SCOTTISH NATURAL HERITAGE

The Vadills
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 interest: 'Coastal lagoons'. 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.

The Vadills was designated by Scottish Ministers as a Special Area of Conservation (SAC) on 17th 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 Vadills 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 Vadills marine SAC are: The Vadills SSSI; The Vadills and Brindister Voe Marine Consultation 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 Vadills marine SAC, a site which consists entirely of a marine qualifying interest. 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 interest.

The Vadills marine SAC has been designated for the habitat 'Coastal lagoons', which is listed on Annex I of the Habitats Directive.

The Vadills SAC consists entirely of a marine qualifying interest.

The conservation objectives for The Vadills marine SAC are as follows:

To avoid deterioration of the qualifying habitat (**Coastal lagoons**) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for the qualifying interest.
To ensure for the qualifying habitat 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 Vadills 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 The Vadills 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

Fishing
Static gear: Creel / Pot fishing

Gathering / Harvesting
Intertidal collection of shellfish
Intertidal gathering of cast seaweed

Marine Development
Extraction of beach material

Recreational Activities
Angling

Scientific Research
Scientific research

Annex A

Non-statutory advice given by SNH
Sensitivity and Vulnerability of The Vadills SAC 'Coastal lagoons' 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.

Operations	Comments
Aquaculture	
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. *Caprella mutica* Japanese skeleton shrimp), which are already widely distributed in the UK. Invasive species have the potential to cause deterioration of the qualifying interest by altering community structure and quality. The associated environmental effects mentioned above are usually localised but the reduced water exchange within this lagoon may exacerbate these effects and cumulative impacts should be considered.
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. *Sargassum muticum* Wireweed), through importation or translocation of shellfish stocks. Invasive species have the potential to cause deterioration of the qualifying interest by altering community structure and quality. Increased development may lead to carrying capacity issues and affect other filter feeding organisms within the ecosystem. The associated environmental effects mentioned above are usually localised but the reduced water exchange within this lagoon may exacerbate these effects and cumulative impacts should be considered.
Coastal Development	
Agriculture	Diffuse run-off from agricultural practices has the potential to cause deterioration of qualifying interest through the smothering, altering water quality through discharge of organic and inorganic pollutants, and causing lethal / sublethal effects on marine plants and animals.

Coastal Development contd.		
Civil engineering		The construction and maintenance of structures, both within and adjacent to the sea have the potential to cause direct loss of qualifying 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. Onshore building construction also has the potential to cause deterioration of qualifying habitats through effects resulting from spoil disposal and drainage.
Discharges / Waste Disposal		
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.
Fishing		
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 through direct contact, particularly during their deployment and / or recovery.
Gathering / Harvesting		
Intertidal collection of shellfish		Collection of shellfish from intertidal areas has the potential to cause deterioration of qualifying habitat and communities through physical damage and disturbance to these habitats (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 qualifying 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 qualifying interest.
Marine Development		
Extraction of beach material		Extraction of beach material for agricultural and construction use near to the qualifying interest has the potential to cause deterioration through direct loss of habitat and associated species, and impact within the extraction site. Such operations could result in the redistribution and deposition of significant quantities of fine particulate sediment, smothering by re-suspended sediments, and changes in water circulation and sediment transport. Gaining mechanical access to sand and gravel has the potential to cause deterioration to habitats and communities through direct loss, or sedimentation and local deterioration.
Recreational Activities		
Angling		Sea angling has the potential to cause deterioration of qualifying interest by removing target species, which could subsequently cause changes in community structure.
Scientific Research		
Scientific Research		Research activities have the potential to cause deterioration of qualifying habitats and communities through direct alteration, removal or manipulation of such qualifying interests and their associated species.

Annex B

Non-statutory Advice given by SNH
Site account

Site description

The Vadills SAC is an example of an extremely sheltered, convoluted, shallow inlet, with shores of predominantly mixed substrata, grading from rock, boulders, cobbles and pebbles, to muddy gravels and muds. Because of its convoluted and shallow nature, and as a result of the relatively high freshwater input from surrounding burns, The Vadills has some brackish lagoonal areas where the water is impounded at different states of the tide, as well as several small areas of tidal narrows with increased tidal streams. It is an undisturbed and largely natural area.

Qualifying marine
Annex I Habitat: Coastal lagoons

Lagoons can be defined as areas of shallow, coastal salt water, wholly or partially separated from the sea by sandbanks, shingle or, less frequently, rocks. Five main sub-types of lagoon have been identified in the UK, on the basis of their physiography, as meeting the definition of the Annex I habitat type: isolated lagoons; percolation lagoons; silled lagoons; sluiced lagoons; and lagoonal inlets.

The Vadills SAC contains two types of lagoon habitats: lagoonal inlets and silled lagoons. Seawater enters lagoonal inlets on each tide and the salinity within this habitat type is usually high. These inlets may have a number of different basins, separated by sills, which exhibit a complete gradient from full salinity through brackish to fresh water. In silled lagoons water is retained at all states of the tide by a barrier of rock (the sill). Although seawater input is regular and frequent there is usually little tidal rise-and-fall. The salinity in these lagoons may be high, but may also vary seasonally.

The shores generally have a narrow zone of yellow and grey and black lichens, with narrow bands of channel wrack, *Pelvetia canaliculata,* and spiral wrack *Fucus spiralis* where rock or large boulders occur. The mid-shores are dominated by egg wrack *Ascophyllum nodosum* occurring on rock, boulders and cobbles, with varying amounts of bladder wrack *Fucus vesiculosus* and serrated wrack *Fucus serratus*, and, where the substratum is more muddy, sediment fauna such as lugworms. In the outer part of the lagoon system the lower shore and sublittoral fringe have serrated wrack and kelps (*Laminaria hyperborea* and *Halidrys siliquosa*), but within the inner basins the lower shores consist mainly of muddy gravel and muds with sparse fucoids (wracks) and thongweed *Chorda filum*.

Tideswept reefs occur in narrow channels where the tidal movement of water is increased. On the lower shore communities are dominated by fucoids. In the sublittoral, communities include the kelps *Laminaria hyperborea* and *Halidrys siliquosa* with associated colonies of sponges, sea squirts and sea

mats which thrive in fast-moving water. Good examples of tide swept communities are present between Mo Wick and Smisslings Wick, north and south of Marlee Loch and south of the islands close to the entrance to The Vadills system.

Sublittoral sediments within The Vadills SAC support beds of maerl *Lithothamnion glaciale* and the brittlestar *Ophiura affinis.* Beds of *Ophiura* are unusual in shallow waters such as are found within the site.

Beds of the free-living form of egg wrack, *Ascophyllum nodosum* ecad *mackaii* are found in areas of extreme shelter. This form of *Ascophyllum nodosum* is of at least national interest and in addition, The Vadills is the only known location for this free-living fucoid alga in Shetland. Beds of the seagrass *Ruppia sp.* can also be found in a few places within the inner basins.