeding and roosting.

3.4 Internationally important populations of the regularly occurring Annex 1 species

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. Teesmouth and Cleveland Coast is of importance for internationally important populations of breeding little tern *Sterna albifrons* and migrant sandwich tern *Sterna sandvicensis*, both of which species are listed on Annex 1.

Relevant authorities need also to have regard to adjacent European interests (i.e. those occurring above the highest astronomical tide), as they might be affected by activities taking place within, or adjacent to the European marine site. Objectives to maintain this aspect of bird interest in favourable condition are found within English Nature's conservation objectives for the relevant SSSI within the SPA boundary and will be dealt with through procedures outlined in the Conservation (Natural Habitats &c.) Regulations 1994.

3.4.1 Key sub-features

Sand and shingle areas - Sparsely vegetated shingle/sand areas fronting sand dune systems are an important nesting area for little terns. Colonies are located at Hart Warren Dunes, South Gare and Coatham Sands and at Seaton Dunes.

Intertidal sandflat and mudflat - These habitats provide roosting and loafing sites for the sandwich tern population during the post-breeding period (July and August) prior to autumn migration, and for little tern in summer (May to August). North Gare Sands, Seal Sands, Bran Sands and Coatham Sands constitute the key sites.

Shallow coastal waters - shallow coastal waters are important in that they comprise the main feeding areas for both little and sandwich terns, both of which species feed almost exclusively on fish (particularly sprats and sandeels).

3.5 Internationally important populations of regularly occurring migratory bird species

Knot occurs in internationally important numbers in winter. As this internationally important population is included within the wintering waterfowl assemblage, and as it depends on the same marine habitats, it has also been included in the conservation objectives for the assemblage.

Redshank occurs in internationally important numbers during moult and migration in late summer and autumn. A small proportion of the population utilises grazing marsh habitats (including brackish and freshwater pools) outside the European marine site.

3.5.1 Key sub-features

Rocky shores - These habitats, which are present around Hartlepool Headland/ North Sands, South Gare, Coatham and Redcar Rocks and Seaton Snook, provide vital food resources for the wintering knot population (for which mussel spat *Mytilus edulis* are particularly important), and are also used by a small proportion of the autumn redshank population. Those rocky shores at higher tidal levels are also used (primarily by knot) as high water roosting sites, especially at Seaton Snook.

Intertidal sandflat and and mudflat - Intertidal sandflats and mudflats on the site support high densities of invertebrates which are important as food for knot and redshank. The high biomass of invertebrates includes key species such as mudsnails *Hydrobia ulvae* (>10,000m^2 max. recorded density), cockles *Cerastoderma edule* (>400m^2 max. recorded density), marine worms such as ragworms *Nereis diversicolor* (>3000m^2 max. recorded density) and crustaceans such as *Corophium volutator* (5000 m^2 max recorded density). In general more sheltered areas with a relatively high silt content support a richer biomass than more exposed areas. Seal Sands, North Tees Mudflat and Greatham Creek are of prime importance for redshank,while knot favour Seal Sands and Hartlepool North Sands. Knot also roost at higher tidal levels at North Gare Sands, Bran Sands and Hartlepool North Sands.

Saltmarsh - Teesmouth and Cleveland Coast's relatively small saltmarsh resource, concentrated on the margins of Greatham Creek and within Seal Sand Peninsula enclosures, provides roosting opportunities for redshank.

Grazing Marsh - A small proportion of the redshank population utilises grazing marsh habitats (including brackish and freshwater pools) outside the European marine site.

3.6 An internationally important assemblage of waterbirds

The large areas of intertidal mudflats and sandflats at Teesmouth and Cleveland Coast support dense populations of marine invertebrate species, which in turn provide a food source for large populations of waterbirds (wildfowl and waders). Teesmouth and Cleveland Coast ranks among the forty or so most important estuarine and coastal sites in the UK for wintering waterbirds, regularly supporting over 20,000 birds (Cranswick *et al.*, 1999). During severe winter weather Teesmouth and Cleveland Coast assumes even greater national and international importance as waterbirds arrive from other parts of the North Sea basin to take advantage of its more sheltered conditions and abundant food resource. Grazing marsh habitats (including brackish and freshwater pools) outside the European marine site are also used by a high proportion of this assemblage (particularly teal).

3.6.1 Key sub-features

Rocky Shores - These habitats, which are present around Hartlepool Headland/North Sands South Gare, Coatham and Redcar Rocks and Seaton Snook, provide a hard substrate for a different range of prey species including dense beds of mussels *Mytilus edulis*. These areas are very important bird feeding habitats. Small mussels are eaten by knot, and these and other invertebrates are taken by a small element of the wintering redshank population. Those rocky shores at higher tidal levels are also used (primarily by knot) as high water roosting sites, especially at Seaton Snook.

Intertidal sandflat and mudflat - Intertidal sandflat and mudflats on the site support high densities of invertebrates which are important as winter food for knot, redshank, shelduck and sanderling. The high biomass of invertebrates includes key species such as mudsnails *Hydrobia ulvae* (>10,000m^2 max. recorded density), cockles *Cerastoderma edule* (>400m^2 max. recorded density), marine worms such as ragworms *Nereis diversicolor* (>3000m^2 max. recorded density) and small polychaetes/oligochaetes (2 million/m^2 max. recorded density) along with crustaceans such as *Corophium volutator* (5000 m^2 max recorded density). In general more sheltered areas with a relatively high silt content support a richer biomass than more exposed areas; Seal Sands, North Tees Mudflat and Bran Sands are of particular importance for redshank,while knot favour Seal Sands and Hartlepool North Sands. Knot also roost at higher tidal levels at North Gare Sands, Bran Sands and Hartlepool North Sands.

Saltmarsh - Saltmarsh on the site provides significant feeding and roosting opportunities for many species of waterbirds, in particular redshank, shelduck and teal, with the two last-named species obtaining nutrition from the seeds of saltmarsh vegetation. The two important sites are Greatham Creek (within Cowpen Marsh SSSI) and Seal Sands Peninsula enclosure.

Grazing Marsh - A high proportion of the assemblage also utilises grazing marsh habitats (including brackish and freshwater pools) outside the European marine site.

4. Conservation objectives for SPA interest features

Under Regulation 33(2)(a) of The Conservation (Natural Habitats &c.) Regulations 1994, English Nature has a duty to advise other relevant authorities as to the conservation objectives for the European marine site. The conservation objectives for the Teesmouth and Cleveland Coast European marine site interest features are provided below and should be read in the context of other advice given in this package, particularly:

- the attached maps showing the extent of the sub-features;
- summary information on the interest of each of the features; and
- the favourable condition table, which provides information on how to recognise favourable condition for the feature and which will act as a basis for the development of a monitoring programme.

4.1 The conservation objective for the internationally important populations of the regularly occurring Annex 1 bird species

Subject to natural change, maintain in favourable condition[6] 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

Numbers of bird species using these habitats are given in Table 1

4.2 The conservation objective for the internationally important populations of regularly occurring migratory bird species

Subject to natural change, maintain in favourable condition[6] 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
- Saltmarsh

Numbers of bird species using these habitats are given in Table 1

[6] For a detailed definition of how to recognise favourable condition see Table 2 (Section 5)

4.3 The conservation objective for the internationally important assemblage of waterbirds

Subject to natural change, maintain in favourable condition[6] the habitats for the **internationally important assemblage of waterbirds**, under the Birds Directive, in particular:

- Rocky shores
- Intertidal sandflat and mudflat
- Saltmarsh

Numbers of bird species using these habitats are given in Table 1

Note: These SPA conservation objectives focus on habitat condition in recognition that bird populations may change as a reflection of national or international trends or events. Annual counts for qualifying species will be used by English Nature, in the context of five year means of annual peaks, together with available information on UK population and distribution trends, to assess whether this SPA is continuing to make an appropriate contribution to the Favourable Conservation Status of the species across Europe.

[6] For a detailed definition of how to recognise favourable condition see attached table (Section 5)

[Issued 6 November 2000]

Table 1 **Information on populations of internationally important species of birds under the Birds Directive using the Teesmouth and Cleveland Coast European marine site at the time the SPA was classified.**

Internationally important populations of regularly occurring Annex 1 species.

Species	Population (5yr mean of peaks)*	National & International Importance	Period
Little tern *Sterna albifrons* (breeding)	40 pairs	1.7 % Great Britain	1995-1998
Sandwich tern *Sterna sandivensis* (autumn)	1900 birds	4.0% Great Britain	1988-1992

Internationally important populations of regularly occurring migratory bird species.

Species	Population (5yr mean of peaks)*	National & International Importance	Period
Knot *Calidris canutus* (winter)	5509 birds	1.6% East Atlantic Flyway	1991/92-1995/96
Redshank *Tringa totanus* (autumn)	1648 birds	1.1% East Atlantic Flyway	1987-1991

An internationally important assemblage of waterbirds.

Importance	Population (5yr mean of peaks)*
Teesmouth and Cleveland Coast supports large populations of wintering waterbirds.	21312 individual birds excluding gulls and terns (1991/92-1995/96), including 5509 knot, 1228 shelduck, 1351 teal, 1133 redshank and 259 sanderling

* SPA citation for extended SPA designated on 31 March 2000.

5. Favourable condition table

The favourable condition table is supplied as an integral part of English Nature's Regulation 33 advice package. It is intended to supplement the conservation objectives only in relation to management of activities and requirements on monitoring the condition of the site and its features. The table **does not by itself** provide a comprehensive basis on which to assess plans and projects as required under Regulations 20 and 48-50, but it does provide a basis to inform the scope and nature of any 'appropriate assessment' that may be needed. It should be noted that appropriate assessments are separate activities from condition monitoring, requiring consideration of issues specific to individual plans or projects. English Nature will provide more detailed advice to competent and relevant authorities to assess the implications of any given plan or project under the Regulations, where appropriate, at the time a plan or project is being considered.

The favourable condition table is the principal source of information that English Nature will use to assess the condition of an interest feature and as such comprises indicators of condition. On many terrestrial European sites, we know sufficient about the preferred or target condition of qualifying habitats to be able to define measures and associated targets for all attributes to be assessed in condition monitoring. Assessments as to whether individual interest features are in favourable condition will be made against these targets. In European marine sites we know less about habitat condition and find it difficult to specify favourable condition. Individual sites within a single marine habitat category are also all very different, further hampering the identification of generic indicators of condition. Accordingly, in the absence of such information, condition of interest features in European marine sites will be assessed against targets based on the existing conditions, which may need to be established through baseline surveys in many cases.

The assumption that existing interest features on European marine sites are in favourable condition will be tested in the 2000 - 2006 reporting period and the results subsequently fed back into our advice and site management. Where there is more than one year's observations on the condition of marine habitats, all available information will need to be used to set the site within long-term trends in order to form a view on favourable condition. Where it may become clear that certain attributes are a cause for concern, and if detailed studies prove this correct, restorative management actions will need to be taken to return the interest feature from unfavourable to favourable condition. It is the intention of English Nature to provide quantification of targets in the favourable condition table during the 2000 - 2006 reporting period.

This advice also provides the basis for discussions with management and advisory groups, and as such the attributes and associated measures and targets may be modified over time. The aim is to produce a single agreed set of attributes that will then be monitored in order to report on the condition of features. Monitoring of the attributes may be of fairly coarse methodology, underpinned by more rigorous methods on specific areas within the site. To meet UK agreed common standards, English Nature will be committed to reporting on each of the attributes subsequently listed in the final version of the table, although the information to be used may be collected by other organisations through agreements.

The table will be an important, but not the only, driver of the site monitoring programme. Other data, such as results from compliance monitoring and appropriate assessments, will also have an important role in assessing condition. The monitoring programme will be developed as part of the management scheme process through discussion with the relevant authorities and other interested parties. English Nature will be responsible for collating the information required to assess condition and will form a judgement on the condition of each feature within the site, taking into account all available information and using the favourable condition table as a guide.

Box 1	**Glossary of terms used in the favourable condition table**
Interest Feature	The habitat or species for which the site has been selected.
Sub-feature	An ecologically important sub-division of the interest feature.
Attribute	Selected characteristic of an interest feature/sub-feature which provides an indication of the condition of the feature to which it applies.
Measure	What will be measured in terms of the units of measurement, arithmetic nature and frequency at which the measurement is taken. This measure will be attained using a range of methods from broad scale to more specific across the site.
Target	This defines the desired condition of an attribute, taking into account fluctuations due to natural change. Changes that are significantly different from the target will serve as a trigger mechanism through which some further investigation or remedial action is taken.
Comments	The rationale for selection of the attribute.

Table 2 Favourable Condition Table for Teesmouth & Cleveland Coast European marine site

NB Monitoring of many of the attributes will be possible at the same time or during the same survey. The frequency of sampling for many attributes may need to be greater during the first reporting cycle in order to characterise the site and establish the baseline.

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 (flight 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 of <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 tern require views >200m to allow early detection of predators at roost sites.
	Shallow coastal waters	Food availability	Presence and abundance 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, sandeel, and sprats are important for feeding little and Sandwich terns.

[Issued 6 November 2000]

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 abundance of surface and sub-surface 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.	*Mytilus* spat are important prey for Knot.
	Intertidal sand and mudflats	Absence of obstructions to bird sight lines	Openess 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 abundance of surface and sub-surface 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.	Prey items include *Hydrobia, Macoma, Corophium, Nereis* (redshank and shelduck), *Macoma, Mytilus/ Cerastoderma spat, Hydrobia* (knot), *Bathyporeia, Nerine, Mytilus*, wrack flies, sandhoppers (sanderling).

[Issued 6 November 2000]

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	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 areas 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 food 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.

6. Advice on operations

English Nature has a duty under Regulation 33(2)(b) of The Conservation (Natural Habitats &c.) Regulations 1994 to advise other relevant authorities as to any operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species, for which the site has been classified. Information on how English Nature has developed this advice is given in section 6.2, and on how it may be reviewed and updated in the future, in Section 6.4.

The advice is provided in summary form in Table 3 and Section 6.5 and with more detail in Table 4 and Section 6.8, including advice in relation to specific interest features and their sub-features.

6.1 Purpose of advice

The aim of this advice is to enable all relevant authorities to direct and prioritise their work on the management of those activities which pose the greatest potential threat to the favourable condition of interest features on the Teesmouth and Cleveland Coast European marine site. The advice is linked to the conservation objectives for interest features and may help provide the basis for detailed discussions within the management group to formulate and agree a management scheme to agreed timescales for the site. The advice given here will inform, but is without prejudice to, any advice given under Regulation 48 or Regulation 50 on operations that qualify as plans or projects within the meaning of Article 6 of the Habitats Directive.

6.2 Methods for assessment

To develop this advice on operations English Nature has used a three step process involving:

- an assessment of the **sensitivity** of the interest features or their component sub-features to operations;
- an assessment of the **exposure** of each interest feature or their component sub-features to operations; and
- a final assessment of **current vulnerability** of interest features or their component sub-features to operations.

This three step process builds up a level of information necessary to manage activities in and around the European marine site in an effective manner. Through a consistent approach, this process enables English Nature to explain both the reasoning behind our advice, and to identify to competent and relevant authorities those operations which pose the most immediate threats to the favourable condition of the interest features on the European marine site.

All the scores of relative sensitivity, exposure and vulnerability are derived using best available scientific information and informed scientific interpretation and judgement. The process uses sufficiently coarse categorisation to minimise uncertainty in information, reflecting the current state of our knowledge and understanding of the marine environment. Information has been gathered from a range of sources including reports such as ABP Research (1999).

6.2.1 Sensitivity assessment

The sensitivity assessment used is an assessment of the relative sensitivity of the interest features or the component sub-features of the Teesmouth and Cleveland Coast European marine site to the effects of broad categories of human activities. In relation to this assessment, sensitivity has been defined as the intolerance of a habitat, community or individual (or individual colony) of a species to damage, or death, from an external factor (Hiscock, 1996). The sensitivity has been assessed in relation to the use of habitats by birds. As an example, wintering birds are highly sensitive to loss of their roosting or feeding grounds.

The sensitivity assessments of the interest features or their component sub-features of the Teesmouth and Cleveland Coast European marine site are based upon a series of scientific review documents. These include reports produced for the UK Marine SAC LIFE project (Davison & Hughes 1998; Elliott *et al* 1998; Cole *et al* 1999), the Countryside Council for Wales Science Report (Holt *et al*, 1995) and the Marine Habitats Reviews (Jones *et al*, 2000).

The sensitivity assessments are based on current information but may develop with improvements in scientific knowledge and understanding. In particular, English Nature and Scottish Natural Heritage have commissioned the Marine Biological Association of the UK, through its Marine *Life* Information Network (MarLIN) to provide detailed sensitivity information to underpin this advice over the next three years, and to make it available to all via the World Wide Web (www.marlin.ac.uk).

6.2.2 Exposure assessment

This has been undertaken for the Teesmouth and Cleveland Coast European marine site by assessing the relative exposure of the interest features via their component sub-features on the site to the effects of broad categories of human activities currently occurring on the site as at July 2000. The exposure has been assessed in relation to the use of habitats by birds. As an example, wintering birds' feeding and roosting grounds may be considered highly exposed to toxic contamination from synthetic compounds due to the locations and intensity of discharges into an area.

6.2.3 Vulnerability assessment

The third step in the process is to determine the vulnerability of interest features or their component sub-features to operations. This is an integration of sensitivity and exposure. Only if a feature is both sensitive and exposed to a human activity will it be considered vulnerable. In this context therefore, 'vulnerability' has been defined as the exposure of a habitat, community or individual (or individual colony) of a species to an external factor to which it is sensitive (Hiscock, 1996). For example, eelgrass beds are highly sensitive to physical loss through removal, which may occur as a result of activities such as coastal development or dredging. However, the eelgrass beds in certain European marine sites may not currently be considered vulnerable to such activities, due to their low exposure, location and existing site management. The process of deriving and scoring relative vulnerability is provided in Appendix I.

6.3 Format of advice

The advice is provided within six broad categories of operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species. This approach therefore:

- enables links to be made between human activities and the ecological requirements of the habitats or species, as required under Article 6 of the Habitats Directive;
- provides a consistent framework to enable relevant authorities in England to assess the effects of activities and identify priorities for management within their areas of responsibility; and
- is robust enough to take into account the development of novel activities or operations which may cause deterioration or disturbance to the interest features of the site; hence the advice should need only infrequent review and updating by English Nature.

Sensitivity and vulnerability have been assessed in relation to the use of habitats by birds.

These broad categories provide a clear framework against which relevant authorities can assess activities under their responsibility. The more detailed information in Table 4 provides relevant authorities with a context against which to consider assessment of 'significant effect' with regard to plans or projects proposed on or near, the site and a basis for informing the scope and nature of appropriate assessments required in relation to such plans and projects. It is important to note that this advice is only a starting point for assessing impacts. It does not remove the need for the relevant authorities to consult English Nature formally over individual plans and projects where required to do so under the Habitats Regulations.

6.4 Update and review of advice

Information as to the operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species, for which the site has been designated, is provided in light of what English Nature knows about current activities and patterns of usage at the Teesmouth and Cleveland Coast European marine site. English Nature expects that the information on current activities and patterns of usage (which was used to derive Table 4) will be supplemented as part of the process of developing the management scheme through further discussion with the relevant authorities. The option of zoning this information may be appropriate. As such, it is important that future consideration of this advice by relevant authorities and others takes account of changes in the usage patterns that have occurred at the site, over the intervening period, since the advice was issued. In contrast, the information provided in this advice on the sensitivity of interest features or sub-features (Table 5) is relatively stable and will only change as a result of an improvement in our scientific knowledge, which will be a relatively long term process. Advice for sites will be kept under review and may be periodically updated through discussion with relevant authorities and others to reflect significant changes in our understanding of sensitivity together with the potential effects of plans and projects on the marine environment.

6.5 Summary of advice on operations

6.5.1 Internationally important populations of regularly occurring Annex 1 species

In pursuit of the conservation objective for "habitats supporting internationally important populations of regularly occurring Annex 1 species" (Section 4.1), the relevant and competent authorities for Teesmouth and Cleveland Coast European marine site are advised to manage human activities within their remit such that they do not result in deterioration or disturbance to habitats or species for which the site has been selected, through any of the following:

- Physical damage resulting from abrasion (trampling) and selective extraction
- Non-physical disturbance resulting from noise and visual disturbance

Reference to sand and shingle has been included in this advice on operations (subsumed within 'intertidal sand and mudflats'). This is because much of this habitat is interspersed with other substrates below the highest astronomical tide mark, and is critical for the survival and continued presence of the breeding population of little terns within the European marine site.

6.5.2 Internationally important populations of regularly occurring migratory species

In pursuit of the conservation objective for "habitats supporting internationally important populations of regularly occurring migratory species" (Section 4.2), the relevant and competent authorities for Teesmouth and Cleveland Coast European marine site are advised to manage human activities within their remit such that they do not result in deterioration or disturbance to habitats or species for which the site has been selected, through any of the following:

- Non-physical disturbance resulting from noise and visual disturbance
- Toxic contamination arising from the introduction of synthetic (e.g.TBT, endocrine disruptors) and non-synthetic compounds (e.g. heavy metals, hydrocarbons)
- Non-toxic contamination arising from changes in nutrient and organic loading
- Biological disturbance resulting from selective extraction of species (e.g. bait digging)

6.5.3 Internationally important assemblage of waterbirds

In pursuit of the conservation objective for "habitats supporting the internationally important assemblage of waterbirds" (Section 4.3), the relevant and competent authorities for Teesmouth and Cleveland Coast European marine site are advised to manage human activities within their remit such that they do not result in deterioration or disturbance to habitats or species for which the site has been selected, through any of the following:

- Non-physical disturbance resulting from noise and visual disturbance
- Toxic contamination arising from the introduction of synthetic (e.g.TBT, endocrine disruptors) and non-synthetic compounds (e.g. heavy metals, hydrocarbons)
- Non-toxic contamination arising from changes in nutrient and organic loading
- Biological disturbance resulting from selective extraction of species (e.g. bait digging)

6.6 Plans and Projects

Under Regulation 48(1), an appropriate assessment must be undertaken in respect of any plan or project which:

a. either alone or in combination with other plans or projects is likely to have a ***significant effect*** on a European Site; and
b. is not directly connected with or necessary to the management of the site for nature conservation.

This legal requirement applies to all European sites. Regulation 48 is also applied, as a matter of Government policy, to potential SPAs and listed Ramsar sites.

English Nature's 'Habitats regulations guidance note 1: The Appropriate Assessment (Regulation 48)', is at Appendix IV for further information.

Tables 3 and 4 provide relevant authorities with a guide against which to initiate an assesssment of the 'significance' of any plans or projects (and ongoing operations or activities) proposed for the site although this will only be the starting point for assessing impacts and does not remove the need for relevant authorities to formally consult English Nature over individual plans and projects where required under the Regulations.

6.7 Review of consents

Regulation 50 of The Conservation (Natural Habitats, &c.) Regulations 1994 requires a competent authority to undertake a review of any existing consent or permission to which Regulation 48(1) would apply if were being reconsidered as of the date on which the site became a European site. Where a review is requried under these provisions it must be carried out as soon as reasonably practicable. This will have implications for discharge and other consents, which will need to be reviewed in light of these objectives and may mean that lower targets for background levels of contaminants etc. will need to be set.

[Issued 6 November 2000]

Table 3 Summary of operations which may cause deterioration or disturbance to the Teesmouth and Cleveland Coast European marine site interest features at current levels of use[7]

The advice below is not a list of prohibitions but rather achecklist for operations for discussion with the management group, which may need to be subject to some form of management measure(s) or further measures where actions are already in force. Examples of activities under relevant authority jurisdiction are also provided. Operations marked with a ✓ indicate those features that are considered to be highly or moderately vulnerable to the effects of the operations.

Standard list of categories of operation which may cause deterioration or disturbance	Internationally important populations of regularly occurring bird species listed on Annex 1 of the Birds Directive	Internationally important assemblage of waterbirds, including the internationally important populations of regularly occurring migratory species
Physical loss Removal (e.g. harvesting, coastal development) Smothering (e.g. by artificial structures, disposal of dredge spoil)		
Physical damage Siltation (e.g. run-off, channel dredging, outfalls) Abrasion (e.g. boating, anchoring, trampling) Selective extraction (e.g. aggregate dredging, entanglement, sea coal extraction)	 ✓ ✓	
Non-physical disturbance Noise (e.g. boat activity) Visual (e.g. recreational activity)	 ✓ ✓	 ✓ ✓
Toxic contamination Introduction of synthetic compounds (e.g. pesticides, TBT, PCBs) Introduction of non-synthetic compounds (e.g. heavy metals, hydrocarbons) Introduction of radionuclides		 ✓ ✓
Non-toxic contamination Changes in nutrient loading (e.g. agricultural run-off, outfalls) Changes in organic loading (e.g. mariculture, outfalls) Changes in thermal regime (e.g. power stations) Changes in turbidity (e.g. run-off, dredging) Changes in salinity (e.g. water abstraction, outfalls)		 ✓ ✓

Standard list of categories of operation which may cause deterioration or disturbance	Internationally important populations of regularly occurring bird species listed on Annex 1 of the Birds Directive	Internationally important assemblage of waterbirds, including the internationally important populations of regularly occurring migratory species
Biological disturbance Introduction of microbial pathogens Introduction of non-native species & translocation Selective extraction of species (e.g. bait digging, wildfowling, commercial & recreational fishing)		✓

[7]This advice has been developed using best available scientific information and informed scientific interpretation and judgement (as at July 2000). This process has used a coarse grading of relative sensitivity, exposure and vulnerability of each interest feature to different categories of operation based on the current state of our knowledge and understanding of the marine environment. This is shown in the sensitivity and vulnerability matrices at Table 4. The advice is indicative only, and is given to guide relevant authorities and others on particular operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species for which the site has been designated. The advice, therefore, is not a list of prohibitions but rather a check list for operations which may need to be subject to some form of management measure(s) or further measures where actions are already in force.

The precise impact of any category of operation occurring on the site will be dependent upon the nature, scale, location and timing of events. More detailed advice is available from English Nature to assist relevant authorities in assessing actual impacts and cumulative effects. Assessment of this information should be undertaken in the development of the management scheme by the management group and through wider consultation.

In accordance with Government policy guidance, the advice on operations is feature and site specific, and provided in the light of current activities and patterns of usage at the site as at July 2000. As such, it is important that future consideration of this advice by relevant authorities, and others, takes account of changes in usage patterns that have occurred at the site over the intervening period. Advice for sites will be kept under review and may be periodically updated through discussions with relevant authorities, and others, to reflect significant changes in our understanding of sensitivity together with the potential effects of plans or projects on the marine environment. The provision of the statutory advice given here, on operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species, for which the site has been designated,under Regulation 33(2), is provided without prejudice to specific advice given under Regulation 48(3) or Regulation 50 on individual operations which qualify as plans or projects within the meaning of Article 6 of the Habitats Directive.

6.8 Interest feature and sub-feature specific advice on operations

This section provides information to help relate general advice to each of the specific interest features of the Teesmouth and Cleveland Coast European marine site.

This advice relates to the vulnerability of the interest features and sub-features of the Teesmouth and Cleveland Coast European marine site as summarised in Table 3 and set out in more detail in Table 4. An explanation of the sensitivity of the interest features or sub-features follows with an explanation of their exposure and therefore their vulnerability to damage or disturbance from the listed categories of operations. This enables links between the categories of operation and the ecological requirements of the European marine site's interest features, as set out in Section 3, to be made.

6.8.1 Internationally important populations of regularly occurring Annex 1 species

i) Physical damage

- Habitats within the site (particularly at Hart Warren Dunes,Seaton Sands, and Coatham Sands) provide breeding sites for the little tern population, therefore operations or activities that adversely affect the functional regime of the of these areas should be avoided. The collection of sea coal from the intertidal zone, although an activity apparently declining in intensity, has the potential to cause direct destruction of little tern eggs and young chicks. Similarly, abrasion (trampling) may cause similar losses.

  Terns have the potential to become entangled in litter or fishing gear. However, current levels of use do not appear to present a threat at this site. Illegal persecution, particularly by egg collectors, is also a significant factor.

ii) Non-physical disturbance

- Terns are disturbed by sudden movements of objects and increases in noise disturbance over or adjacent to sand and shingle banks. This can have the effect of displacing the birds from their roosting or feeding grounds. During the breeding season in particular, this may result in disturbance to the nesting little terns causing eggs or chicks to be abandoned. Current patterns of use of the sensitive sites are unpredictable, and little tern wardening schemes have had considerable beneficial effect, but persistent disturbance remains a key danger. These management issues require resolving.

6.8.2 Internationally important populations of regularly occurring migratory species

i) Non-physical disturbance

- Waders such as knot and redshank can be disturbed by sudden movements of objects and increases in noise disturbance over or adjacent to their feeding and roosting sites. Disturbance caused by poorly-controlled dogs may be particularly significant. Such disturbance can have the effect of displacing the birds from their roosting or feeding grounds, resulting in excessive energy expenditure. Operations need to take account of the vulnerability of these species.

ii) Toxic contamination

- Given that the Tees is probably one of the most contaminated estuaries in the UK , owing to the large industrial and domestic dischargesin the vicinity (Allen *et al* in prep), the exposure level for synthetic and non-synthetic contamination is high, as is the degree of vulnerability of the migratory bird populations. The remobilisation of synthetic compounds previously locked up in soft intertidal and subtidal sediments (caused by capital dredges, for example) has the potential to affect benthic invertebrates within the European marine site, and the knot and redshank which prey upon them. Toxic effects on invertebrates may also be caused by existing discharges. Furthermore, it is possible that populations of 'grazing' invertebrates such as *Littorina* spp have been inhibited by TBT levels, thus contributing to the spread of algal mats within the intertidal area of Seal Sands (Brown et al, 2000). However, there is as yet little evidence of direct toxic contamination of these wader species.

iii) Non-toxic contamination

- Organic or nutrient enrichment can reduce the availability of food for birds by increasing the growth of algal mats within the intertidal area. Dense algal mats not only suppress densities of mud-dwelling invertebrates in the sediments beneath them, but also reduce the foraging efficiency of redshank. There is now clear evidence of a significant recent increase in the percentage cover of the intertidal mudflats of Seal Sands by *Enteromorpha* algal mats, and remedial action is urgently required. A recent scoping study (Brown *et al*, 2000) suggested the involvement of a range of factors operating in a complex and synergistic manner, among them sediment change, declines in turbidity and associated increases in light penetration, elevated levels of TBT inhibiting grazers such as *Littorina*, and climate change (milder winters).

iv) Biological disturbance

- There is no evidence that commercial or recreational fisheries are currently causing significant adverse effects to these wader populations. However, the increased intensity of bait collection activities on certain parts of the site (particularly the Bran Sands area landward of the South Gare breakwater) does give cause for concern.

6.8.3 Internationally important assemblage of waterbirds

i) Non-physical disturbance

- Waders such as knot, redshank and sanderling and wildfowl such as shelduck and teal can be disturbed by sudden movements of objects and increases in noise disturbance over or adjacent to their feeding and roosting sites. Disturbance caused by poorly-controlled dogs may be particularly significant. Such disturbance can have the effect of displacing the birds from their roosting or feeding grounds, resulting in excessive energy expenditure. Operations need to take account of the vulnerability of these species.

ii) Toxic contamination

- Given that the Tees is probably one of the most contaminated estuaries in the UK , owing to the large industrial and domestic dischargesin the vicinity (Allen *et al* in prep), the exposure level for synthetic and non-synthetic contamination is high, as is the degree of vulnerability of the migratory bird populations. The remobilization of synthetic compounds previously locked up in soft intertidal and subtidal sediments (caused by capital dredges, for example) has the potential to affect benthic invertebrates within the European Marine Site, and the knot, redshank, sanderling and shelduck which prey upon them. Toxic effects on invertebrates may also be caused by existing discharges. Furthermore, it is possible that populations of 'grazing' invertebrates such as *Littorina* spp have been inhibited by TBT levels, thus contributing to the spread of algal mats within the intertidal area of Seal Sands (Brown et al, 2000). However, there is as yet little evidence of direct toxic contamination of these bird species.

iii) Non-toxic contamination

- Organic or nutrient enrichment can reduce the availability of food for birds by increasing the growth of algal mats within the intertidal area. Dense algal mats not only suppress densities of mud-dwelling invertebrates in the sediments beneath them, but also reduce the foraging efficiency of redshank and shelduck. There is now clear evidence of a significant recent increase in the percentage cover of the intertidal mudflats of Seal Sands by *Enteromorpha* algal mats. Recent declines in the site's wintering population of shelduck in particular appear to be correlated with algal mat expansion. Remedial action is urgently required. A recent scoping study (Brown *et al*, 2000) suggested the involvement of a range of factors operating in a complex and synergistic manner, among them sediment change, declines in turbidity and associated increases in light penetration, elevated levels of TBT inhibiting grazers such as *Littorina*, and climate change (milder winters).

iv) Biological disturbance

- There is no evidence that commercial or recreational fisheries are currently causing significant adverse effects on this assemblage. However, the increased intensity of bait collection activities on certain parts of the site (particularly the Bran Sands area landward of the South Gare breakwater) does give cause for concern.

[Issued 6 November 2000]

Table 4. **Assessment of the relative exposure of interest features and sub-features of Teesmouth and Cleveland Coast European marine site to different categories of operations based on current level of activities (July 2000)**

Key: **High exposure = 3** **Medium exposure = 2** **Low exposure = 1** **No detectable exposure = 0**

Categories of operation which may cause deterioration or disturbance	Internationally important populations of regularly occurring bird species listed on Annex 1 of the Birds Directive.			Internationally important assemblage of waterbirds, including the internationally important populations of regularly occurring migratory species		
	Sand and shingle	*Intertidal sandflat and mudflat*	*Coastal waters*	*Rocky shores*	*Intertidal sandflat and mudflat*	*Saltmarsh*
Physical loss						
Removal (e.g. harvesting, land claim)	0	0	0	0	0	0
Smothering (e.g. by artificial structures, disposal of dredge spoil)	0	1	1	1	1	1
Physical damage						
Siltation (e.g. run-off, dredging, outfalls)	1	1	1	1	2	1
Abrasion (e.g. boating, anchoring, trampling).	1	0	1	0	1	1
Selective extraction (e.g. aggregate dredging, entanglement, turf cutting).	2	0	1	0	0	0
Non-physical disturbance						
Noise (e.g. boat activity)	1	1	1	1	1	1
Visual (e.g. recreational activity)	3	2	1	2	2	1

[Issued 6 November 2000]

Categories of operation which may cause deterioration or disturbance	Internationally important populations of regularly occurring bird species listed on Annex 1 of the Birds Directive.			Internationally important assemblage of waterbirds, including the internationally important populations of regularly occurring migratory species		
	Sand and shingle	*Intertidal sandflat and mudflat*	*Coastal waters*	*Rocky shores*	*Intertidal sandflat and mudflat*	*Saltmarsh*
Toxic contamination						
Introduction of synthetic compounds (e.g. Pesticides, antifoulants, PCBs)	1	1	1	3	3	3
Introduction of non-synthetic compounds (e.g. heavy metals, hydrocarbons)	1	2	1	3	3	3
Introduction of radionuclides	1	1	1	1	1	1
Non-toxic contamination						
Changes in nutrient loading (e.g. agricultural run-off, outfalls)	0	3	1	1	3	1
Changes in organic loading (e.g. mariculture, outfalls)	0	3	1	1	3	1
Changes in thermal regime (e.g. outfalls, power stations)	0	1	1	1	1	1
Changes in turbidity (e.g. run-off, dredging)	0	2	1	1	2	1
Changes in salinity (e.g. water abstraction, outfalls)	0	0	1	1	1	1
Biological disturbance						
Introduction of microbial pathogens	1	1	1	1	1	1
Introduction of non-native species & translocation	0	0	0	0	0	0
Selective extraction of species (e.g. bait digging, wildfowling, commercial & recreational fishing)	1	2	1	1	2	1

Table 5. **Assessment of the relative vulnerability of interest featues and sub-features of** Teesmouth and Cleveland Coast **European Marine site to different categories of operations. Categories of operations to which the features or sub-features of the site are highly or moderately vulnerable are indicated by darker shading. Table also incorporates relative sensitivity scores used in part to derive vulnerability.**[8]

Key

High vulnerability	●●●● High sensitivity
Moderate vulnerability	●●● Moderate sensitivity
Low vulnerability	●● Low sensitivity
	● No detectable sensitivity

Categories of operations which may cause deterioration or disturbance	**Internationally important populations of regularly occurring Annex 1 species**			**Internationally important assemblage of waterbirds including the internationally important populations of regularly occurring migratory species**		
	Sand and shingle	Intertidal sandflat and mudflat	Coastal waters	Rocky shores	Intertidal sandflat and mudflat	Saltmarsh
Physical Loss						
Removal (e.g. harvesting, land claim, coastal defence)	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●
Smothering (e.g. artificial structures, disposal of dredge spoil)	●●●	●●●	●●	●●●	●●●	●●●
Physical Damage						
Siltation (e.g. run-off, channel dredging, outfalls)	●	●	●●	●●	●●	●●
Abrasion (e.g. boating, anchoring, trampling)	●●●●	●●●●	●●	●●●	●●	●●●
Selective extraction (e.g. aggregate dredging, entanglement)	●●●●	●●●●	●●	●●●	●●	●●
Non-physical disturbance						
Noise (e.g. boat activity)	●●●●	●●●●	●●	●●●●	●●●●	●●●●
Visual presence (e.g. recreational activity)	●●●●	●●●●	●●	●●●●	●●●●	●●●●
Toxic contamination						
Introduction of synthetic compounds (e.g. pesticides, TBT, PCBs)	●	●	●●●	●●●	●●●	●●●

[Issued 6 November 2000]

Categories of operations which may cause deterioration or disturbance	Internationally important populations of regularly occurring Annex 1 species			Internationally important assemblage of waterbirds including the internationally important populations of regularly occurring migratory species		
	Sand and shingle	Intertidal sandflat and mudflat	Coastal waters	Rocky shores	Intertidal sandflat and mudflat	Saltmarsh
Toxic contamination Introduction of non-synthetic compounds (e.g. heavy metals, hydrocarbons)	•	•	●●●	●●●	●●●	●●●
Introduction of radionuclides	•	•	●●	●●	●●	●●
Non-toxic contamination Changes in nutrient loading (e.g. agricultural run-off, outfalls)	•	•	●●	●●●	●●●	●●
Changes in organic loading (e.g. mariculture, outfalls)	•	•	●●	●●●	●●●	●●
Changes in thermal regime (e.g. outfalls, power stations)	•	•	•	•	•	•
Changes in turbidity (e.g. run-off, dredging)	•	•	●●●	•	•	•
Changes in salinity (e.g. water abstraction, outfalls)	•	•	●●	●●	●●	•
Biological disturbance Introduction of microbial pathogens	•	•	●●	●●	●●	•
Introduction of non-native species & translocation	•	•	●●	●●●	●●●	●●●
Selective extraction of species (e.g. bait digging, wildfowling, commercial & recreational fishing)	•	•	●●●	●●●	●●●	●●●

[8] English Nature's advice on operations is derived from an assessment combining relative sensitivity of the features or sub-features with information on human usage of the site (as at July 2000), to identify relative vulnerability to categories of operations. In accordance with Government policy guidance this advice is provided in the light of current activities and patterns of usage at the site. It is important therefore that future consideration of this advice by relevant authorities, and others, takes account of changes in the usage patterns at the site. In contract the sensitivity of interest features, or sub-features, is relatively stable with alterations reflecting improvement in our scientific knowledge and understanding. To this end, information on sensitivity has been included in this table to assit the management and advisory groups with the future management of the site.

7. Bibliography

ABP RESEARCH & CONSULTANCY LTD. 1999. *Good practice guidelines for ports and harbours operating within or near UK European Marine Sites.* English Nature, UK Marine SACs Project. pp120

ANON. 1994. *The Conservation (Natural Habitats, &c.) Regulations 1994.* Statutory Instrument No.2716.

ANON. 1995. *Biodiversity: The UK Steering Group Report. Vol 1: Meeting the Rio Challenge. Vol 2: Action Plans.* London: HMSO.

ALLEN, Y., HURRELL, V., JONES, C., REED, J., MATTHIESSEN, P. in prep. *Endocrine disruptors and European marine sites in England.* Centre for Environment, Fisheries & Aquaculture Science.

BATTEN, L. et al. 1990. *Red Data Birds in Britain.* T. & A.D. Poyser.

BLICK, M.A. 1978. *The Birds of Teesside 1968-73.* Teesmouth Bird Club.

BROWN, A.R., LEWIS,R.E., RIDDLE,A.M., STANLEY, R.D., WIDDOWS, J. 2000. *Lower Tees Estuary: a scoping study of the intertidal ecosystem.* Report to Environment Agency North East Region.

CLEVELAND COUNTY LIBRARIES in conjunction with The Cleveland and Teesside Local History Society (undated). *The River Tees. Two Centuries of Change.* Cleveland County Libraries.

COLE, S., CODLING, I.D., PARR, W., ZABEL, T. 1999. *Guidelines for managing water quality impacts within UK European marine sites.* UK Marine SACS Project. English Nature.

CRANSWICK, P.A., POLLITT, M.S., MUSGROVE, A.J. & HUGHES, R.C. 1999. *The Wetland Bird Survey 1997/98: Wildfowl and Wader Counts.* BTO/WWT/RSPB/JNCC, Slimbridge.

DAVIDSON, D & HUGHES, D. 1998. Zostera Biotopes (Volume I). *An overview of dynamics and sensitivity characteristics for conservation management of marine SACs.* Scottish Association of Marine Science (UK Marine SACs Project).

DAVIDSON, N.C. 1980. *Seal Sands Feasibility Study.* Report to Cleveland County Council and Nature Conservancy Council.

DAVIDSON, N.C. et al. 1991. *Nature conservation and estuaries in Great Britain.* Nature Conservancy Council.

DAVIDSON, N.C. & ROTHWELL, P.I. 1993. *Human disturbance to waterfowl on estuaries: conservation and coastal management implications and current knowledge.* Wader Study Group Bulletin.

DEPARTMENT OF THE ENVIRONMENT. 1994. *Planning Policy Guidance No 9: Nature Conservation..* London.. HMSO.

DETR & THE WELSH OFFICE. 1998. *European marine sites in England and Wales. A guide to the Conservation (Natural Habitats, &c.) Regulations 1994 and to the preparation and application of management schemes.* London.

ELLIOTT, M., NEDWELL, S., JONES, N.V., READ, S.J., CUTTS, N.D. & HEMINGWAY, K.L. 1998. *Intertidal sand and mudflats & subtidal mobile sandbank* (Volume II). *An overview of dynamics and sensitivity characteristics for conservation management of marine SACs.* Scottish Association of Marine Science (UK Marine SACs Project).

ENGLISH NATURE. 1998. *Advice on European marine sites: some common questions answered.* Peterborough.

ENGLISH NATURE. 1999. *Teesmouth NNR Management Plan.* English Nature Northumbria Team.

ENO, C. 1991. *Marine Conservation Handbook. English Nature*. Peterborough.

ENVIRONMENTAL TRACING SYSTEMS LTD. 1998. *Sediment transport pathway study, North Gare Sands - Seaton Channel Embankment.* Report commissioned by THPA Ltd. Copy in English Nature files.

EVANS, P.R. 1975. *The effects of Stage 1 of the reclamation of Seal Sands on the invertebrate and bird populations.* Report to the Teesmouth Bird Club.

EVANS, P.R. (undated). *Teesmouth Bird Studies.* Final Report to NCC on Contract F3/06/96 to University of Durham.

EVANS, P.R. & OLIVER, P.A. 1992. *A preliminary evaluation of the results of the 1990 and 1991 monitoring programmes related to nature conservation concerns arising from the River Tees Barrange and Crossing Act 1990.* Teesside Development Corporation.

EVANS, P.R. & EVANS, R.D. 1993. *An overview and preliminary evaluation of the results of the 1990-1992 monitoring programmes related to nature conservation concerns arising from the River Tees Barrage and Crossing Act 1990.* Teesside Development Corporation.

EVANS, P.R. & MATTHEWS, S. 1994. *An overview and preliminary evaluation of the results of the 1990-1993 monitoring programmes related to nature conservation concerns arising from the River Tees Barrage and Crossing Act 1990.* Teesside Development Corporation.

EVANS, P.R., WARD, R.M. & MERCER, T. 1995. *An overview of the results of the monitoring programmes related to nature conservation concerns arising from the River Tees Barrage and Crossing Act 1990, for the years 1990-1994, before commissioning of the Barrage.* Teesside Development Corporation.

EVANS, P.R., WARD, R.M. & MITCHELL, P.I. 1997. *A preliminary evaluation of the results of the 1995 monitoring programmes related to nature conservation concerns arising from the River Tees Barrage and Crossing Act 1990.* Teesside Development Corporation.

EVANS, P.R., WARD, R.M. & SELMAN, C. 1997. *A preliminary evaluation of the results of the 1996 monitoring programmes related to nature conservation concerns arising from the River Tees Barrage and Crossing Act 1990.* Teesside Development Corporation.

EVANS, P.R., WARD, R.M. & BONE, M. 1997. *Seal Sands North-west Enclosure Intertidal Habitat Re-creation; invertebrate recolonization and use by wildfowl and shorebirds.* Report to INCA (Projects)Ltd and English Nature. English Nature files.

EVANS, P.R., WARD, R.M. & BONE, M. 1998. *A preliminary evaluation of the results of the 1997 monitoring programmes related to nature conservation concerns arising from the River Tees Barrage and Crossing Act 1990.* Commission for New Towns North.

EVANS, P.R., WARD, R.M., BONE, M. & LEAKEY, M. In press. *Creation of temperate-climate intertidal mudflats; factors affecting colonization and use by benthic invertebrates and their predators. Marine Pollution Bulletin* (in press).

FOWLER, S.E. 1999. *Guidelines for managing the collection of bait and other shoreline animals within UK European marine sites.* English Nature UK Marine SACS Project.

FRID, C.L.J., EVANS, S.M., CLARK, R.B. 1991. *An environmental appraisal of the north-east coast of England.* Dove Marine Laboratory of the University of Newcastle-upon-Tyne for Shell UK).

GRAHAM, G.G. 1988. *The Flora and Vegetation of County Durham.* Durham Flora Committee and the Durham County Conservation Trust.

HISCOCK, K (Ed.). 1996. *Marine Nature Conservation Review: rationale and methods.* Peterborough, Joint Nature Conservation Committee (Coasts and Seas of the United Kingdom, MNCR Series).

HOLT, T.J., JONES, D.R., HAWKINS, S.J., HARTNOLL, R.G. 1995. *The sensitivity of marine communities to man-induced change - a scoping report.* Countryside Council for Wales Science Report No65.

JONES, L.A., HISCOCK, K., CONNOR, D.W. 2000. *Marine Habitat Reviews. A summary of ecological requirements and sensitivity characteristics for the conservation and management of marine SACs.* Peterborough , Joint Nature Conservation Committee.

LACEY, J. (Ed) 1997. *Tees Estuary Management Plan. A strategy for sustainable development.* Industry Nature Conservation Association.

LACK, P. 1986. *The Atlas of Wintering Birds in Britain and Ireland.* T. & A.D. Poyser.

RANWELL, D.S. 1972. *Ecology of Salt Marshes and Sand Dunes.* Chapman and Hall.

SHENNAN I. & SPROXTON, I.W. 1990. *Possible impacts of sea-level rise - a case study from the Tees Estuary, County Cleveland.* In *Greenhouse Effect and Rising UK sea levels.* (ed. J C Doornkamp).

SHILLABEER. 1990. *Changes in the benthic fauna.* In *Cleaning up the Tees - Progress and Prospects.* Proceedings of a Conference held by Cleveland INCA and University of Durham on 15 September 1990.

SIMPSON, M.A. 1997. *An investigation into the cause, effects and implications of the growth of the green macroalga Enteromorpha spp. on Seal Sands, Teesmouth.* Dissertation for BSc (Hons) in Marine Biology, University of Hull. Copy in English Nature files.

STEAD, P.J. 1964. *The Birds of Teesside. Transactions of the Natural History Society of Northumberland, Durham and Newcastle-upon-Tyne, Vol XV, No 1.*

STEAD, P.J. 1969. *The Birds of Teesside 1962-1967.* Teesmouth Bird Club.

STONE, B.H., SEARS, J., CRANSWICK, P.A., GREGORY, R.D., GIBBONS, D.W., REHFISCH, M.M., AEBISCHER, N.J. & REID, J.B. 1997. *Population estimates of birds in Britain and in the United Kingdom. British Birds* 90: 1-22.

TEESMOUTH BIRD CLUB. (ed. D G Bell). 1974-1999. *Cleveland Bird Report.* Published annually by Teesmouth Bird Club.

8. Glossary

Advisory Group	The body of the representatives from local interests, user groups and conservation groups, formed to advise the management group.
Annex 1 Bird species	The species listed in Annex 1 of the Birds Directive are the subject of special conservation measures concerning their habitat. These measures ensure the survival and reproduction of the birds in their area of distribution. Species listed on Annex 1 are in danger of extinction, rare or vulnerable.
Annex I habitat type(s)	A natural habitat(s) listed in Annex I of the Habitats Directive for which Special Areas of Conservation can be selected.
Annex II species	A species listed in Annex II of the Habitats Directive for which Special Areas of Conservation can be selected.
Annex V	The listing, in the Habitats Directive, of the animal and plant species whose taking in the wild and exploitation may be subject to management measures.
Assemblage	A collection of plants and/or animals characteristically associated with a particular environment.
Attribute	Characteristic of an interest feature/sub-feature which provides an indication of the condition of the feature or sub-feature to which it applies.
BAP	Biodiversity Action Plan.
Benthos	Those organisms attached to, or living on, in or near, the seabed, including that part which is exposed by tides.
Biotope	The physical habitat with its biological community; a term which refers to the combination of physical environment and its distinctive assemblage of conspicuous species.
Biodiversity	The total variety of life on earth. This includes diversity within species, between species and ecosystems.
Characteristic	Special to, or especially abundant in, a particular situation or biotope. Characteristic species should be immediately conspicuous and easily identified.
Circalittoral	The rocky subtidal zone below that which is dominated by algae (animal-dominated subtidal zone).
Community	A group or organisms occurring in a particular environment, presumably interacting with each other and with the environment, and separable by means of ecological survey from other groups.
Competent authority	Any Minister, government department, public or statutory undertaker, public body or person holding a public office which exercises legislative powers.
Conservation objective	A statement of the nature conservation aspirations for a site, expressed in terms of the favourable condition that we wish to be attained by those species and/or habitats for which the site has been selected. Conservation objectives for European marine sites relate to the aims of the Habitats Directive.
Eulittoral	The main part of the intertidal zone characterised by limpets, barnacles, mussels, fucoid algae and with red algae often abundant on the lower part.
Epifauna	Benthic animals living on the seabed.
European marine site	A European site which consists of, or in so far as it consists of, areas covered intermittently or continuously by seawater.

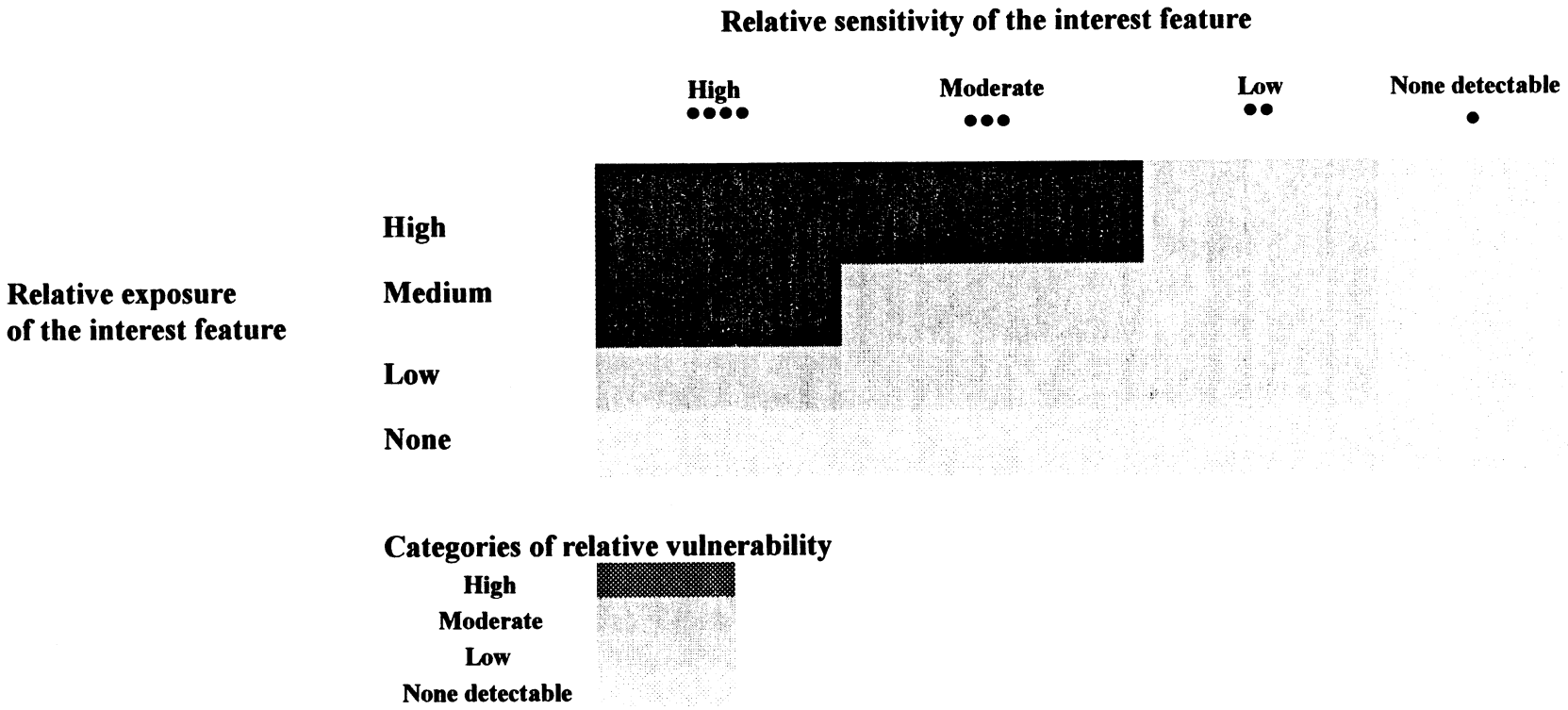
European Site	A classified SPA, designated SAC, site of Community importance (a site selected as a candidate SAC, adopted by the Euopean Commission but not yet designated), a candidate SAC (in England only) or a site hosting a priority species in respect of which Article 5 of the Habitats directive applies.
Favourable conservation status	A range of conditions for a natural habitat or species at which the sum of the influences acting upon that habitat or species are not adversely affecting its distribution, abundance, structure or function throughout the EU in the long term. The condition in which the habitat or species is capable of sustaining itself on a long-term basis.
Favourable condition	A range of conditions for a natural habitat or species at which the sum of the influences acting upon that habitat or species are not adversely affecting its distribution, abundance, structure or function within an individual Natura 2000 site in the long term. The condition in which the habitat or species is capable of sustaining itself on a long-term basis.
Habitat	The place in which a plant or animal lives.
Habitats Directive	The abbreviated term of *Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora*. It is the aim of this Directive to promote the conservation of certain habitats and species wihtin the European Union.
Infauna	Benthic animals which live within the sediment.
Infralittoral	The subtidal zone in which upward facing rocks are dominated by erect algae, typically kelps.
Interest feature	A natural or semi-natural feature for which a European site has been selected. This includes any Habitats Directive Annex I habitat, or specific component of their fauna and flora, or any Annex II species and any population of a bird species for which and SPA has been designated under the Birds Directive. Any habitat of a species for which a site has been selected, or typical species of an Annex I habitat are also considered to be interest features.
Maintain	The action required for an interest feature when it is considered to be in favourable condition.
Management group	The body of relevant authorities formed to manage the European marine site.
Management scheme	The framework established by the relevant authorities at a European marine site under which their functions are exercised to secure, in relation to that site, compliance with the requirements of the Habitats Directive.
Nationally scarce/rare	For marine purposes, these are regarded as species of limited national occurrence.
Natura 2000	The European network of protected sites established under the Birds Directive and the Habitats Directive.
Notable species	A species that is considered to be notable due to its importance as an indicator, and may also be of nature conservation importance, and which is unlikely to be a 'characteristic species'.
Operations which may cause deterioration or disturbance	Any activity or operation taking place within, adjacent to, or remote from a European marine site that has the potential to cause deterioration to the natural habitats for which the site was designated, or disturbance to the species and its habitats for which the site was designated.
Plan or project	Any proposed development that is within a relevant authority's function to control, or over which a competent authority has a statutory function to decide on applications for consents, authorisations, licences or permissions.

Peak mean counts (5 yr)	The Tees WeBS Site is broken down into count sectors. Every month WeBs volunteers count all the waterbirds which are visible within each sector. The yearly maxima for each species at each season in the Tees WeBS Site are then averaged over a five year period to give the 5 year peak mean (or to be more precise, the mean peak) count for each season..
Ramsar	The Convention on Wetlands of International Importance, especially as Waterfowl Habitat. An intergovernmental treaty which provides the framework for international co-operation aimed at the conservation of wetland habitats.
Relevant authority	The specific competent authority which has powers or functions which have, or could have, an impact on the marine environment in or adjacent to a European marine site.
Restore	The action required for an interest feature when it is not considered to be in a favourable condition.
Sensitivity	The intolerance of a habitat, community or individual species to damage from an external force.
Subfeature	An ecologically important sub-division of an interest feature.
Vulnerability	The exposure of a habitat, community or individual of a species to an external factor to which it is sensitive.
Waterbirds	The collective term for the taxa monitored by WeBS, comprising divers, grebes, cormorants, herons, swans, ducks, geese, rails, waders, gulls and terns.
WeBS	Wetland Bird Survey: a collaborative national surveillance scheme of the UK's waterbirds based on counts undertaken once per month.

[Issued 6 November 2000]

Appendix I Matrix of relative vulnerability

The relative vulnerability of an interest feature or sub-feature is determined by multiplying the scores for relative sensitivity and exposure, and classifying that total into categories of relative vulnerability.



[Issued 6 November 2000]

Appendix II List of Relevant Authorities

Association of Sea Fisheries Committees
Countryside Agency
Crown Estate
English Heritage
English Nature
Environment Agency
Department of Environment, Transport and the Regions
Department of Trade and Industry
Durham County Council
Easington District Council
Government Office North East
Hartlepool Borough Council
Joint Nature Conservation Committee
Middlesbrough Council
Ministry of Agriculture, Fisheries and Food
Ministry of Defence
North East Sea Fisheries Committee
Northumbrian Water
Redcar & Cleveland Borough Council
Sea Fish Industry Authority
Stockton-on-Tees Borough Council
Tees and Hartlepool Port Authority
Tees Valley Joint Strategy Unit
Trinity House

[Issued 6 November 2000]

Appendix III List of National and Local Consultees

List of National Consultees

English Nature (Maritime Team)	Mark Duffy, Dan Laffoley, Tim Hill, John Torlesse
English Nature (Environmental Impacts Team)	Alastair Burn, Greg Smith
English Nature (Strategic Direction & Reporting Team)	Tom Tew, Rob Cooke, Keith Porter, Wyn Jones
English Nature (External Relations Team)	Sharron Gunn
English Nature (National Partnerships)	Richard Leafe
English Nature (Executive Committee)	Sue Collins
English Nature (General Managers)	Tim Bines
English Nature (Council)	Sue Gubbay, Mike Moser, Stephen Tromans, Gren Lucas
Joint Nature Conservation Committee	David Connor, Malcolm Vincent, Mark Tasker
Scottish Natural Heritage	John Baxter
Countryside Council for Wales	Maggie Hill
Environment & Heritage Service (Northern Ireland)	Martin Bradley
Duchas (Replublic of Ireland)	Liz Sides
Department of Environment, Transport and the Regions	Trevor Salmon, Kim Gunningham, Roger Pritchard, Colin Morris
Ministry of Agriculture, Fisheries and Food	Francis Radcliffe, John Maslin, Peter Winterbottom, Jim Park, David Collins, Geoff Bowles
Environment Agency	Paul Raven, Alistair Ferguson, John Orr
Countryside Agency	Richard Lloyd, Andrew Gale
CEFAS	Stuart Rogers
The Crown Estate	Frank Parrish
Department of Trade and Industry	Robin Hastings, Keith Welford
Ministry of Defence	Colonel J H Baker
Trinity House	Anne Thorogood
Centre for Coastal and Marine Science	Dr Graham Simmield
CoastNET	Carolyn Heeps
Whale and Dolphin Conservation Society	Mark Simmonds
WWF-UK	Sian Pullen, Sarah Jones
The Wildlife Trusts	Joan Edwards
Royal Society for the Protection of Birds	Duncan Hugget
Greenpeace	Richard Page
Fiends of the Earth	Matt Phillips
Marine Conservation Society	Tony Martin
Marine Biological Association of the UK	Keith Hiscock
Wildlife and Countryside Link	Bryony Worthington
Sea Mammal Research Unit	Phil Hammond
UKMPG	John Dempster
ABP	Graham Rabbitts
BPA	David Whitehead
BMIF	Rhona Fairgrieve
Royal Yachting Association	Jerry Eardley
Sea Fish Industry Authority	Phil MacMullen
National Federation of Fisherman's Organisations	Barrie Deas
Association of Sea Fisheries Committees	Russell Bradley
Shellfish Association of Great Britain	Clive Askew
British Marine Aggregates Producers Association	Richard Griffiths
British Wind Energy Association	Nick Goodall
UKOOA	Gordon Harvey

[Issued 6 November 2000]

List of Local Consultees

University of Newcastle	Dr Chris Frid, Jeremy Lowe
University of Durham	Professor Peter Evans
ENTEC UK	Charlotte Johnston
Northumbrian Water	Dr Chris Spray
Environment Agency	Bob Pailor, Sarah Peaty, Katy Dixon, Andrea Shaftoe
Government Office North East	Jim Darlington
English Heritage	Peter de Lange
Ministry of Agriculture, Fisheries and Food	Jim Hutchinson
Durham County Council	Chief Executive, Director of Environment, Chief Engineer
Easington District Council	Chief Executive, Senior Planning Officer, Chief Engineer
Tees Valley Joint Strategy Unit	Chief Executive, Group Leader Strategic Planning and Transportation
Hartlepool Borough Council	Chief Executive, Director of Environment and Development, Chief Engineer
Stockton-on-Tees Borough Council	Chief Executive, Assistant Director (Planning), Chief Engineer
Middlesbrough Council	Chief Executive, Head of Public Protection & Planning
Redcar & Cleveland Borough Council	Chief Executive
Royal Yachting Association	Neil Hill
Hartlepool Water	Managing Director
Tees and Hartlepool Port Authority	Jerry Drewitt
The Crown Estate (Lamb & Edge)	Peter Edmonds
British Association for Shooting and Conservation	Head of Conservation Department
North East Sea Fisheries Committee	Dawn Wilcox
Royal Society for the Protection of Birds	Rebecca Sinton
Teesmouth Bird Club	Chris Sharp
Durham Bird Club	Kevin Spindloe
Tees Valley Wildlife Trust	Jeremy Garside
Biological Records Centre (Hancock Museum)	Alec Coles
Industry Nature Conservation Association	John Mann
Teesmouth Field Centre	Lynne Burn

Appendix IV

English Nature's Habitats regulations guidance note 1 'The Appropriate Assessment (Regulation 48)'

ENGLISH NATURE

Habitats regulations guidance note

HRGN 1

Issued by Greg Smith, Environmental Impacts Team, English Nature. Tel: 01733 455210

The Appropriate Assessment (Regulation 48) The Conservation (Natural Habitats &c) Regulations, 1994

Introduction

1. This Guidance Note has been prepared to assist competent authorities and English Nature staff when undertaking the ***"appropriate assessment"*** required by Regulation 48 of the *Habitats Regulations 1994* implementing Article 6(3) of the *Habitats Directive* (92/43/EEC). Only the Courts can provide authoritative interpretation of the Regulations, but these notes have been developed in the light of practical experience and a close examination of the Regulations, the Habitats Directive and central government guidance, particularly in PPG 9.

When Does An 'Appropriate Assessment' Need To Be Undertaken?

Types of Proposal

2. Under Regulation 48(1), an appropriate assessment needs to be undertaken in respect of any plan or project which:

a. either alone or in combination with other plans or projects would be likely to have a ***significant effect*** on a European Site, and
b. is not directly connected with the management of the site for nature conservation.

3. Appropriate assessment is required by law for all European Sites (Regulation 48). A European Site is any classified SPA and any SAC from the point where the Commission and the Government agree the site as a Site of Community Importance. Appropriate assessment is also required, as a matter of Government policy, for potential SPAs, candidate SACs and listed Ramsar Sites for the purpose of considering development proposals affecting them. (PPG 9 paras 13 and C7).

Timing of the Assessment

4. An appropriate assessment needs to be undertaken in respect of a plan or project described above **before** any ***"competent authority"***:

a. decides to undertake the plan or project, in cases where no consent, permission or other authorisation is required. (Reg. 48(1));
b. decides to give any consent, permission or other authorisation for the plan or project. (Regs. 48(1) *et al*);
c. reviews the decision to undertake a plan or project or reviews consents, permissions or other authorisations for plans or projects that are incomplete. (Regs. 50(2) *et al* - see also EN Habitats Regulations Guidance Note No. 2);
d. decides whether to approve an application for development that would otherwise be permitted development. (Reg. 62(6)).

Significant Effects

5. The plan or project does not have to be located within the designated area. Significant effects may occur even if the plan or project is some distance away and even outside any consultation area defined by English Nature (PPG 9 paras 30-32). The effects may be direct or indirect, temporary or permanent, beneficial or harmful to the site, or a combination of these.

6. The initial determination of likely significance is intended to ensure that all relevant plans and projects likely to have a material effect on these internationally important sites are subject to an appropriate assessment. In all but the most clear cut cases, competent authorities are likely to need advice. English Nature will advise, on request, as to whether any particular plan or project may be likely to have a significant effect on any of these sites. If the decision as to whether or not the development would have a significant effect on the designated site is inconclusive, on the information available, the competent authority should make a fuller assessment; in doing so they may ask the developer or other parties for more information. (PPG 9 para C10).

Who Undertakes the Appropriate Assessment?

7. The appropriate assessment must be undertaken by the *competent authority*, as defined in Regulation 6(1) of the Habitats Regulations, which includes any Minister, Government Department, public or statutory undertaker, public body of any description or person holding a public office. The developer or proposer of the plan or project is required to provide relevant information. English Nature must be consulted, during the course of the assessment, but it is the duty of the competent authority to undertake the assessment itself.

8. Most competent authorities will not have the technical expertise "in house" to assess the effects of the plan or project on the international nature conservation interests. Most will need to rely heavily on the advice, guidance and recommendations of English Nature, at each stage, including the scope and content of the assessment, the site's conservation objectives, the information required from the developer or proposer and the effects on the integrity of the site, all of which are discussed below. The appropriate assessment, in many cases, is likely to be an iterative process. In the simplest cases a general statement in a single consultation response from English Nature may suffice to enable the competent authority to complete the assessment. However, in most cases, it is envisaged that a more detailed response from, and dialogue with, English Nature is likely to be necessary.

What is an 'Appropriate Assessment'

9. It is a self contained step in a wider decision making process, required by the Habitats Regulations and described more fully in PPG 9, Annex C. Its conclusions must be based only on the scientific considerations under steps laid out in the Habitats Regulations. The assessment should not be influenced by wider planning or other considerations.

10. The Regulations do not specify how the assessment should be undertaken but describe it simply as "an appropriate assessment". This is taken to mean that the assessment must be appropriate to its purpose under the Regulations (and also the Directive, which originated the use of the term). Its purpose is to assess the implications of the proposal in respect of the site's "***conservation objectives***". The conclusions of the assessment should enable the competent authority to ascertain whether the proposal would adversely affect the integrity of the site.

Scope and Content

11. PPG 9 indicates that the scope and content of an appropriate assessment will depend on the location, size and significance of the proposed plan or project (PPG 9 box C10). The PPG indicates that English Nature will advise on a case-by-case basis. According to the nature conservation interests of the site, English Nature will identify particular aspects that the appropriate assessment should address. Examples given are hydrology, disturbance and land-take, but there are clearly many other potential matters that may need to be addressed in particular cases.

12. Procedures under the Habitats Regulations should be confined to the effects on the internationally important habitats or species for which the site is or will be internationally designated or classified, including any indirect effects on these interests, for example, via their supporting ecosystems and natural processes. Notwithstanding a favourable assessment in respect of the plan or project's effects on the international nature conservation interests for which the site was classified or designated, decisions to undertake or give consent to the plan or project may need to take account of other international, national, regional or local nature conservation interests in the light of other policy and legislative provisions. (PPG 9 paras 4, 18 and 27).

Environmental Assessment

13. The appropriate assessment is not the same as an environmental assessment under the provisions of the various *Environmental Assessment (EA) Regulations* (1988-95), in compliance with the Directive 85/337/EEC. In many cases, plans or projects that will be subject to an appropriate assessment will need an Environmental Statement (ES) to be prepared under the EA Regulations. (PPG 9 paras 38 and 39).

14. The ES will address all significant environmental effects. It will be appropriate to use the information assembled for the ES when carrying out the appropriate assessment under the Habitats Regulations. In view of this it would be helpful if the relevant ES clearly identified, under a specific subject heading, the likely significant effects on the internationally important habitats and/or species.

How is an Appropriate Assessment Undertaken?

Key Steps

15. Having established that an appropriate assessment is required, the following conclusions may be drawn (from the foregoing considerations and Government guidance) in respect of how it should be undertaken.

The Key Steps in An Appropriate Assessment

The competent authority:

I

Must consult English Nature

II

May consult the general public

III

Should clearly identify and understand the site's conservation objectives having regard to the advice of English Nature

IV

Should require the applicant to provide such information as may reasonably be required for the purposes of the assessment

V

Should identify the effects of the proposal on the habitats and species of international importance and how those effects are likely to affect the site's conservation objectives

VI

Should decide whether the plan or project, as proposed, would adversely affect the integrity of the site in the light of the conservation objectives

VII

Should consider the manner in which the plan or project is proposed to be carried out, whether it could be modified, or whether conditions or restrictions could be imposed, so as to avoid adverse effects on the integrity of the site

VIII

Should conclude whether the proposal, as modified by conditions or restrictions, would adversely affect the integrity of the site

IX

Should record the Assessment and notify English Nature of the conclusions

The Key Steps Explained

These key steps are explained in more detail below.

I. Consulting English Nature

16. Under Regulation 48(3) the competent authority must consult English Nature and must have regard to any representations made by English Nature. It may be inferred from PPG 9 (box C10 and para C9) that the competent authority would be expected to follow the advice of English Nature and normally to decide the case *"in accordance with the recommendations of English Nature"*. If it does not do so, the competent authority should be prepared to explain its reasons. In cases where it proposes to agree to a plan or project notwithstanding a negative assessment, the competent authority is required to notify the Secretary of State in advance of any decision.

II. Consulting the General Public

17. Under Regulation 48(4) the competent authority may (if it considers it appropriate) take the opinion of the general public, on the implications of the proposal for the site's conservation objectives, using whatever steps they consider necessary. This may usefully include taking the opinion of others with relevant knowledge or expertise.

III. The Site's Conservation Objectives

18. The Regulations do not define what is meant by the site's conservation objectives but PPG 9 box C10 describes them as:

"the objectives.... / the reasons for which the site was classified or designated"

English Nature will be able to give a clear statement of the site's conservation objectives in the light of its European Site Register entry (compiled by Government under Regulation 11), its citation, its reasons for recommendation, English Nature's knowledge of the site, national and international objectives for the international nature conservation interests (such as may be contained in the UK Biodiversity Action Plan) and any Management Plan or Management Statement for the site in so far as they relate to the interests for which the site was selected.

19. The site may also host habitats and/or species of Community interest (see Article 1 of the Habitats Directive) which are not mentioned in the European Site Register, the citation or the reasons for recommendation because they were not, at the time, a reason for classification or designation. Such features are not relevant to the appropriate assessment itself. Nevertheless their presence may be material to the decision as to whether or not to undertake or to consent to the plan or project.

IV. Requiring Further Information

20. The competent authority, taking the advice of English Nature where necessary, should require the applicant to provide such information as the competent authority may reasonably require for the purposes of making the assessment (Reg.48(2)). The information required may relate to any environmental information, or information about the proposal, relevant to the assessment and may include:

i. information already available, or
ii. new information from surveys that may need to be carried out, or
iii. data analysis, predictions, comparisons or assessments of a technical nature.

V. Identifying the Effects

21. Having regard to English Nature's advice and other consultation responses and, where relevant, taking account of the ES or any other information supplied by the developer/proposer, or otherwise available, the competent authority should identify what the effects of the proposal are likely to be. The effects considered should be those of the plan or project, either alone or in combination with other plans or projects, on the habitats and species of international importance and how those effects are likely to affect the site's conservation objectives. This will involve considering, for example, the nature, scale, geographic extent, timing, duration and magnitude of direct and indirect effects; considering the degree of certainty in the prediction of effects; considering all mitigating measures already contained in the proposal and the extent to which these measures are likely to avoid, reduce or ameliorate adverse effects on the international nature conservation interests. It is the residual effects, after mitigation, that are considered at this stage.

VI. Integrity of the Site

22. Having regard to English Nature's advice, other consultation responses and any other information available, the competent authority should decide whether the plan or project, as proposed, would adversely affect the integrity of the site, in the light of its conservation objectives. That is, whether the plan or project would adversely affect the *"coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified"* (PPG 9 box C10). An adverse effect on integrity is likely to be one which prevents the site from making the same contribution to favourable conservation status for the relevant feature as it did at the time of its designation.

23. The form of words used in Regulation 48(5) implies that a precautionary approach should be taken in considering effects on integrity, in line with the Government's principles for sustainable development (see *Sustainable Development: the UK strategy* page 33). Regulation 48(5) says that (subject to Regulation 49) projects may only proceed if the competent authority has ascertained that it **will not adversely affect** the integrity of the European site.

VII. Considering How To Avoid Adverse Effects

24. If the proposal would adversely affect the integrity of the site then, having regard to English Nature's advice, the competent authority should consider the manner in which it is proposed to be carried out and whether the plan or project could be modified, or whether conditions or restrictions could be imposed, so as to avoid the adverse effects. This may include, for example, changes to the siting, layout, timing or use of the proposal and the use of obligations or legal agreements. (Reg. 48(6)).

25. Compensatory measures that may be offered in the proposal at this stage, seeking to redress but not remove residual harm to the international interests (such as the provision of land for habitat creation purposes), should not

be considered in the appropriate assessment, but may be considered later in the decision making process. (See Reg. 53).

VIII. Conclusion on Effects In The Light of Conditions and Restrictions

26. The competent authority should reassess the conclusions in the light of any such modifications, conditions or restrictions that may be agreed or imposed.

IX. Recording the Assessment

27. It would be advisable for this conclusion, and the reasons for it, to be recorded. English Nature should be notified of the conclusion of the appropriate assessment and the authority's decision as to the effects on the integrity of the site, before the authority undertakes the plan or project or issues any permission, consent or other authorisation (PPG 9 para 30).

28. The subsequent courses of action open to a competent authority are set out in Regulations 48(5) - (7), 49 and 54(3). The Regulations prohibit a competent authority from undertaking or giving consent to any plan or project unless the appropriate assessment concluded that it would not have an adverse effect on the integrity of the site, or specific criteria are met and the Secretary of State has been informed.

Good Practice Outline of an Appropriate Assessment Record

29. A suggested model or good practice outline record of an appropriate assessment is set out below. It may be contained in, for example, a planning officer's committee report or the minutes of a competent authority's decision. In other cases it may be a file note, clearly recording compliance with the Regulations. The record may take many different forms because each assessment needs to be appropriate to the type, scale, location and significance of the proposal and to the relevant nature conservation interests. It is provided here as a guide to assist competent authorities and English Nature staff, not as an authoritative legal formula. Any record made of an appropriate assessment should be copied to English Nature and to any other parties who were consulted on the assessment.

Title of Plan or Project/Application
Location of Plan or Project/Application
[With location plan attached showing relationship to the international designation]
International Nature Conservation Site
Nature/Description of Plan or Project/Application
[Including brief description of manner in which plan or project is proposed to be carried out]
Date Appropriate Assessment Recorded

This is a record of the appropriate assessment, required by Regulation 48 of the Habitats Regulations 1994, undertaken by [name of competent authority] in respect of the above plan/project, in accordance with the Habitats Directive (Council Directive 92/43/EEC). Having considered that the plan or project would be likely to have a significant effect on the [name of international site] and that the plan or project was not directly connected with or necessary to the management of the site, an appropriate assessment has been undertaken of the implications of the proposal in view of the site's conservation objectives.

*English Nature was consulted under Regulation 48(3) on [date] and their representations, to which this authority has had regard, are attached at Annex 1. The conclusions of this appropriate assessment * are/are not in accordance with the advice and recommendations of English Nature.*

**The applicant was required to submit further information reasonably necessary for this assessment on [date] under Reg.48(2) * and replied with the information on [date]/but did not supply the information.*

** The opinion of the general public was taken under Reg. 48(4) by way of *public advertisement/further consultation etc and the views expressed (attached at Annex 2) have been taken into account.*

The site's conservation objectives have been taken into account, including consideration of the citation for the site and information supplied by English Nature (see Annex 1). The likely effects of the proposal on the international nature conservation interests for which the site was designated may be summarised as:
[List of Effects]

The assessment has concluded that:
a)* *the plan or project **as proposed would not adversely affect the integrity of the site,*
or
b)* *the plan or project **as proposed would adversely affect the integrity of the site.*
[If (b):]
The imposition of conditions or restrictions on the way the proposal is to be carried out has been considered and it is ascertained that:
**a)* *conditions or restrictions cannot overcome the adverse effects on the integrity of the site.*
or
**b)* *the following conditions and/or restrictions would avoid adverse effects on the integrity of the site. [list conditions/restrictions]*

Signed ..... Date ..... *(* delete as appropriate)*
Annexes to also include relevant correspondence, minutes or meetings with English Nature, the applicant etc.

Figure 1

Location Map of Teesmouth and Cleveland Coast Special Protection Area


Nature Conservancy Council for England
ENGLISH NATURE
Special Protection Area
Teesmouth & Cleveland Coast
Cleveland
Special Protection Area
1247.31 hectares
Designation date
This is a Location Map The boundary shown is derived from larger scale mapping and may not match the background detail on this map
Scale 1:50000
0
3 kilometres
0
2 miles
Map 1 of 1
Grid North
Site_id 1007769
Parent_id
Grid ref NZ611252
Version 29 Aug 2000
Plotted 2 Oct 2000 12 17
Ref: 1007769-k00-51-1
This map is reproduced the Ordnance Survey map by English Nature with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown Copyright Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Licence no GD272299
Produced by Geographic Information Unit, English Nature © English Nature 2000
HARTLEPOOL
Hartlepool Bay
Long Scar
Little Scar
TEES BAY
TEES MOUTH
North Gare Breakwater
South Gare Breakwater
Seal Sands
Coatham Rocks
Salt Scar
REDCAR
Greatham
Graythorp
Seaton Carew
Saltholme
Dormanstown
Kirkleatham
Grangetown
Teesport

Figure 2

Maps showing sub-features of Teesmouth and Cleveland Coast European marine site