ENGLISH NATURE

Isles of Scilly complex
European marine site

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

Issued 14 January 2000

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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 of natural habitats or the habitats of species, or disturbance of species for the Isles of Scilly complex European marine site. This advice is being prepared to fulfill our obligations under Regulation 33(2) of the Conservation (Natural Habitats &c.) Regulations 1994.

The Isles of Scilly complex European marine site is a candidate Special Area for Conservation. It is Government policy that such sites should be protected as if they were already designated and, where appropriate, it is desirable to establish voluntary management schemes at an early stage, before the formal statutory obligations apply, and to act in the spirit of the Directive in the meantime (DETR & The Welsh Office, 1998). In light of this policy, we have worked with many of you to develop this advice in advance of statutory obligations applying.

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 for Conservation under the Habitats Directive, which support certain natural habitats and species of European importance, and Special Protection Areas under the Birds Directive which support significant numbers of internationally important wild birds. In the case of the Isles of Scilly complex European marine site our advice is being prepared to cover the SAC interest.

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;

- develop a management scheme to ensure that the ecological requirements of the site's interest features are met; and

- 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.

In addition, the Regulation 33 package will provide a basis to inform on 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 during the European Union's moderation process qualifying interest features are added to this European marine site, English Nature will add to this advice as appropriate.

Tim Bines
English Nature
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1. Introduction

1.1 Natura 2000

The European Union Habitats[1] and Birds[2] Directives are international agreements 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, especially 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 for 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 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 the management schemes which may be developed for these sites.

This document is English Nature's advice for the Isles of Scilly complex European marine site 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 English Nature local office.

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[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.

In addition to providing such advice, the Regulation 33 package will inform on 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). In the future, 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. The management scheme which the relevant authorities are drawing up under Regulation 34 for the Isles of Scilly complex European marine site will provide the framework through which this will be done and it should be based on the advice in this package. IN THIS RESPECT, RELEVANT AUTHORITIES MUST, WITHIN THEIR AREAS OF JURISDICTION, HAVE REGARD TO BOTH DIRECT AND INDIRECT EFFECTS ON AN INTEREST FEATURE OF THE SITE. THIS MAY INCLUDE CONSIDERATION OF ISSUES OUTSIDE THE BOUNDARY OF THE EUROPEAN MARINE SITE.

Relevant authorities should ensure that all plans for the area integrate with the management scheme for the European marine site. Such plans may include shoreline management plans, local Environment Agency plans, SSSI management plans, local BAP plans and sustainable development strategies for estuaries. 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 SAC 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 BYLAW-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 Isles of Scilly complex European marine site a SAC Management Group has already been set up and 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 candidate SAC status, parts of the Isles of Scilly complex are also designated and subject to agreements under other conservation legislation (eg. SSSIs notified under the Wildlife and Countryside Act 1981, as amended 1985). 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 Isles of Scilly complex European marine site. They are the starting point from which management schemes and monitoring programmes are to be developed as they provide the basis for determining what is likely to cause a significant effect, and for informing 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 have been generally presumed to have been in favourable condition at the time they were identified. This assumption will be tested during the 2000 - 2006 reporting period. 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 and thereby focus the attention of relevant authorities and surveillance to areas that may need management measures.

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

This operations advice, when issued, will need to be supplemented through further detailed discursions 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 Habitats Directive

2.1 Introduction

The Isles of Scilly are a remote oceanic archipelago, situated nearly 40 km south west of Lands End. They support a range of flora and fauna characteristic of full salinity intertidal and subtidal sandflats and sandbanks, possibly unparalleled in north west Europe for their undisturbed nature. These are important in Britain for their extent and the diversity of their associated communities, including eelgrass beds and many rare species restricted to south western Britain such as the trumpet anemone *Aiptasia mutabilis*. A coastal Annex II species, shore dock *Rumex rupestris* is also present. The islands are a breeding site for in excess of 20,000 seabirds including large numbers of storm petrels and lesser black-backed gulls.

The Isles of Scilly complex is a candidate Special Area for Conservation (SAC) the boundary of which is illustrated at Appendix I.

2.2 Interest features under the EU Habitats Directive

The Isles of Scilly complex qualifies as a SAC for the following Annex I habitats as listed in the EU Habitats Directive:

- Sandbanks which are slightly covered by seawater all the time
- Mudflats and sandflats not covered by seawater at low tide

The Isles of Scilly complex SAC also qualifies for the Annex II species shore dock *Rumex rupestris*. This does not however occur within the European marine site and therefore within this document as it occurs above Highest Astronomical Tide. Objectives to maintain shore dock in favourable condition are found within English Nature's conservation objectives for the relevant SSSI within the SAC boundary and will be dealt with through procedures outlined in the Conservation (Natural Habitats &c) Regulations 1994. Relevant authorities need to have regard to such adjacent European interests, as they might be affected by activities taking place within or adjacent to the European marine site.

Where these habitats and species occur within the European marine site they are referred to as interest features. Sub-features have also been identified to highlight the ecologically important components of each interest feature. The interest features and sub-features for the Isles of Scilly complex European marine site are discussed in Section 3 in more detail and are mapped at Figure 1 to show their distribution and extent. The boundary of the Isles of Scilly complex European marine site is also shown in Figure 1.

3. SAC interest features

3.1 Sandbanks which are slightly covered by seawater all the time

3.1.1 Definition

This habitat consists of soft sediment seabeds which are permanently covered by shallow seawater. Key components of these subtidal areas are the range of invertebrate animals and seaweeds that colonise the seabed, or which live in the seabed sediment. Shallow sandy sediments are typically colonised by a burrowing fauna of worms, crustaceans, bivalve molluscs, anemones and echinoderms. Mobile species at the surface of the sandbanks may include shrimps, crabs and fish. Where coarse stable material such as shells or gravel are present, epifaunal attached species may include foliose algae, hydroids, bryozoans and ascidians. Shallow sandy sediments are often important nursery areas for fish and feeding grounds for seabirds.

3.1.2 Importance of the feature

The Isles of Scilly archipelago encompasses extensive sublittoral sandy sediments which, between the islands, are contiguous with the intertidal sandflats. They are important in the UK for the extent and diversity of their associated communities. In particular, their isolation and the presence of oceanic water contribute to the special nature of the site, which is characterised by shallow sandy sediments with low silt content and by constant salinity. The mild climate results in an abundance of Mediterranean-Atlantic species. The Isles of Scilly are also remote from most major sources of disturbance by man, and there is almost no freshwater input and hence almost no associated waterborne pollution or input of suspended fine sediment. The most notable areas of sublittoral sandy sediments are between the islands, where subtidal sandbanks form a continuous gradation into deep water from the intertidal sandflats, bisected by narrow tideswept channels.

3.1.3 Key sub-features

Eelgrass bed communities - The shallow sublittoral sediments are colonised by the most extensive and best developed eelgrass *Zostera marina* beds in southern Britain (Brown, *et. al.*, 1997). Eelgrass beds have a rich associated flora and fauna of algae, hydroids, sea anemones, molluscs and fish, including nationally rare sea snails and seaweeds. Eelgrasses are the only group of marine underwater flowering plants in Britain and they provide an important source of attachment for many small animals and plants, including rarities such as the hydroid *Laomedea angulata*. Animals commonly found include snakelocks anemone *Anemonia viridis*, the swimming crab *Necora puber*, hermit and shore crabs *Carcinus maenas*, sea urchin *Echinocardium cordatum*, brittle stars *Amphiura* spp., cuttlefish *Sepiola* sp. and, more unusually, seahorses *Hippocampus* sp.. Eelgrasses were once abundant and widespread around the British coasts, but serious declines have occurred, in particular as a consequence of a severe outbreak of 'wasting disease' in the early 1930s. Recovery of eelgrass beds since the 1930s has been slow and patchy and this habitat is now considered nationally scarce in the UK. It is also the subject of a UK biodiversity habitat action plan, with the southwest now providing an important stronghold (Davison & Hughes, 1998). Eelgrass beds require light for photosynthesis and therefore need water of suitable clarity.

Sand and gravel communities - The rich communities present on the tide swept sandbanks in the narrow channels between the islands and in the deeper, more stable, wave sheltered sediments are unique in the UK for their extent and diversity. Communities range from those dominated by trough shells *Mactra* and *Spisula* spp. and venerid bivalves in areas of wave mobile sediments, to sea urchin *Spatangus purpureus* communities in coarser sediments. In the narrow tide swept channels between the islands, gravelly sands are colonised by the daisy anemone *Cereus pedunculatus* and the gastropod snail *Gibbula magus*. The fauna of all these sediment communities includes a much wider variety of smaller animals such as crustaceans, polychaete worms and various sea urchins, starfish and brittlestars. The variation in tidal influence and wave exposure throughout the island group adds to the diversity and many rare species are present, including the sea snails *Jujubinus striatus* and *Bittium simplex*, the bivalve *Callista chione* and the sea squirt *Molgula oculata* (Barne *et. al.*, 1996).

Mixed sediment communities - Mixtures of sand and gravel, pebbles and cobbles generally occur in areas between the islands which are subject to enhanced tidal streams or wave exposure. The enhanced water movement and the range of sediment types leads to the presence of very rich communities characterised by both animals living in the sediment and those attached to the larger stones on the surface. These larger stones provide an important source of attachment for small animals and plants, including nationally rare species, particularly of red seaweeds such as *Gelidiella calcicola, Schmitzia hiscockiana* and *Cruoria cruoriaeformis* (Barne *et. al.*, 1996), along with more common species such as sugar kelp *Laminaria saccharina* and the south-western seaweed *Cystoseira baccata*. Larger stones, and the sediment surface may be grazed by gastropod snails such as *Gibbula magus* and the chink shell *Lacuna vincta*, whilst within the sediment may be daisy anemones *Cereus pedunculatus* and the polychaete worms *Cirriformia tentaculata* and *Notomastus latericeus*.

3.2 Mudflats and sandflats not covered by seawater at low tide

3.2.1 Definition

These are intertidal sands and muds that are usually submerged at high tide and exposed at low tide. The Isles of Scilly complex supports extensive areas of undisturbed intertidal sandflats and are particularly important for the exceptionally species-rich communities occurring in coarse sediments, including clean sand, a substrate that usually supports few species. Although sheltered from wave action, the sediments include little mud because the surrounding seas have a low suspended sediment load, resulting from the islands' isolation from land and presence of oceanic water. The sandflats exposed at low tide between the northern islands are of UK and European importance, owing to their extent and diversity and the presence of species rarely found elsewhere in the intertidal (Brown, *et. al.*, 1997).

3.2.2 Importance of the feature

The intertidal sediment flats are subject to fully saline conditions, shelter from strong wave action and a variety of tidal currents. The quartz sediments derived from the granite rock that form the Isles of Scilly are coarse grained, which enable a number of species more usually found offshore in coarse shell or gravel deposits, to occur in the intertidal zone. These include the purple heart urchin *Spatangus purpureus*, dense aggregations of the heart urchin *Echinocardium cordatum* and razor shells *Ensis* spp.

3.2.3 Key sub-features

Eelgrass bed communities - The lower shore sandflats are particularly notable, for they include the fringes of the most extensive and diverse beds of eelgrass *Zostera marina* known in Britain. These have an unusually rich associated biota including various seaweeds and fish, and rich sediment communities of anemones, polychaete worms, bivalve molluscs and burrowing echinoderms. Many southern species are present, often in large numbers, including some which are only rarely recorded in Britain. Intertidal eelgrass is continuous with the subtidal eelgrass beds, and they are therefore structurally and functionally linked.

Sand communities - The sandflats exposed at low tide between the islands are of UK and European conservation importance, owing to their extent and diversity and the presence of species rarely found elsewhere in the intertidal. These include many species restricted to the sublittoral elsewhere in the UK, such as the purple heart urchin *Spatangus purpureus*. There is a wide range of bivalve molluscs with notable species including the tellin *Angulus tenuis* and the rayed artemis *Dosinia exoleta*. Over 50 species of mollusc have been recorded from a single sandflat. The heart urchin *Echinocardium cordatum* and razor shell *Ensis siliqua* biotope in lower shore fine sands is nationally uncommon, although in Scilly it occurs over extensive areas. Other species within the sediment include the lug worm *Arenicola marina* on the mid and lower shore, and a number of other polychaete worms. On the tide swept lower shore the sand mason worm *Lanice conchilega* occurs in abundance. Many southern species are also present, often in large numbers, including some, such as the hermit crab *Cestopagurus timidus* and the spiny cockle *Acanthocardia aculeata*, that are recorded only rarely in the UK (Barne and others 1996).

4. Conservation objectives for all 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 Isles of Scilly complex European marine site 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 various interest features and sub-features;
- summary information on the interest of each of the features; and
- the favourable condition table, providing information on how to recognise favourable condition for each of the features and which will act as a basis from which the monitoring programme will be developed.

4.1 The conservation objective for sandbanks which are slightly covered by seawater all the time

Subject to natural change, maintain the **sandbanks which are slightly covered by seawater all the time** in favourable condition[5], in particular:

- Eelgrass bed communities
- Sand and gravel communities
- Mixed sediment communities

4.2 The conservation objective for mudflats and sandflats not covered by seawater at low tide

Subject to natural change, maintain the **mudflats and sandflats not covered by seawater at low tide** in favourable condition[5], with particular reference to:

- Eelgrass bed communities
- Sand communities

[5] For a detailed definition of how to recognise favourable condition see Table 1 (Section 5)

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 established and ongoing activities and future reporting 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, by contrast, a separate activity to 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 principle 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 far less about habitat condition and find it difficult to predict what favourable condition may look like. 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

Feature	The habitat or species for which the site has been selected.
Sub-feature	An ecologically important sub-division of the feature.
Attribute	Selected characteristic of an interest feature/sub-feature which provides an indication of the condition of the feature or sub-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 1 Favourable Condition Table for the Isles of Scilly complex European marine site

NB - Many of the attributes will be able to be monitored 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
Subtidal sandbanks		Extent	Area (ha) measured periodically (frequency to be determined).	No decrease in extent from an established baseline, subject to natural change.	Extent of the feature is an attribute on which reporting is required by the Habitats Directive. Monitoring will need to take account of the dynamic nature of the feature but reduction in extent may indicate long term changes in the physical conditions influencing the feature.
		Sediment character	Particle size analysis (PSA). Parameters include percentage sand/silt/gravel, mean and median grain size, and sorting coefficient, used to characterise sediment type. Sediment character to be measured during summer, once per reporting cycle.	Average PSA parameters should not deviate significantly from an established baseline, subject to natural change.	Sediment character defined by particle size analysis is key to the structure of the feature, and reflects all of the physical processes acting on it. Particle size composition varies across the feature and can be used to indicate spatial distribution of sediment types thus reflecting the stability of the feature and the processes supporting it.
		Topography	Depth distribution of sandbanks from selected sites, measured periodically (frequency to be determined).	Depth distribution should not deviate significantly from an established baseline, subject to natural change.	Depth and distribution of the sandbanks reflects the energy conditions and stability of the sediment, which is key to the structure of the feature. Depth of the feature is a major influence on the distribution of communities throughout.

Feature	Sub-feature	Attribute	Measure	Target	Comments
Subtidal sandbanks		Water density	Regular measurement of water temperature and salinity in the subtidal periodically throughout the reporting cycle (frequency to be determined).	Average temperature/ salinity should not deviate significantly from an established baseline, subject to natural change.	Temperature and salinity are characteristic of the overall hydrography of the area. Changes in temperature and salinity influence the presence and distribution of species (along with recruitment processes and spawning behaviour) including those at the edge of their geographic ranges and non-natives.
	Eelgrass bed communities	Extent	Area/ha of eelgrass measured during peak growth period twice during reporting cycle.	No decrease in extent from an established baseline, subject to natural change.	The extent and distribution of seagrass beds provides a long term integrated measure of environmental conditions.
		Water clarity	Average light attenuation measured periodically throughout the reporting cycle (frequency to be determined).	Average light attenuation should not decrease significantly from an established baseline subject to natural change.	Water clarity is important for maintaining the eelgrass beds, and thus the structure of the feature. Clarity decreases through increases in amounts of suspended organic/inorganic matter.
		Characterising species: density of *Zostera marina*	Average shoot density, measured in July twice during reporting cycle.	Average shoot density should not deviate significantly from an established baseline, subject to natural change.	An early indicator of seagrass under stress is a reduction in biomass, ie the number and length of leaves. Density is preferred as a surrogate for biomass, being less destructive, based on baseline survey to establish the relationship between density and biomass at a site.

Feature	Sub-feature	Attribute	Measure	Target	Comments
		Non-native species - *Sargassum muticum*	Presence and abundance of *Sargassum* (Jap weed) within seagrass bed measured in July twice during reporting cycle.	Presence and abundance of *Sargassum* should not increase significantly from an established baseline, subject to natural change.	*S. muticum* is believed to compete with *Zostera marina* for space, light and other resources, modifying the structure of the eelgrass community. *S. muticum* is considered to be more relevant to the condition of seagrass communities for this site rather than other macroalgae, particularly opportunistic green algae.
Subtidal sandbanks	Eelgrass bed communities	Characteristic species - epiphytic community composition	Presence and abundance of epiphytes measured during July twice per reporting cycle.	Presence and abundance should not deviate significantly from an established baseline, subject to natural change.	Presence and abundance of epiphytes is indicative of the structure of the eelgrass bed communities. It gives an indication of their quality and changes in epiphytic composition may indicate cyclic changes/trends in the host biotope or the subtidal sandbank communities as a whole.
	Sand & gravel communities	Species composition of characteristic biotopes	Presence, abundance and diversity of composite species from a range of biotopes (to be determined) measured once per reporting cycle.	Composite species, abundance and diversity should not deviate significantly from an established baseline, subject to natural change	Species composition is an important contributor to the structure of the sub-feature. The presence, relative abundance and diversity of characterising and notable species gives an indication of the quality of the sub-feature and change in composition may indicate cyclic changes/trends in subtidal sand and gravel communities. The current list of biotopes is given in Appendix III. Further data collection and analysis is required to achieve a comprehensive list of biotopes, the species composition of which will be measured.

Feature	Sub-feature	Attribute	Measure	Target	Comments
	Mixed sediment communities	Species composition of ephemeral red algae on mixed sediment (EphR)	Presence, abundance and diversity of composite species from EphR measured during summer, twice per reporting cycle.	Composite species, abundance and diversity should not deviate significantly from an established baseline, subject to natural change	The species composition of this biotope is an important contributor to the structure of the sub-feature and is indicative of the unusual combination of light attenuation, tidal regime and lack of siltation conditions. Change in species composition may indicate cyclic change/trend in the subtidal mixed sediment communities.
Intertidal sand and mudflats		Extent	Area (ha) measured periodically (frequency to be determined).	No decrease from an established baseline, subject to natural change.	Extent of the feature is a reporting requirement of the Habitats Directive. Monitoring will need to take account of the dynamic nature of the feature but reduction in extent may indicate long term changes in the physical conditions influencing the feature.
Intertidal sand and mudflats		Sediment character	Particle size analysis (PSA). Parameters include percentage sand/silt/gravel, mean and median grain size, and sorting coefficient, used to characterise sediment type. Sediment character to be measured once per reporting cycle.	Average PSA parameters should not deviate significantly from an established baseline, subject to natural change.	Sediment character defined by particle size analysis is key to the structure of the feature, and reflects all of the physical processes acting on it. Particle size composition varies across the feature and can be used to indicate spatial distribution of sediment types thus reflecting the stability of the feature and the processes supporting it.
		Topography	Tidal elevation/shore slope, measured as height (m) relative to chart datum, measured periodically (frequency to be determined, but no more than once per reporting cycle).	Tidal elevation/shore slope should not deviate significantly from an established baseline, subject to natural change.	Height and distribution of the sandbanks reflects the energy conditions and stability of the sediment, which is key to the structure of the feature. Height of the feature is a major influence on the distribution of communities throughout.

Feature	Sub-feature	Attribute	Measure	Target	Comments
		Water density	Regular measurement of water temperature and salinity in the intertidal periodically throughout the reporting cycle (frequency to be determined).	Average temperature/ salinity should not deviate significantly from an established baseline, subject to natural change.	Temperature and salinity are characteristic of the overall hydrography of the area. Changes in temperature and salinity influence the presence and distribution of species (along with recruitment processes and spawning behaviour) including those at the edge of their geographic ranges and non-natives.
Intertidal sand and mudflats	Sand communities	Species composition of characteristic biotopes	Presence, abundance and diversity of composite species from a range of sites, measured once per reporting cycle.	Composite species, abundance and diversity should not deviate significantly from an established baseline, subject to natural change.	Species composition is an important contributor to the structure of the sub-feature. The presence, relative abundance and diversity of characterising and notable species gives an indication of the quality of the sub-feature and change in composition may indicate cyclic changes/trends in intertidal sand communities. The site supports a notably rich intertidal sand community which includes a number of notable species, eg species more usually found subtidally, and which may therefore be sensitive to a number of factors of less importance subtidally such as air temperature, eg rare/scarce species. The current list of biotopes is given in Appendix III, although further data collection and analysis is required to achieve a comprehensive list of biotopes, of which the species composition will be measured.

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 in the Fleet 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 designated. 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 2 and Section 6.5 and with more detail in Table 4 and Section 6.6, 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 relevant authorities to direct and prioritise their work on the management of activities that pose the greatest potential threat to the favourable condition of interest features on the Isles of Scilly complex European marine site. The advice is linked to the conservation objectives for interest features and, once issued, will 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 on, but is without prejudice to, any advice to be given subsequently 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 both explain the reasoning behind our advice and identify to competent and relevant authorities those operations which pose the most current 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 Isles of Scilly complex 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). As an example, seagrass beds are highly sensitive to increases in turbidity of the surrounding water. This reduces the light penetration which in turn prevents adequate photosynthesis.

The sensitivity assessments of the interest features or their component sub-features of the Isles of Scilly complex European marine site are based primarily upon a series of UK Marine SACs *Life* Project Task Reports (Davison & Hughes, 1998; Elliott and others 1998), and the Marine Habitats Reviews (Jones and others in prep.).

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, available to all over the World Wide Web (www.marlin.ac.uk).

6.2.2 Exposure assessment

This has been undertaken for the Isles of Scilly complex European marine site by assessing the relative exposure of the interest features or their component sub-features on the site to the effects of broad categories of human activities currently occurring on the site. For example, the exposure of interest features within the site to changes in the thermal regime as a result of human activities is negligible but exposure of some of the interest features to abrasion may be high.

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 of individual (or individual colony) of a species to an external factor [human activity] to which it is sensitive (McLeod, 1996). For example a subtidal sandbank may be sensitive to abrasion by benthic fishing gear, but it may not be currently vulnerable within the Isles of Scilly due to the limited benthic fishing taking place and existing management controls. The process of deriving and scoring relative vulnerability is provided in Appendix II.

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 appropriately robust to take into account the development of novel activities or operations which may cause deterioration or disturbance to the interest features of the site and should have sufficient stability to need only infrequent review and updating by English Nature.

These broad categories provide a clear framework against which relevant authorities can assess activities under their responsibility. The more detailed information in Table 3 provides relevant authorities with a context against which to consider an assessment of 'significant effect' of any plans or projects which may affect the site and a basis to inform on the scope and nature of appropriate assessments required in relation to 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 formally consult English Nature over individual plans and projects where required to do so under the 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 Isles of Scilly complex European marine site. English Nature expects that the information on current activities and patterns of usage (which was used to derive Table 3) 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 3) 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 discussions 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 Sandbanks which are slightly covered by seawater all the time

In pursuit of the conservation objective for the sandbanks (Section 4.1) the relevant and competent authorities for the Isles of Scilly complex 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
- Nutrient and/or organic enrichment

6.5.2 Mudflats and sandflats not covered by seawater at low tide

In pursuit of the conservation objective for the intertidal mud and sandflats (Section 4.2) the relevant and competent authorities for the Isles of Scilly complex European marine site are advised to manage human activities within their remit such that they do not result in deterioration or disturbance through any of the following:

- Physical damage resulting from abrasion
- Nutrient and/or organic enrichment

Table 2 showing operations which may cause deterioration of disturbance to the Isles of Scilly complex European marine site interest features at current levels of use[6]

The advice below is not a list of prohibitions but rather a checklist for operations for discussion with the management group, which need to be subject to some form of management measures(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 (or some component of them) that are considered to be highly or moderately vulnerable to the effects of the operations.

Standard list of categories of operations which may cause deterioration or disturbance	**Sandbanks which are slightly covered by seawater at all times**	**Mudflats and sandflats not covered by seawater at low tide**
Physical Loss Removal (eg harvesting, land claim, coastal development) Smothering (eg disposal of dredge spoil, outfalls)		
Physical Damage Siltation (eg dredging, outfalls) Abrasion (eg mobile benthic fishing, anchoring) Selective extraction (eg aggregate dredging, entanglement)	✓	✓
Non-physical disturbance Noise (eg boat activity) Visual presence (eg recreational activity)		
Toxic contamination Introduction of synthetic compounds (eg TBT, PCBs, endocrine disruptors) Introduction of non-synthetic compounds (eg heavy metals, hydrocarbons) Introduction of radionuclides		

Standard list of categories of operations which may cause deterioration or disturbance	Sandbanks which are slightly covered by seawater at all times	Mudflats and sandflats not covered by seawater at low tide
Non-toxic contamination Nutrient enrichment (eg agricultural run-off, outfalls) Organic enrichment (eg mariculture, outfalls) Changes in thermal regime (eg power stations) Changes in turbidity (eg dredging) Changes in salinity (eg water abstraction, outfalls)	✓ ✓	✓ ✓
Biological disturbance Introduction of microbial pathogens Introduction of non-native species and translocation Selective extraction of species (eg commercial & recreational fishing, bait collection)		

[6] This advice has been developed using best available scientific information and informed scientific interpretation and judgement (as at November 1999). 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 3. 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 November 1999. 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 that qualify as plans or projects within the meaning of Article 6 of the Habitats Directive.

6.6 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 Isles of Scilly complex European marine site.

This advice relates the vulnerability of the interest features and sub-features of the Isles of Scilly complex European marine site to current levels of human usage as summarised in Table 2, and set out in more detail in Table 3. An explanation of the sensitivity of the interest features or sub-features follows with examples of their exposure and therefore their vulnerability to damage or disturbance from the listed categories of operations. This enables links to be made between the categories of operation and the ecological requirements of the European marine site's interest features, as set out in Section 3.

6.6.1 Sandbanks which are slightly covered by seawater all the time

i) Physical loss

- All sub-features of the sandbanks are highly sensitive to physical loss through direct removal. Many communities that occur in the subtidal sandbanks are interdependent upon the ecological functioning of others and it is important that this potential indirect effect is considered when the effects of removal are assessed. Loss by removal could be by either one-off events or the cumulative effect of continuous activities. Whilst highly sensitive, due to the current low exposure on this site the subtidal sandbanks are not considered to be vulnerable to physical loss through removal or smothering.

ii) Physical damage

- Eelgrass beds are particularly sensitive to physical damage by abrasion. They can be easily dislodged and uprooted from the sediment during physical disturbances. Once damaged in this way, eelgrasses have difficulty in re-establishing or colonising the area, as their rhizomes may be damaged or their seeds may be removed or may have been buried too deeply for successful germination (Davison & Hughes, 1998). The eelgrass beds present on the subtidal sandy sediments within the Isles of Scilly complex European marine site are considered moderately vulnerable to this form of damage due to the potential abrasion which may occur as a result of anchoring or scour from moorings at particularly sensitive sites where eelgrass occurs. Further investigation is necessary into these types of effects and monitoring of the potential impact will continue on the site. The use of mobile benthic fishing gear may affect eelgrass beds, however, it is noted that fisheries management practices within the site currently preclude the use of trawls and other such gear that may cause damage.

iii) Non-toxic contamination

- Some marine species may be tolerant to eutrophication and as a consequence, can thrive in conditions of increased nutrients, often at the expense of the more sensitive species. However, this is not the case with eelgrass beds and subtidal sediment communities in this area. Blooms of phytoplankton within the water column as a result of nutrient enrichment can decrease the clarity of the water with detrimental consequences to eelgrass beds, which require a sufficient light supply for photosynthesis. Sediment communities are also sensitive to elevated nutrient

concentrations, which can result in the growth of blanketing, floating or attached algae, and this can smother invertebrate communities and lead to localised anoxic conditions on the surface of the sediment. Given the current levels of exposure, eelgrass beds and subtidal sediments are currently considered moderately vulnerable to nutrient enrichment (Davison & Hughes, 1998).

- Eelgrass beds and subtidal sediments are moderately sensitive to organic enrichment. Elevations in the organic material content of the water column and sediments can result in reduced oxygen levels due to the increased activity of aerobic micro-organisms which break down the organic material. This can have knock-on effects for many marine animals living within the sediments and eelgrass beds, which require oxygen for their healthy functioning. Eelgrass bed, sand and gravel communities and mixed sediment communities are moderately vulnerable to increases in organic material due to current exposure levels and their moderate sensitivity.

6.6.2 Mudflats and sandflats not covered by seawater at low tide

i) Physical loss

- All sub-features of the mudflats and sandflats are highly sensitive to physical loss through direct removal. Many communities that occur in the mudflats and sandflats are interdependent upon the ecological functioning of others and it is important that this potential indirect effect is considered when the effects of removal are assessed. Loss by removal could be by either one-off events or the cumulative effect of continuous activities. Whilst highly sensitive, due to present levels of exposure on this site, mudflats and sandflats are not considered to be vulnerable to loss through removal.

ii) Physical damage

- Intertidal mudflats and sandflats are moderately vulnerable to abrasion. This is due primarily to the vulnerability of eelgrass, which is sensitive and exposed to abrasion for the same reasons as subtidal eelgrass beds. Physical damage of intertidal sediments can alter their structure and hence their stability, and this may ultimately lead to the loss of parts of the habitat.

ii) Non-toxic contamination

- As with the subtidal communities, intertidal sediment and eelgrass communities are moderately vulnerable to nutrient and organic enrichment. The reasons for this are the same as those for the sub-features of subtidal sandbanks, mentioned above in Section 6.6.1.

6.7 Plans and Projects

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.

An 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 European Union 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).

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

Tables 2 and 3 provide relevant authorities with a guide against which to initiate an assessment 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.

6.8 Review of consents

Regulation 50 of The Conservation (Natural Habitats, &c.) Regulations 1994 requires competent authorities to undertake a review of all existing consents and permissions affecting the SAC as soon as possible after the site officially becomes a Site of Community Importance. 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.

Table 3 Assessment of the relative exposure of interest features and sub-features of the Isles of Scilly complex European marine site to different categories of operations. Relative exposure (this table) and sensitivity scores (Table 4) when combined are used to derive relative vulnerability using the table in Appendix III

Key:

High	High exposure
Med	Medium exposure
Low	Low exposure
None	No current exposure

Categories of operations which may cause deterioration or disturbance	**Sandbanks which are slightly covered by seawater all the time**			**Mudflats and sandflats not covered by seawater at low tide**	
	Eelgrass bed communities	**Sand and gravel communities**	**Mixed sediment communities**	**Eelgrass bed communities**	**Sand communities**
Physical Loss					
Removal (eg. harvesting, land claim)	**None**	**None**	**None**	**None**	**None**
Smothering (eg. disposal of dredge spoil)	**Low**	**Low**	**Low**	**Low**	**Low**
Physical Damage					
Siltation (eg. dredging, outfalls)	**None**	**None**	**None**	**None**	**None**
Abrasion (eg. mobile benthic fishing, anchoring)	**Low**	**Low**	**Low**	**Low**	**Low**
Selective extraction (eg. aggregate dredging, entanglement)	**None**	**None**	**None**	**None**	**Low**
Non-physical disturbance					
Noise (eg. boat activity)	**None**	**None**	**None**	**None**	**None**
Visual presence (eg. recreational activity)	**None**	**None**	**None**	**None**	**None**

Categories of operations which may cause deterioration or disturbance	Sandbanks which are slightly covered by seawater all the time			Mudflats and sandflats not covered by seawater at low tide	
	Eelgrass bed communities	Sand and gravel communities	Mixed sediment communities	Eelgrass bed communities	Sand communities
Toxic contamination					
Introduction of synthetic compounds (eg. TBT, PCBs, endocrine disruptors)	**None**	**None**	**None**	**None**	**None**
Introduction of non-synthetic compounds (eg. heavy metals, hydrocarbons)	**None**	**None**	**None**	**None**	**None**
Introduction of radionuclides	**None**	**None**	**None**	**None**	**None**
Non-toxic contamination					
Nutrient enrichment (eg. agricultural run-off, outfalls)	**Med**	**Med**	**Med**	**Med**	**Med**
Organic enrichment (eg. mariculture, outfalls)	**Med**	**Med**	**Med**	**Med**	**Med**
Changes in thermal regime (eg. power stations)	**None**	**None**	**None**	**None**	**None**
Changes in turbidity (eg. dredging)	**None**	**None**	**None**	**None**	**None**
Changes in salinity (eg. water abstraction, outfalls)	**None**	**None**	**None**	**None**	**None**
Biological disturbance					
Introduction of microbial pathogens	**None**	**None**	**None**	**None**	**None**
Introduction of non-native species and translocation	**Low**	**Low**	**Low**	**Low**	**Low**
Selective extraction of species (eg. commercial and recreational fishing)	**Low**	**Low**	**Low**	**Low**	**Low**

Table 4 Assessment of the relative vulnerability of interest features and sub-features of the Isles of Scilly complex 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 shading. This table also incorporates relative sensitivity scores used in part to derive vulnerability[7].

Key

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

Categories of operations which may cause deterioration or disturbance	Sandbanks which are slightly covered by seawater all the time			Mudflats and sandflats not covered by seawater at low tide	
	Eelgrass bed communities	Sand and gravel communities	Mixed sediment communities	Eelgrass bed communities	Sand communities
Physical Loss					
Removal (eg. harvesting, land claim)	●●●●	●●●●	●●●●	●●●●	●●●●
Smothering (eg. disposal of dredge spoil)	●●●	●●	●●●	●●●	●●●
Physical Damage					
Siltation (eg. dredging, outfalls)	●●●	●●	●●	●●●	●●
Abrasion (eg. mobile benthic fishing, anchoring)	●●●●	●●●	●●●	●●●●	●●●
Selective extraction (eg. aggregate dredging, entanglement)	●●●●	●●●	●●●	●●●●	●●
Non-physical disturbance					
Noise (eg. boat activity)	●	●	●	●	●
Visual presence (eg. recreational activity)	●	●	●	●	●
Toxic contamination					
Introduction of synthetic compounds (eg. TBT, PCBs, endocrine disruptors)	●●●●	●●●●	●●●●	●●●●	●●●●
Introduction of non-synthetic compounds (eg. heavy metals, hydrocarbons)	●●●	●●●	●●●	●●●	●●●

Categories of operations which may cause deterioration or disturbance	Sandbanks which are slightly covered by seawater all the time			Mudflats and sandflats not covered by seawater at low tide	
	Eelgrass bed communities	Sand and gravel communities	Mixed sediment communities	Eelgrass bed communities	Sand communities
Introduction of radionuclides	●●	●●	●●	●●	●●
Non-toxic contamination					
Nutrient enrichment (eg. agricultural run-off, outfalls)	●●●	●●●	●●●	●●●	●●●
Organic enrichment (eg. mariculture, outfalls)	●●●	●●●	●●●	●●●	●●●
Changes in thermal regime (eg. power stations)	●●●	●●●	●●●	●●●	●●●
Changes in turbidity (eg. dredging)	●●●●	●●●	●●●	●●●	●●
Changes in salinity (eg. water abstraction, outfalls)	●●●	●●●	●●●	●●●	●●●
Biological disturbance					
Introduction of microbial pathogens	●	●	●	●	●
Introduction of non-native species and translocation	●●●	●●	●●	●●●	●●
Selective extraction of species (eg. commercial and recreational fishing)	●●●	●●●	●●●	●●●	●●●

[7] 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 November 1999), 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 contrast, 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 assist the management and advisory groups with the future management of the site.

7. Bibliography

ABP RESEARCH. 1999. *Good practice guidelines for ports and harbours operating within or near UK European marine sites*. English Nature, UK Marine SACs Project.

BARNE, J.H., and others, eds. 1996. *Coasts and seas of the UK, Region 11 The Western Approaches: Falmouth Bay to Kenfig*. Peterborough: JNCC.

BISHOP, G.M. 1986. Study of *Echinus esculentus* L. populations in the Isles of Scilly, September 1986. *Unpublished report to the Nature Conservancy Council from the Marine Conservation Society*.

BROWN, A.E., BURN, A.J., HOPKINS, J.J., & WAY, S.F. 1997. The Habitats Directive: selection of Special Areas of Conservation in the UK. *JNCC Report*, No. 270.

BKS SURVEYS (undated). Mapping *Zostera* beds in Special Areas of Conservation by aerial photography. *Unpublished Report to English Nature from BKS surveys*.

CONNOR, D.W., and others. 1997. Marine Nature Conservation Review: marine biotope classification for Britain and Ireland. Volume 1. Littoral biotopes. Version 97.06. *Joint Nature Conservation Committee Report*, No. 229.

CONNOR, D.W., and others. 1997. Marine Nature Conservation Review: marine biotope classification for Britain and Ireland. Volume 2. Sublittoral biotopes. Version 97.06. *Joint Nature Conservation Committee Report*, No. 230.

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

DETR & THE WELSH OFFICE. 1998. *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*. London: DETR.

DAVIES, J. 1991. Benthic marine ecosystems of Great Britain: a review of current knowledge. Western Channel and approaches. *Nature Conservancy Council, CSD Report*, No 1173 (Coasts and seas of the United Kingdom. MNCR series.)

DAVISON, 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).

ELLIOTT, M., and others. 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. Site Objective Statements and citation sheets for SSSIs, Devon & Cornwall: *English Nature, Unpublished Report*.

ENGLISH NATURE. 1994. *Marine Annex Types - further information*. Peterborough: English Nature.

EN, SNH, EHS(DOE(NI)), CCW, JNCC & SAMS. 1998. *Natura 2000: European marine sites: Guidance relating to statutory conservation objectives and operations which may cause deterioration or disturbance.* Peterborough.

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).

JONES, L.A., HISCOCK, K., & CONNOR, D.W. In prep. *Marine Habitat Reviews.* JNCC

MCLEOD, C. 1996. *Appendix 1. Glossary of marine ecological terms* In: *Marine Nature Conservation Review: rationale and methods.* Peterborough: Joint Nature Conservation Committee, (Coasts and Seas of the United Kingdom, MNCR series).

MUNRO, C., & NUNNY, R. 1998. Isles of Scilly subtidal habitat and biotope mapping survey. Peterborough, *English Nature Research Reports*, No. 276.

NICHOLS, D., & HARRIS, T. 1982. A survey of the low tide flats of the Isles of Scilly. *Unpublished Report to the Nature Conservancy Council from Exeter University*.

8. Glossary

Advisory Group	The body of representatives from local interests, user groups and conservation groups, formed to advise the management group
Annex I habitat type(s)	A natural habitat type 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 of 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 of organisms occurring in a particular environment, presumably interacting with each other and with the environment, and identifiable by means of ecological survey from other groups.

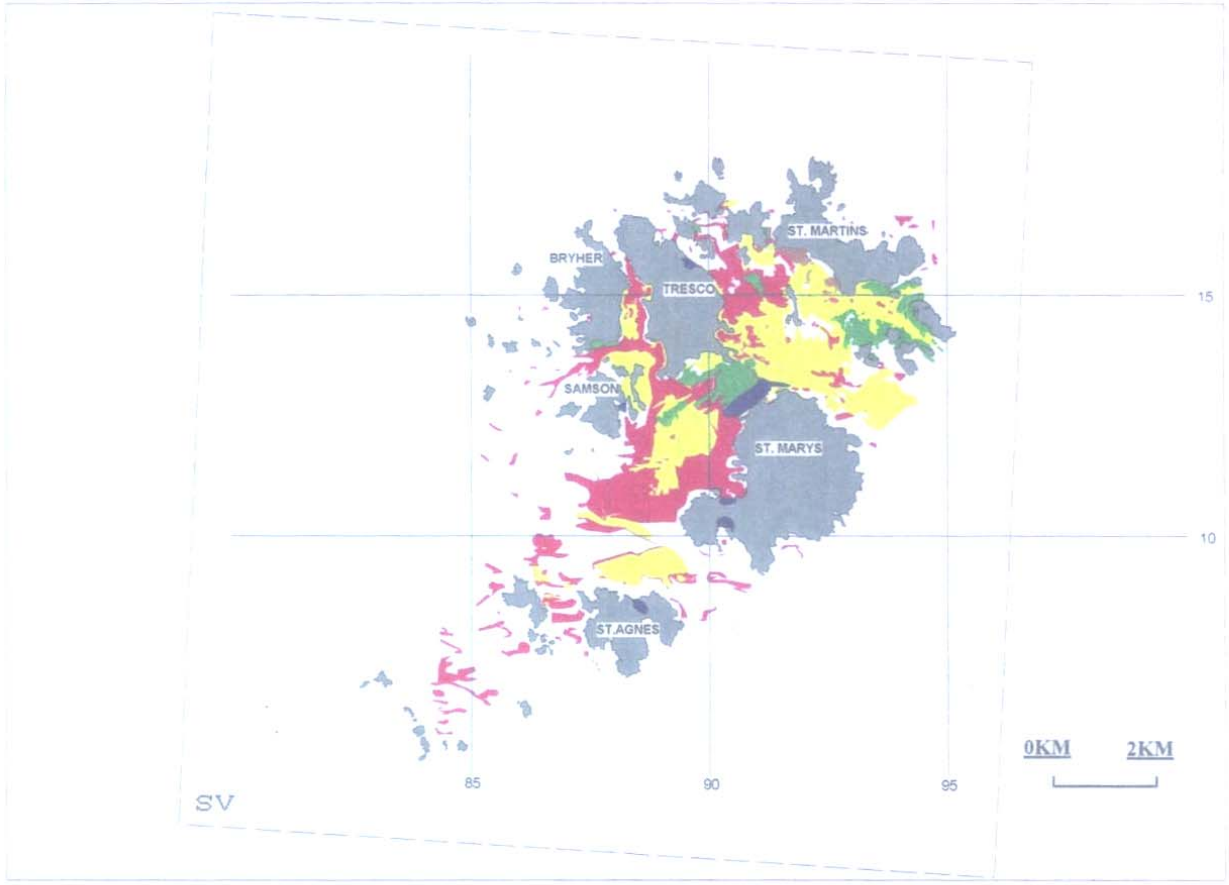
Competent authority	Any Minister, government department, public or statutory undertaker, public body or person holding a public office that exercises legislative powers (see also relevant authority).
Conservation objective	A statement of the nature conservation aspirations for a site, expressed in terms of the favourable condition required for the habitats and/or species for which the site has been selected.
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.
European marine site	A European site (SAC or SPA) which consists of, or in so far as it consists of, marine areas.
Favourable condition	A range of conditions for a natural habitat or species at which the sum of the influences acting upon it are not adversely affecting its distribution, abundance, structure or function within an individual Natura 2000 site. The condition in which the habitat or species is capable of sustaining itself on a long-term basis.
Favourable conservation status	A range of conditions for a natural habitat or species at which the sum of the influences acting upon it are not adversely affecting its distribution, abundance, structure or function throughout the biogeographic region. 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 for *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 within the European Union.
Infauna	Benthic animals which live within the seabed.
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 Annex II species and any population of a bird species for which a site has been designated under the Birds Directive.
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 compliance with the Habitats Directive in relation to that site.
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' (*qv*)
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 has been designated, or disturbance to the species and its habitats for which the site has been designated.
Plan or project	In general, any operation which requires an application to be made for specific statutory consent, authorisation, licence or other permission. Specifically, 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.
Relevant authority	The specific competent authority which has powers or functions which have, or could have, an impact on the marine environment within, 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 (or individual colony) of a species to damage or disturbance from an external factor.
Sub-feature	An ecologically important sub-division of an interest feature.

Typical species	A species that is considered to be a typical component of a feature or sub-feature.
Vulnerability	The exposure of a habitat, community or individual (or individual colony) of a species to an external factor to which it is sensitive.

FIGURE 1

ISLES OF SCILLY EUROPEAN MARINE SITE : LOCATION OF INTEREST FEATURES AND SUB - FEATURES



SANDBANKS SLIGHTLY COVERED BY SEAWATER ALLTHE TIME

EELGRASS BED COMMUNITIES

SAND AND GRAVEL COMMUNITIES

MIXED SEDIMENT COMMUNITIES

MUDFLATS AND SANDFLATS NOT COVERED BY SEAWATER AT LOW TIDE

EELGRASS BED COMMUNITIES

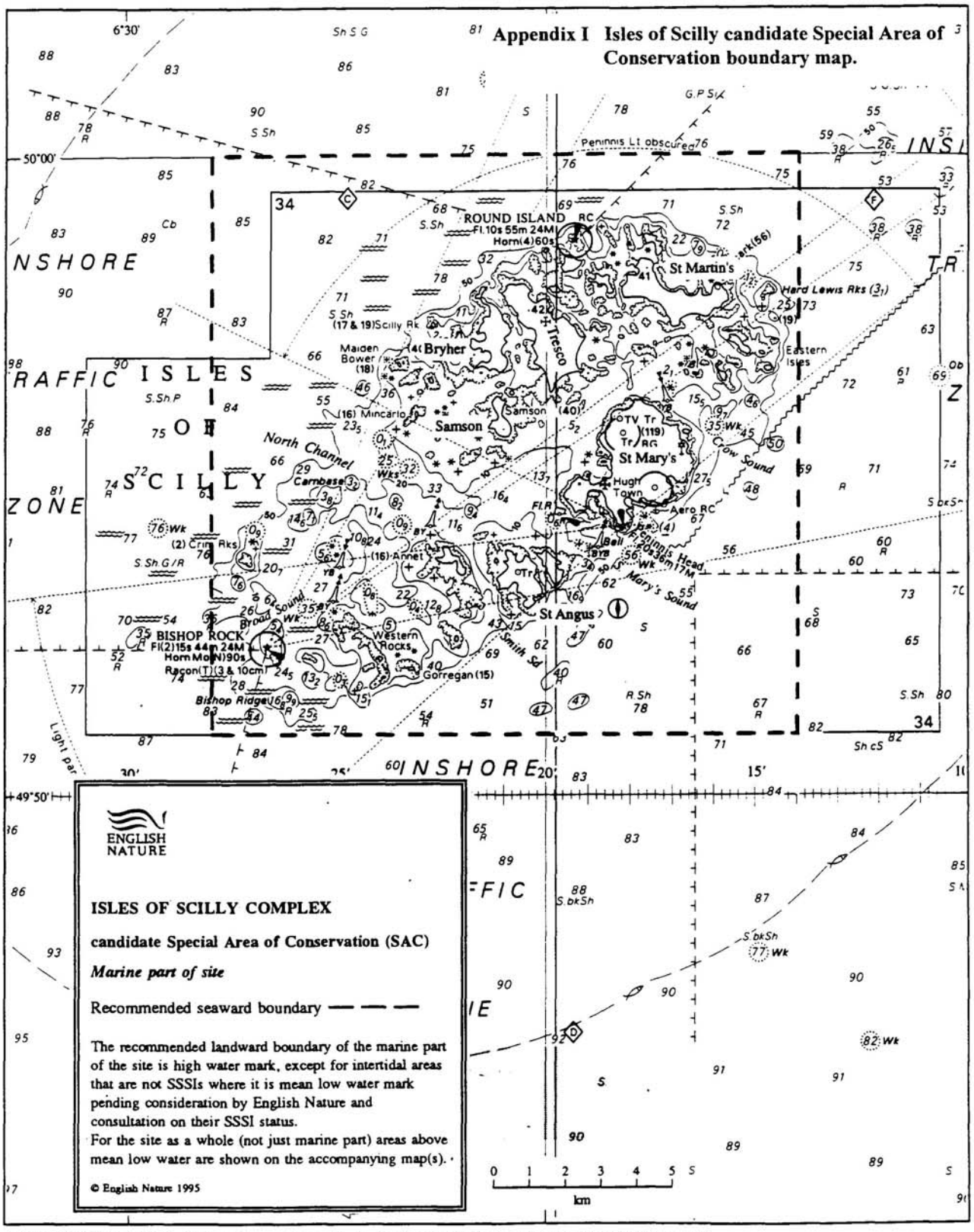
SAND COMMUNITIES

EUROPEAN MARINE SITE BOUNDARY

1) The landward boundary of this European marine site follows the mean high water mark within the SSSI, elsewhere the landward boundary follows the mean low water mark.

This location map is indicative only. It identifies the distribution of the main biotopes, based on Munro & Nunney 1998.

Appendix I Isles of Scilly candidate Special Area of Conservation boundary map



Taken from Admiralty Chart No. 2565 with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright.

Appendix II 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.

		Relative sensitivity of the interest feature			
		High (3)	**Medium (2)**	**Low (1)**	**None detectable (0)**
Relative exposure of the interest feature	**High (3)**	**9**	**6**	**3**	**0**
	Medium (2)	6	4	2	0
	Low (1)	3	2	1	0
	None (0)	0	0	0	0

Categories of relative vulnerability

High	6 - 9
Medium	3 - 5
Low	1 - 2
None detectable	0

Appendix III Summary of key biotopes (Connor and others 1997) - reference Favourable Condition Table

Interest Feature	Sub-feature	Biotope code	Biotope name
Subtidal sandbanks	**Eelgrass bed communities**	IMS.Zmar	Eel grass *Zostera marina/angustifolia* beds in lower shore or shallow subtidal clean or muddy sand
	Gravel and sand communities	IGS.Sell	Sand with high number of bivalves with *Spisula elliptica*
		IGS.NcirBat	*Nephtys cirrosa* and *Bathyporeia* spp. in shallow infralittoral sand
		CMS.AfilEcor	*Amphiura filiformis* and *Echinocardium cordatum* in clean or slightly muddy sand
		IMS.EcorEns	*Echinocardium cordatum* & *Ensis* spp. In lower shore or subtidal medium to fine grained sand
	Mixed sediment communities	IMX.An	Burrowing anemones in subtidal muddy gravel
		IMX.LsacX	Sugar kelp *Laminaria saccharina, Chorda filum* and filamentous red seaweeds on sheltered subtidal sediment
		MIR.EphR	Ephemeral red seaweeds and kelps on tide swept mobile subtidal cobbles
Intertidal sand and mudflats	**Eelgrass bed communities**	IMS.Zmar	Eel grass *Zostera marina/angustifolia* beds in lower shore or shallow subtidal clean or muddy sand
	Sand communities	IMS.EcorEns	Urchin *Echinocardium cordatum* and razor shell *Ensis* spp. in lower shore fine sands and muddy sands
		CGS.Ven	Purple heart urchin *Spatangus purpureus* and bivalve community in lower-shore sands
Intertidal sand and mudflats (cont.)	**Sand communities (cont.)**	LGS.Lan	Sand mason worm *Lanice conchilega* in tidal-scoured lower-shore sands

Appendix IV English Nature's guidance note HRGN1 'The Appropriate assessment (Regulation 48)'

Issued 14 January 2000

ENGLISH NATURE

Habitats regulations guidance note

NATURA 2000

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 English Nature 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.

Appendix V Relevant authority names and addresses

Council of the Isles of Scilly Town Hall St Mary's Isles of Scilly TR21 0LW	English Nature Trevint House Strangways Villas Truro TR1 2PA
Harbour Master The Duchy of Cornwall Town Quay St Mary's Isles of Scilly, TR21 0LS	The Duchy of Cornwall Hugh House St Mary's Isles of Scilly TR21 0LS
The Sea Fisheries Committee Council of the Isles of Scilly Town Hall St Mary's Isles of Scilly, TR21 0LW	