

**SCOTTISH  
NATURAL  
HERITAGE**



**Papa Stour  
Special Area of Conservation**

**Advice under Regulation 33(2)**  
of The Conservation (Natural Habitats, &c.) Regulations 1994  
(as amended)

30 March 2006

**About this Package:**

Section 1 of this document provides a general introduction and Sections 2 and 3 fulfil Scottish Natural Heritage's duties under Regulation 33(2) of The Conservation (Natural Habitats, &c.) Regulations 1994 (Habitats Regulations) (as amended by The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004). This requires that SNH advises other relevant authorities as to the conservation objectives of the site (see Section 2) and any operations which may cause deterioration of natural habitats or the habitats of species, or disturbance of species, in so far as such disturbance could be significant, for which the site has been designated (see Section 3).

Annexes A and B provide supplementary, non-statutory information. Annex A gives information on the sensitivity and vulnerability of the qualifying interests: 'Reefs' and 'Submerged or partially submerged sea caves'. Annex B gives some indication as to the extent, distribution, structure, function and processes that affect the qualifying interests. It should be noted that this is indicative and not definitive, and as more site information is gathered these sections may be updated.

Papa Stour was designated by Scottish Ministers as a Special Area of Conservation (SAC) on 17<sup>th</sup> March 2005. This site is also referred to as a 'European site' (Regulation 10(1)). A 'European marine site' is a 'European site' which is wholly or in part marine (Regulation 2(1)) and is hereafter referred to as a marine SAC.

Although the following statutory information is for the benefit of relevant authorities (see below for explanation of their role), it can also be used by other competent authorities when assessing plans or projects.

## 1 Introduction

### 1.1 Background

The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended by The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004), commonly referred to as the Habitats Regulations, transpose the EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) into domestic legislation. Regulation 33(2) gives Scottish Natural Heritage a statutory responsibility to advise other relevant authorities as to the conservation objectives for marine SACs in Scotland, and 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.

This document presents the Regulation 33 advice, plus supporting information, for the Papa Stour SAC to assist relevant and competent authorities, local interest groups and individuals in considering management (including the management scheme) of the site. This advice, plus supporting information, will also help to determine the scope and nature of any “appropriate assessment”, which the Habitats Directive requires to be undertaken for proposed plans and projects that are not connected to the conservation management of the site and are considered likely to have a significant effect. Where necessary Scottish Natural Heritage will also provide more detailed advice to relevant, and other competent, authorities to inform assessment of the implications of any such plans or projects.

### 1.2 Relevant and competent authorities

Within the context of a marine SAC, a relevant authority is a body or authority that has a function in relation to land or waters within or adjacent to the site (Regulation 5) and include: a nature conservation body; a local authority; water undertakers; a navigation authority; a harbour authority; a lighthouse authority; a river purification board (SEPA); a district salmon fishery board; and a local fisheries committee. All *relevant authorities* are *competent authorities*.

A competent authority is defined in Regulation 6 as “any Minister, government department, public or statutory undertaker, public body of any description or person holding a public office”. In the context of a plan or project, the *competent authority* is the authority with the power or duty to determine whether or not the proposal can proceed.

### 1.3 The role of relevant authorities

The Habitats Regulations require relevant authorities to exercise their functions so as to secure compliance with the Habitats Directive. A management scheme may be drawn up for each marine SAC by the relevant authorities as described under Regulation 34. For marine SACs with overlapping interests, a single management scheme may be developed.

Where a management scheme is in place the relevant authorities must ensure that all plans for the area integrate with it. Such plans may include shoreline

management plans, Sites of Special Scientific Interest (SSSI) management plans, local Biodiversity Action Plans (BAPs) and sustainable development strategies for estuaries. This must occur to ensure that only a single management scheme is produced through which all relevant authorities exercise their duties under the Habitats Regulations.

#### **1.4 Responsibilities under other conservation designations**

Other designations within or adjacent to the Papa Stour marine SAC are: Papa Stour SSSI; Sandness Coast SSSI; Papa Stour Special Protection Area. The obligations of relevant, and other competent authorities and organisations under such designations and legislation are not affected by the advice contained in this document.

#### **1.5 Conservation objectives**

Section 2 of this document contains the conservation objectives for the Papa Stour marine SAC, a site which consists entirely of marine qualifying interests. The conservation objectives have been developed to ensure that the obligations of the Habitats Directive are met.

#### **1.6 Advice as to operations**

The operations, set out in Section 3, are those which SNH advise may cause deterioration of natural habitats for which the site has been designated. This does not necessarily mean that the operations are *presently* ongoing or, if they are, that they are at levels incompatible with the conservation objectives.

#### **1.7 Plans and projects**

The Habitats Regulations require that, where an authority concludes that a development proposal is unconnected with the nature conservation management of a Natura site and is likely to have a significant effect on that site, it must undertake an appropriate assessment of the implications for the qualifying interest for which the area has been designated.

#### **1.8 Review of Consents**

Competent authorities are required by the Habitats Regulations to undertake a review of all consents and permissions for activities affecting the site as soon as reasonably practicable after it becomes a European site. This will have implications for discharge and other consents, which will need to be reviewed in the light of the conservation objectives.

## 2 Statutory advice given by SNH under Regulation 33(2) Conservation Objectives

### 2.1 Introduction

This section provides conservation objectives, which have been developed by SNH in agreement with the Scottish Executive and are to be provided to the relevant authorities in fulfilment of the requirements under Regulation 33(2) of The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended by The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004).

The conservation objectives ensure that the obligations of the Habitats Directive are met; that is, there should not be deterioration or significant disturbance of the qualifying interest. This will also ensure that the integrity of the site is maintained and that it makes a full contribution to achieving favourable conservation status for its qualifying interests.

The Papa Stour marine SAC has been designated for the habitats 'Reefs' and 'Submerged or partially submerged sea caves', which are listed on Annex I of the Habitats Directive.

The Papa Stour SAC consists entirely of marine qualifying interests.

**The conservation objectives for the Papa Stour marine SAC are as follows:**

To avoid deterioration of the qualifying habitats ( <b>Reefs</b> and <b>Submerged or partially submerged sea caves</b> ) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying interests.
To ensure for the qualifying habitats that the following are maintained in the long term:
• Extent of the habitat on site
• Distribution of the habitat within site
• Structure and function of the habitat
• Processes supporting the habitat
• Distribution of typical species of the habitat
• Viability of typical species as components of the habitat
• No significant disturbance of typical species of the habitat

### **3 Statutory advice given by SNH under Regulation 33(2) Operations**

The following advice as to operations to be considered by relevant authorities is provided by SNH with respect to the Papa Stour marine SAC in fulfilment of the requirements under Regulation 33(2)(b) of The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended by The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004). The advice identifies those operations, either on or affecting the SAC, which may cause deterioration of the marine natural habitats or the habitats of species, or disturbance of species, for which the site has been designated. These include operations that may not be currently affecting the Papa Stour marine SAC.

#### **Operations (in alphabetical order)**

##### **Aquaculture**

Finfish farming  
Shellfish farming

##### **Coastal Development**

Agriculture  
Civil engineering

##### **Discharges / Waste Disposal**

Discharge of commercial effluent  
Discharge of sewage  
Marine litter

##### **Fishing**

Hydraulic fishing  
Mobile gear: Dredging  
Mobile gear: Trawling  
Static gear: Creel / Pot fishing  
Static gear: Line fishing  
Static gear: Netting

##### **Gathering / Harvesting**

Bait gathering  
Diver collection of shellfish  
Harvesting of seaweed subtidally  
Intertidal collection of shellfish  
Intertidal gathering of cast seaweed

##### **Marine Development**

Aggregate extraction  
Extraction of beach material

##### **Marine Traffic**

Boat maintenance and antifoulant use  
Commercial vessels

##### **Recreational Activities**

Angling  
Boat anchorages  
Boat moorings  
Charter / recreational vessels  
Scuba diving

##### **Scientific Research**

Scientific research

## Annex A

### Non-statutory advice given by SNH Sensitivity and Vulnerability of the Papa Stour SAC 'Reefs' and 'Submerged or partially submerged sea caves' to activities listed in Section 3

The comments below are general and should not be considered to be definitive. They are made without prejudice to any comments SNH may provide or any assessment that may be required for specific proposals to be considered by a relevant authority. The level of any impact will depend on the location and intensity of the relevant activity. This advice is provided to assist and focus the relevant authorities in their consideration of the management of these operations.

NB. References to deterioration in the comments section below should be taken to mean *deterioration of all the qualifying interests*. If specific qualifying interests are particularly at risk they may be referred to individually where relevant.

Operations	Comments
<b>Aquaculture</b>	
Finfish farming	Finfish farming has the potential to cause deterioration of qualifying habitats and communities through changes in water quality, smothering from waste material and physical disturbance from mooring systems. There is potential for accidental introduction of new non-native species and increasing the spread of existing non-native plants and animals (e.g. <i>Caprella mutica</i> Japanese skeleton shrimp), which are already widely distributed in the UK. Invasive species have the potential to cause deterioration of the qualifying interests by altering community structure and quality.
Shellfish farming	This activity has the potential to cause deterioration of the qualifying habitats and communities through physical damage (e.g. installation of mooring blocks and continued scouring by riser chains) and changes in community structure caused by smothering from pseudo-faeces (undigested waste products) and debris (including dead shells) falling from the farm. There is also potential for accidental introduction of new non-native species and increasing the spread within the UK of existing non-native plants and animals (e.g. <i>Sargassum muticum</i> Wireweed), through importation or translocation of shellfish stocks. Invasive species have the potential to cause deterioration of the qualifying interests by altering community structure and quality.
<b>Coastal Development</b>	
Agriculture	Diffuse run-off from agricultural practices has the potential to cause deterioration of qualifying habitats and communities, particularly reefs, through the smothering of qualifying interests, and / or altering water quality through discharge of organic and inorganic pollutants.

<b>Coastal Development contd.</b>	
Civil engineering	The construction and maintenance of structures, both within and adjacent to the sea have the potential to cause direct loss of qualifying habitat (particularly reefs) and deterioration of adjacent reef habitats and communities as tidal currents and therefore coastal processes are affected. For example coastal structures such as linear coastal defences or erosion control measures (e.g. gabions) can affect local sediment suspension and deposition patterns and therefore have the potential to cause deterioration of qualifying habitats through smothering. Installation, replacement and maintenance of undersea cables have the potential to cause direct loss of qualifying habitats as well as local deterioration of associated habitats and communities.
<b>Discharges / Waste Disposal</b>	
Discharge of commercial effluent	Commercial effluent has the potential to cause deterioration of qualifying habitats and communities. This would be through the effects of pollution and / or nutrient enrichment, which may cause subsequent changes in community structure.
Discharge of sewage	Sewage effluent (whether treated or untreated) has the potential to cause deterioration of qualifying habitats and communities. This would be through the effects of pollution and / or nutrient enrichment, which may cause subsequent changes in community structure.
Marine litter	Marine litter, particularly discarded fishing nets, has the potential to cause deterioration of the qualifying habitats by becoming entangled in the reefs and caught within or around caves, which would impact sessile organisms and trap mobile species.
<b>Fishing</b>	
Hydraulic fishing	Hydraulic fishing has the potential to cause deterioration of the qualifying habitats and communities (particularly sedimentary habitats but also rocky reefs). This deterioration will be caused by sedimentary deposition onto adjacent reef habitats and communities.
Mobile gear: Dredging	Benthic dredging has the potential to cause deterioration of qualifying habitats and communities (particularly reefs) through direct contact with dredge gear, and sedimentation when dredging occurs close to the qualifying interests.
Mobile gear: Trawling	Benthic trawling has the potential to cause deterioration of qualifying habitats and communities (particularly reefs) through direct contact with trawling gear, and sedimentation when trawling occurs close to the qualifying interests.
Static gear: Creel / Pot fishing	The use of creels and / or pots in a localised area has the potential to cause deterioration of qualifying habitats and communities (particularly reefs, and sessile and encrusting species within caves) through direct contact, particularly during their deployment and / or recovery.
Static gear: Line fishing	Handlines and longlines have the potential to cause deterioration of qualifying interests through removal of target species and imbalance of associated species, communities and ecosystems. Lost gear may cause deterioration to qualifying interests such as fragile and erect reef species.
Static gear: Netting	The use of bottom-set gill and tangle nets has the potential to cause deterioration of qualifying habitats and communities, particularly fragile and erect reef species, mainly during deployment and / or recovery, but also through gear loss leading to problems of entanglement.
<b>Gathering / Harvesting</b>	
Bait gathering	Bait gathering on the foreshore has the potential to cause deterioration of qualifying habitats and communities through physical damage and disturbance of intertidal habitats and communities. This may cause deterioration of the qualifying interests by indirect impact through loss or imbalance of associated species, communities and ecosystems.

<b>Gathering / Harvesting contd.</b>	
Diver collection of shellfish	Collection of shellfish by diving has the potential to cause deterioration of the qualifying habitats and communities where the target species is a key component of that community, or where the collection method involves the use of invasive techniques (e.g. hydraulic equipment). Diving amongst reefs could cause deterioration and physical damage, in particular to erect and fragile species.
Harvesting of seaweed subtidally	Harvesting of seaweed subtidally has the potential to cause deterioration of qualifying habitats and communities by physical damage or through the loss of target species, which can cause imbalances in community and ecosystem structures.
Intertidal collection of shellfish	Collection of shellfish from intertidal areas has the potential to cause deterioration of reef habitat and communities through physical damage and disturbance to qualifying habitat (trampling and turning stones), and removal of the target species, which can cause an imbalance of communities and ecosystems.
Intertidal gathering of cast seaweed	The gathering of cast seaweed has the potential to cause deterioration of intertidal reef habitats and communities through physical damage and disturbance (trampling). Removal of the target species can cause an imbalance of communities and ecosystems within the intertidal area, which may affect reef qualifying interest.
<b>Marine Development</b>	
Aggregate extraction	Extraction of subtidal aggregate has the potential to cause deterioration of the qualifying seabed habitats and communities through direct loss and impact within the extraction site. Such operations could result in the redistribution and deposition of significant quantities of fine particulate sediment, which could alter the sediment characteristics of adjacent areas and their associated plant and animal communities.
Extraction of beach material	Removal of sand for agricultural practices has the potential to cause deterioration of reef qualifying interest through direct loss of habitat and associated species. Gaining mechanical access to sand and gravel has the potential to cause deterioration to adjacent reefs through direct loss of intertidal reef habitat, or sedimentation and local deterioration of any reef habitats and communities.
<b>Marine Traffic</b>	
Boat maintenance and antifoulant use	Most antifoulant products are designed to kill or discourage naturally occurring organisms and, as such, cause damage to the water environment if used carelessly. Under such circumstances use of antifoulant has the potential to cause deterioration of qualifying habitats and communities within this site.
Commercial vessels	The pumping of bilges, discharge of ballast, accidental grounding, or accidental oil (or other chemical) spillage from commercial vessels could occur within or close to this SAC. Such incidents have the potential to cause deterioration of qualifying habitats and communities through direct and / or indirect impacts. Local authority emergency plans and oil spill contingency plans should take into account specific qualifying interests and recognise the importance of marine SACs should such incidents occur.
<b>Recreational Activities</b>	
Angling	Sea angling has the potential to cause deterioration of qualifying interests by removing target species, which could subsequently cause changes in community structure.
Boat anchorages	Anchors and continual scouring by riser chains have the potential to cause deterioration of reef habitats and communities through direct contact with the qualifying interests.
Boat moorings	Moorings and continual scouring by riser chains have the potential to cause deterioration of reef habitats and communities through direct contact with the qualifying interests.

<b>Recreational Activities contd.</b>	
Charter / recreational vessels	Boats have the potential to cause deterioration of reef habitats and communities through repeated launching and recovery in specific areas, accidental grounding, and accidental fuel spillages.
Scuba diving	Recreational diving in specific areas has the potential to cause deterioration of qualifying habitats and communities, in particular to erect and fragile reef species.
<b>Scientific Research</b>	
Scientific Research	Research activities have the potential to cause deterioration of qualifying habitats and communities through direct alteration, removal or manipulation of this qualifying interests and its associated species.

## Annex B

### Non-statutory Advice given by SNH Site account

#### Site description

The Papa Stour SAC, on the west coast of mainland Shetland, has a rugged stretch of coastline containing a variety of reef habitats which are very representative of the region. The site has some of the most exposed reef communities in the UK and has excellent examples of sea caves and the rich and unusual communities these contain. The clear waters found around the exposed Papa Stour site result in *Laminaria* sp. forests extending to depths of almost 30 metres. Wave exposed gullies with rich surge-tolerant communities are found here whilst exposed reefs in the littoral zone are of considerable conservation interest, as they illustrate the elevation and widening of the zonation pattern. A combination of large waves and high humidity has raised the intertidal zone by several metres and extends the subtidal zone to considerable depths. They further exhibit a transition from classic exposed shore communities on the open coast to sheltered communities in the heads of the voes. The numerous and extensive caves, which have rich faunal turfs on their walls, are the best examples of their type in Shetland and are among the most extensive of such systems in the British Isles.

#### Qualifying marine interests

##### Annex I Habitats:

##### Reefs

The rocky coastline of Papa Stour is amongst the most exposed in Britain and both Papa Stour and the adjacent mainland are fringed entirely by sublittoral bedrock and boulder reefs that reach depths beyond 30 metres. Although reefs are widespread around the UK coast they are extremely variable in structure and the communities they support. Papa Stour SAC reefs represent a variety of exposures and shore types in a relatively small area and include northerly reef communities, which are of limited extent nationally.

The Papa Stour site includes both intertidal and subtidal reefs. The intertidal reefs range from near vertical cliffs to boulder shores, with typical plants and animals including various species of lichens, wrack and red algae, barnacles and mussels. *Fucus distichus*, an exposed shore furoid of limited northerly distribution in the British Isles, is found here. The shallow subtidal reefs throughout the site are dominated by kelp forests and parks, including most of the seabed across Papa Sound. These forests of *Laminaria hyperborea* and *Laminaria saccharina* have a luxuriant sub-flora, whilst deeper reefs are dominated by invertebrates highly characteristic of the Shetland marine environment such as the soft coral *Alcyonium digitatum*, the feather star *Antedon bifida* and the polychaete *Pomatoceros triqueter*. In deeper waters further offshore, the subtidal reefs consist of bedrock and cobbles. Typical species include the soft coral dead man's fingers, keel worms and algal crusts. The subarctic starfish *Hippasteria phrygiana*, which is rare in a national context, has been found on deeper parts of the subtidal reefs.

**Submerged or partially submerged sea caves**

The numerous and extensive caves are the best examples of their type in the Shetland Islands and are amongst the most extensive of such systems in the British Isles. Sea cave communities found in Papa Stour vary considerably reflecting the range of factors, structure, size, degree of submergence and exposure of the caves. The communities typically consist of encrusting species including various sponges, sea squirts, and anemones, and include shade-tolerant algae near the cave entrances. The well developed cave systems within Papa Stour SAC include areas in very exposed sea conditions as well as those in more sheltered gullies and tunnels.