SCOTTISH NATURAL HERITAGE

Lochs Duich, Long and Alsh Reefs 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: 'Reefs'. Annex B gives some indication as to the extent, distribution, structure, function and processes that affect the qualifying interest. It should be noted that this is indicative and not definitive, and as more site information is gathered these sections may be updated.

Lochs Duich, Long and Alsh Reefs were 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 Lochs Duich, Long and Alsh Reefs SAC to assist relevant and competent authorities, local interest groups and individuals in considering management (including any 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 Lochs Duich, Long and Alsh Reefs marine SAC are: Kinloch and Kyleakin Hills SAC; Ard Hill SSSI; Avernish SSSI; Kinloch and Kyleakin Hills (Monadh Chaol Acainn is Cheann Loch) SSSI. Loch Duich and Loch Long are both listed as Marine Consultation Areas in the Skye and Lochalsh Adopted Local Plan, 1999. 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 Lochs Duich, Long and Alsh Reefs 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 Lochs Duich, Long and Alsh Reefs marine SAC has been designated for the habitat 'Reefs', which is listed on Annex I of the Habitats Directive.

The Lochs Duich, Long and Alsh Reefs SAC consists entirely of a marine qualifying interest.

The conservation objectives for the Lochs Duich, Long and Alsh Reefs marine SAC are as follows:

To avoid deterioration of the qualifying habitat (**Reefs**) 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 Lochs Duich, Long and Alsh Reefs 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 Lochs Duich, Long and Alsh Reefs marine SAC.

Operations (in alphabetical order)

Aquaculture
Finfish farming
Shellfish farming

Coastal Development
Civil engineering
Forestry operations

Discharges / Waste Disposal
Discharge of commercial effluent
Discharge of sewage

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

Gathering / Harvesting
Bait gathering
Diver collection of shellfish
Intertidal collection of seaweed
Intertidal collection of shellfish

Marine Development
Aggregate extraction
Extraction of beach material

Marine Traffic
Boat maintenance and antifoulant use
Commercial vessels

Recreational Activities
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 Lochs Duich, Long and Alsh Reefs SAC 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 reef 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 sea lochs may exacerbate these effects and cumulative impacts should be considered.
Shellfish farming	This activity has the potential to cause deterioration of the reef 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. The associated environmental effects mentioned above are usually localised but the reduced water exchange within sea lochs may exacerbate these effects and cumulative impacts should be considered.

Coastal Development		
Civil engineering		The construction, presence and maintenance of structures, both within and adjacent to the SAC have the potential to cause direct loss of reef habitat and deterioration of adjacent reef habitats and communities as tidal currents and therefore coastal processes are affected. For example tidal renewable developments, 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 reef habitat through smothering. Installation, replacement and maintenance of undersea cables have the potential to cause direct loss of reef habitat as well as local deterioration of reef habitats and communities.
Forestry operations		Increased concentrations of dissolved nutrients from fertiliser run-off has the potential to cause deterioration of reef habitats and communities. Large-scale run-off of terrestrial sediment, from forestry operations, has the potential to cause deterioration of reefs through smothering. Loading operations in the intertidal and subtidal areas have the potential to cause deterioration of reef habitats and communities through physical disturbance and sedimentation.
Discharges / Waste Disposal		
Discharge of commercial effluent		Commercial effluent has the potential to cause deterioration of reef 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 reef habitats and communities. This would be through the effects of pollution and / or nutrient enrichment, which may cause subsequent changes in community structure.
Fishing		
Hydraulic fishing		Hydraulic fishing has the potential to cause deterioration of the rocky reef and biogenic reef (reef created by living organisms) habitats and communities through the large volumes of sediment disturbed by this method smothering the qualifying interest.
Mobile gear: Dredging		Benthic dredging has the potential to cause deterioration of reef habitats and communities through direct contact with dredge gear, and sedimentation when dredging occurs close to the qualifying interest.
Mobile gear: Trawling		Benthic trawling has the potential to cause deterioration of reef habitats and communities through direct contact with trawling gear, and sedimentation when trawling occurs close to the qualifying interest.
Static gear: Creel / Pot fishing		The use of creels and / or pots in a localised area has the potential to cause deterioration of qualifying reef habitats and communities through direct contact, particularly during their deployment and / or recovery.
Static gear: Netting		The use of bottom-set nets has the potential to cause deterioration of reef habitats and communities, particularly fragile and erect species, mainly during deployment and / or recovery.
Gathering / Harvesting		
Bait gathering		Bait gathering on the foreshore has the potential to cause deterioration of reef habitats and communities through physical damage and disturbance of intertidal habitats and communities. This may cause deterioration of the qualifying interest by indirect impact through loss or imbalance of associated species, communities and ecosystems.

Gathering / Harvesting contd.		
Diver collection of shellfish		Collection of shellfish by diving has the potential to cause deterioration of the reef habitats and communities where the target species is a key component of that community e.g. biogenic reefs of the horse mussel (*Modiolus modiolus*)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.
Intertidal collection of seaweed		The collection of 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.
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.
Marine Development		
Aggregate extraction		Extraction of subtidal sand and gravel has the potential to cause deterioration of qualifying reef 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 reef areas and their associated plant and animal communities.
Extraction of beach material		Extraction of beach material for agricultural and construction use has the potential to cause deterioration of reef qualifying interest 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 adjacent reefs through direct loss of intertidal reef habitat, or sedimentation and local deterioration of any reef habitats and communities.
Marine Traffic		
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 reef habitats and communities within this site.
Commercial vessels		The use of anchors, 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 reef habitats and communities or destruction of fragile biogenic horse mussel reefs through direct and / or indirect impacts e.g. mechanical damage, toxic contamination of reef species and associated communities. Other potential causes of deterioration to reefs include discharge of ballast and pumping of bilges. Local authority emergency plans and oil spill contingency plans should take into account specific qualifying interest and recognise the importance of marine SACs should such incidents occur.
Recreational Activities		
Boat anchorages		Anchors and continual scouring by riser chains have the potential to cause deterioration of rocky reef habitats and communities and destruction of fragile biogenic reefs (such as horse mussel beds) through direct contact with the qualifying interest.

Recreational Activities contd.		
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 interest.
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 reef habitats and communities, in particular to erect and fragile species.
Scientific Research		
Scientific Research		Research activities have the potential to cause deterioration of reef habitats and communities through direct alteration, removal or manipulation of this qualifying interest and its associated species.

Annex B

Non-statutory Advice given by SNH
Site account

Site description

The reefs of Lochs Duich, Long and Alsh and the tide-swept sound of Kyle Rhea are part of an integral fjordic system of high habitat diversity and one of the very best examples of the 40 such systems in Scotland. The site includes extensive representative examples of reef communities that are characteristic of Scottish fjordic lochs, in addition to several which are rare elsewhere in Scotland. The reefs are also some of the finest examples of their kind in the EU and as such they are of international importance.

Qualifying marine interest

Annex I Habitat: Reefs

Although predominantly sheltered from wave action, conditions in the system range from fully marine, moderately exposed areas at the entrance to Loch Alsh to reduced salinities and very sheltered water at the head of Loch Long, the second most brackish of the large Scottish sealochs. Exceptionally strong tidal streams flow through Kyle Rhea, and the system reaches a maximum depth of 115 metres behind the outer sill in Loch Duich. Bedrock and boulders throughout the site provide extensive, very sheltered littoral and sublittoral reefs which support several communities representative of fjordic lochs. These include a transition from brackish-water to fully marine rocky shore communities and, in the sublittoral, a community characterised by brachiopods and the anemone *Protanthea simplex* on some of the deepest sublittoral cliffs in Scotland. Within the British Isles, this latter community is confined to the Scottish fjords. In addition to these are biogenic reefs of the horse mussel *Modiolus modiolus*, and habitats with communities which are rare or unknown elsewhere in Scotland or the EU. Noteworthy examples are areas of sheltered sublittoral rock with unusual assemblages of encrusting sponges and solitary sea squirts, and, on shallower reefs, tide-swept kelp forests influenced by brackish-water. Bedrock in Kyle Rhea supports rich communities characteristic of such localised areas of very strong water flow and is typically dominated by the hydroids *Tubularia indivisa* and *Sertularia argentea*, the barnacle *Balanus crenatus*, anemones, sponges and ascidians *Ascidia virginea, Boltenia echinata* and *Pyura squamulosa*. Tide-swept reefs in Loch Alsh also support unusually dense beds of the crevice brittle star *Ophiopholis aculeata*. This species is normally confined to the shelter of crevices and boulders and therefore brittle star beds dominated by this species are an extremely rare feature in the UK. In very sheltered areas the free-living species *Ascophyllum nodosum* ecad. *mackaii*, a variant from of knotted wrack, can be found.