Bibliography


Scottish Natural Heritage (1999) Firth of Lorn marine SAC Site Description.

Scottish Natural Heritage (2001) Loch Creran Site Description.

PHOTOGRAPHIC CREDITS

**David Ainsley**

- Northern Sea Fan and Sea Fan Anemone
- Celtic Feather Star
- Diver, kelp and plumose anemones
- Sea slug
- Hydroid
- Yellow boring sponge
- Red cushion star
- Diver and dead men’s fingers

**Scot An Sgeulaiche**

- Creel Boat Balvicar
- Firth of Lorn View from Easdale
- Blackmill Bay Pier Luing
- Yacht Cuan Sound

**Argyll & Bute Council**

- MV Astor Oban Bay
- MV Astor Oban Bay
- Beach Litter Sandwood Bay
- Boat Maintenance Cullipool
- Boat Maintenance Loch Fyne
- Boats on Moorings South Shian Bay
- Caledonian MacBrayne Ferry – Oban Bay
- Cattle on Luing
- Cattle on Luing
- Cattle on Shore

Argyll & Bute Council
Loch Creran in Winter

**Beki Korb**

Marine Resource Centre Ltd.

**Neil MacQueen**

- Lifting Creels
  - Firth of Lorn
- Prawn Creel
  - Firth of Lorn
- Emptying the Catch

**Andrew McKenna**

- West Highland Week
  - Firth of Lorn
  - www.wingman.co.uk

**Paul Naylor**

The following images are reproduced from the book ‘Great British Marine Animals’ by Paul Naylor. Further information on the book can be found at www.marinephoto.co.uk

- Common Lobster
- Jewel Anemone
- Jewel Anemone
- King Scallop
- Northern Starfish
- Oaten Pipes Hydroid
- Prawn
- Serpulid Reef
- Spiny Squat Lobster
- Starfish and Sea Urchin
- Celtic Feather Star
- Velvet Swimming Crab
- Mussel Bed
  - Loch Creran
Scottish Natural Heritage - Brian Eardley

MV Lysfoss
Sound of Mull

Scottish Natural Heritage - Ben James

Anemones and Bloody Henry Starfish

Site Monitoring
Firth of Lorn

Site Monitoring
Firth of Lorn

Long-spined Sea Scorpion

Sponge with Bloody Henry Starfish

Scottish Natural Heritage - Ross Lilley

Black Face Sheep

Highland Cow

Scottish Natural Heritage - Jon Moore

Site Monitoring
Firth of Lorn

Scottish Natural Heritage - Graham Saunders

Horned Wrack

Bladder Wrack

Knotted Wrack

Blue-rayed Limpets & Banded Chink Shells

Sea Slug

Fucus sp.
Photographic Credits

Scottish Natural Heritage - Sue Scott
- Crawfish
- Serpulid Worm
- Horse Mussels

Scottish Sea Farms
- Sunrise
- Loch Creran
- Wellboats
- Scottish Sea Farms
- Pumpashore Facility
- Scottish Sea Farms

Sea Life Surveys
- Harbour Porpoise

Francis Ward
- Whelk Pots on Beach
- Whelk Pot
- Whelk Pot

Debbie White
- Egg Wrack and Saw
- Toothed Wrack
**Annex I Habitats:** A natural habitat listed in Annex I of the Habitats Directive for which Special Areas of Conservation can be selected.

**Assimilative Capacity:** The ability of a body of water to cleanse itself; its capacity to receive wastewaters or toxic materials without deleterious effects and without damage to aquatic life or humans who consume the water.

**Baseline:** A defined condition or range of conditions for a site/qualifying interest against which change in the condition of the site/qualifying interest can be monitored.

**Benthic:** A description for animals, plants and habitats associated with the seabed.

**Biodiversity:** The total variety of life on earth. All genes, species, ecosystems and the ecological processes of which they are a part.

**Biogenic reef:** Solid, massive structures which are created by accumulations of organisms, usually rising from the seabed, or at least clearly forming a substantial, discreet community or habitat which is very different from the surrounding seabed. The structure of the reef may be composed almost entirely of the reef building organism and its tubes or shells, or it may to some degree be composed of sediments, stones and shells bound together by the organisms. Only a few invertebrate species are able to develop biogenic reefs e.g. *Sabellaria spinulosa*, *Sabellaria alveolata*, *Modiolus modiolus*, *Mytilus edulis* and *Serpula vermicularis*. These are usually restricted in distribution and extent.

**Biota:** The combined flora (plants) and fauna (animals) of a region.

**Biotopes:** Marine animal and plant communities together with the physical habitat with which they are characteristically associated.

**Community:** A group of organisms occurring in a particular environment, interacting with each other and with the environment and identifiable, by means of ecological survey, as distinct from other groups.

**Competent Authority:** Any Minister, government department, public or statutory undertaker, public body or person holding a public office that exercises statutory powers.

**Conservation Interest (Qualifying Interest):** A habitat or species for which a site qualifies as an SPA or SAC.

**Conservation Objectives:** A set of specific aims written by SNH as required by Regulation 33 of the Habitat Regulations to ensure protection of the qualifying interests of the site.

**Demersal:** Species of fish that live on, or in close proximity to the seabed e.g. flatfish, cod, haddock. The term also applies to fishing gear that is worked on the seabed.

**Environmental Management System:** The part of an overall management system which includes structure, planning activities, responsibilities, practices, procurements, processes and resources for developing, implementing, achieving, reviewing and maintaining an environmental policy.
**European Marine Site:** Special Area of Conservation (SAC) that includes sea and/or seashore.

**Eutrophication:** Excessive mineral or organic nutrient enrichment that promotes a proliferation of plant life, especially algae, which reduces the dissolved oxygen content with the undesirable effect of altering the structure of communities, by causing the formation of algal mats or blooms, sometimes with disastrous impacts.

**Faecal Coliform:** Aerobic bacteria found in the colon or faeces, often used as indicators of faecal contamination of water supplies.

**Favourable Conservation Status:** A range of conditions for a natural habitat or species at which the sum of the influences acting upon that habitat or species are not adversely affecting its distribution, abundance, structure or function throughout the EU in the long term. The condition in which the habitat or species is capable of sustaining itself on a long-term basis.

**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 EU.

**Habitat Regulations:** The abbreviated term for the Conservation (Natural Habitats &c.) Regulations 1994. This legislation transposes the requirements of the Habitats and Birds Directives into domestic legislation.

**Intertidal:** The foreshore or area of seabed between high water mark and low water mark which is exposed each day as the tide rises and falls. Also called the littoral zone.

**Littoral:** As intertidal.

**Monitoring:** Surveillance undertaken to ensure that formulated standards are being maintained. The term is also applied to compliance monitoring against accepted standards to ensure that agreed or required measures are being followed.

**Natura 2000:** The European network of protected sites (SACs and SPAs) established under the Habitats and Birds Directives.

**Non-native Species:** A species that has been introduced by human activities (intentionally or otherwise) to an area where it has not occurred in historical times (taken as being 500 years before present), and which is separate from and lies outside the area where natural range extension could be expected. The species has become established in the wild and has self-sustaining populations.

**Plans and Projects:** Any proposed development within or adjacent to the SAC.

**Pseudofaeces:** Faecal-like pellets of material taken out of suspension in the water by filter feeders but subsequently rejected (i.e. particles collected but not ingested).

**Qualifying Interest (Conservation Interest):** A habitat or species for which a site qualifies as an SPA or SAC.
**Reef:** Reefs are rocky marine habitats or biological concretions that rise from the seabed. They are generally subtidal but may extend as an unbroken transition to the intertidal zone, where they are exposed to the air at low tide. Two main types of reef can be recognised; those where the structure is created by the animals themselves (biogenic reefs) and those where animal and plant communities grow on raised or protruding rock.

**Relevant Authority:** The specific competent authority with powers or functions which have, or could have, an impact on the marine environment within, or adjacent to, an SAC.

**Sensitivity:** The degree of tolerance of a habitat, community or individual (or individual colony) of a species to damage or death from an external factor.

**Sessile:** An animal or plant that is permanently attached or fixed and therefore unable to move freely.

**Sites of Community Importance (SCI):** candidate Special Areas of Conservation that have been submitted by Member States to Europe and adopted as SCIs in accordance with the procedures in Article 4 of the Habitats Directive. Once they are adopted, Member States can then proceed to designate them as Special Areas of Conservation.

**Soakaway:** A simple way of dispersing sewage effluent or surface water into the ground via an infiltration system in situations where discharges to watercourses are not acceptable.

**Special Area of Conservation (SAC):** A site of community importance designated by the Member States of the European Community, where the necessary conservation measures are applied for the maintenance or restoration, at a favourable conservation status, of the habitats and/or species for which the site is designated.

**Sublittoral:** The zone of the shore below low water exposed to air only at its upper limit by the lowest spring tides.

**Sustainable Development:** The use of resources to meet the needs of the present without compromising the ability of future generations to meet their own needs.
APPENDIX I
Management Forum Structure and Members List

APPENDIX IIA
Scottish Natural Heritage Conservation Advice - Firth of Lorn

APPENDIX IIB
Scottish Natural Heritage Conservation Advice - Loch Creran

APPENDIX III
Appropriate Assessment Procedure

APPENDIX IV
Loch Creran Zoning Plan

APPENDIX V
Dive Code of Conduct

APPENDIX VI
Competent and Relevant Authority Responsibilities
Management Forum Structure and Members List

The Argyll Marine SAC Management Forum consists of four working groups: Recreation and Tourism, Fishing, Aquaculture and Business. The role of each working group is to assess sector specific activities that have the potential to impact the conservation interests of the marine SAC and decide an appropriate management regime for each activity so that site use can be maintained in a sustainable manner.

The working groups are comprised of individuals or organisations that have interests in a particular sector or have cross sector issues they wish to discuss. For example, if a dive tourism operator (part of the Recreation and Tourism working group) feels that the impact of aquaculture effluent discharges is a problem and needs to be reassessed, they would attend an Aquaculture working group meeting to raise and discuss these concerns.

Forum Members

Scottish Natural Heritage Conservation Advice - Firth of Lorn

Statutory advice given by SNH as required by The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended by The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004).

Conservation Objectives

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 Firth of Lorn marine SAC has been designated for the habitat ‘Reefs’, which is listed on Annex I of the Habitats Directive.

The Firth of Lorn SAC consists entirely of a marine qualifying interest.

The conservation objectives for the Firth of Lorn 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
Operations to be considered by relevant authorities

The following advice as to operations to be considered by relevant authorities is provided by SNH with respect to the Firth of Lorn 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 activities that may cause deterioration of the marine natural habitats and marine communities. These include operations that may not be occurring at present within the Firth of Lorn marine SAC.

Aquaculture
- Finfish farming/culture
- Shellfish farming/culture

Coastal Development
- Agriculture
- 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
- Harvesting of seaweed subtidally
- Intertidal gathering of cast seaweed
- Intertidal collection of shellfish

Marine Traffic
- Boat maintenance and antifoulant use
- Commercial vessels

Recreational Activities
- Boat anchorages
- Boat moorings
- Charter/Recreational vessels
- Scuba diving

Scientific Research
- Scientific research
Non-statutory advice given by Scottish Natural Heritage

Sensitivity and Vulnerability of the Firth of Lorn SAC 'Reefs' to current activities

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.

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQUACULTURE</td>
<td></td>
</tr>
<tr>
<td>Finfish farming/culture</td>
<td>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. <em>Caprella mutica</em>), 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.</td>
</tr>
<tr>
<td>Shellfish farming/culture</td>
<td>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. <em>Sargassum muticum</em>), 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.</td>
</tr>
<tr>
<td>COASTAL DEVELOPMENT</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>Diffuse run-off from agricultural practices has the potential to cause deterioration of reef habitats and communities through the smothering of qualifying interests, and/or altering water quality through discharge of organic and inorganic pollutants.</td>
</tr>
</tbody>
</table>


| Civil engineering | The construction and maintenance of structures, both within and adjacent to the sea 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 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. |

**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 reef 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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bait gathering</td>
<td>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.</td>
</tr>
<tr>
<td>Diver collection of shellfish</td>
<td>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, 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.</td>
</tr>
<tr>
<td>Harvesting of seaweed subtidally</td>
<td>Harvesting of seaweed subtidally has the potential to cause deterioration of reef habitats and communities by physical damage or through the loss of target species, which can cause imbalances in community and ecosystem structures.</td>
</tr>
<tr>
<td>Intertidal gathering of cast seaweed</td>
<td>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.</td>
</tr>
<tr>
<td>Intertidal collection of shellfish</td>
<td>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.</td>
</tr>
</tbody>
</table>
### MARINE TRAFFIC

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
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<tbody>
<tr>
<td>Boat maintenance and antifoulant use</td>
<td>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.</td>
</tr>
<tr>
<td>Commercial vessels</td>
<td>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 reef 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.</td>
</tr>
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### RECREATIONAL ACTIVITIES

<table>
<thead>
<tr>
<th>Activity</th>
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<tbody>
<tr>
<td>Boat anchorages</td>
<td>Anchors and continual scouring by riser chains have the potential to cause deterioration of reef habitats and communities through direct contact with the qualifying interest.</td>
</tr>
<tr>
<td>Boat moorings</td>
<td>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.</td>
</tr>
<tr>
<td>Charter/Recreational vessels</td>
<td>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.</td>
</tr>
<tr>
<td>Scuba diving</td>
<td>Recreational diving in specific areas has the potential to cause deterioration of reef habitats and communities, in particular to erect and fragile species.</td>
</tr>
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</table>

### SCIENTIFIC RESEARCH

<table>
<thead>
<tr>
<th>Activity</th>
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<tbody>
<tr>
<td>Scientific research</td>
<td>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.</td>
</tr>
</tbody>
</table>
Scottish Natural Heritage Conservation Advice - Loch Creran

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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 interests. 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 Loch Creran marine SAC has been designated for the habitat 'Reefs', which is listed on Annex I of the Habitats Directive.

The Loch Creran SAC consists entirely of a marine qualifying interest.

The conservation objectives for the Loch Creran marine SAC are as follows:

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- Extent of the habitat on site
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Aquaculture
- Finfish farming/culture
- Shellfish farming/culture

Coastal Development
- Agriculture
- 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
- Diver collection of shellfish
- Intertidal collection of shellfish

Marine Traffic
- Boat maintenance and antifoulant use
- Commercial vessels

Recreational Activities
- Boat anchorages
- Boat moorings
- Charter/Recreational vessels
- Scuba diving

Scientific Research
- Scientific research
Non-statutory advice given by Scottish Natural Heritage

Sensitivity and Vulnerability of Loch Creran SAC 'Reefs' to current activities

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.

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<td><strong>AQUACULTURE</strong></td>
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<tr>
<td>Finfish farming/culture</td>
<td>Finfish farming has the potential to cause deterioration of reef habitats and communities through changes in water quality, smothering from waste material, physical disturbance (in the case of rocky reefs), and physical damage (in the case of more fragile biogenic reefs) from mooring systems. There is also potential for accidental introduction of new non-native species and increasing the spread of existing non-native plants and animals (e.g. <em>Caprella mutica</em>), 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 Loch Creran may exacerbate these effects and cumulative impacts should be considered.</td>
</tr>
<tr>
<td>Shellfish farming/culture</td>
<td>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. <em>Sargassum muticum</em>) through importation and translocation of shellfish stocks. Invasive species have the potential to cause deterioration of the qualifying interest by altering community structure and quality.</td>
</tr>
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<td>Activity</td>
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</tr>
<tr>
<td>Shellfish farming/culture (cont.)</td>
<td>The associated environmental effects mentioned above are usually localised but the reduced water exchange within Loch Creran may exacerbate these effects and cumulative impacts should be considered.</td>
</tr>
<tr>
<td><strong>COASTAL DEVELOPMENT</strong></td>
<td></td>
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<tr>
<td>Agriculture</td>
<td>Diffuse run-off from agricultural practices has the potential to cause deterioration of reef habitats and communities through the smothering of qualifying interests, and/or altering water quality through discharge of organic and inorganic pollutants.</td>
</tr>
<tr>
<td>Civil engineering</td>
<td>The construction and maintenance of structures, both within and adjacent to the sea 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 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.</td>
</tr>
<tr>
<td>Forestry operations</td>
<td>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.</td>
</tr>
<tr>
<td><strong>DISCHARGES/WASTE DISPOSAL</strong></td>
<td></td>
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<tr>
<td>Discharge of commercial effluent</td>
<td>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.</td>
</tr>
<tr>
<td>Discharge of sewage</td>
<td>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.</td>
</tr>
<tr>
<td><strong>FISHING</strong></td>
<td></td>
</tr>
<tr>
<td>Hydraulic fishing</td>
<td>Hydraulic fishing has the potential to cause deterioration of rocky reef and destruction of biogenic reef (reef created by living organisms) habitats and communities through the large volumes of sediment disturbed by this method smothering the qualifying interest and through direct physical impact.</td>
</tr>
</tbody>
</table>
### Mobile gear: Dredging
Benthic dredging has the potential to cause deterioration of rocky reef and destruction of biogenic 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 rocky reef and destruction of biogenic 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 has the potential to cause deterioration of rocky reef and destruction of biogenic reef habitats and communities through direct contact with creels/pots, particularly during their deployment and/or recovery.

### Static gear: Netting
The use of bottom-set nets has the potential to cause deterioration of rocky reefs and destruction of biogenic reef habitats and communities, particularly during deployment and/or recovery.

### GATHERING/HARVESTING

<table>
<thead>
<tr>
<th>Diver collection of shellfish</th>
</tr>
</thead>
<tbody>
<tr>
<td>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, or where the collection method involves the use of invasive techniques (e.g. hydraulic equipment or salt solutions). Diving amongst fragile biogenic reefs could cause deterioration and physical damage.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intertidal collection of shellfish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection of shellfish from intertidal areas has the potential to cause deterioration of reef habitats 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.</td>
</tr>
</tbody>
</table>

### MARINE TRAFFIC

<table>
<thead>
<tr>
<th>Boat maintenance and antifoulant use</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>
### Appendix IIB - SNH Conservation Advice – Loch Creran

#### 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 reef 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.

#### RECREATIONAL ACTIVITIES

<table>
<thead>
<tr>
<th>Activity</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat anchorages</td>
<td>Anchors and continual scouring by riser chains have the potential to cause deterioration of rocky reefs and destruction of fragile serpulid reefs and horse mussel beds through direct contact with the qualifying interest.</td>
</tr>
<tr>
<td>Boat moorings</td>
<td>Moorings and continual scouring by riser chains have the potential to cause deterioration of rocky reefs and destruction of fragile serpulid reefs and horse mussel beds through direct contact with the qualifying interest.</td>
</tr>
<tr>
<td>Charter/Recreational vessels</td>
<td>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 spills.</td>
</tr>
<tr>
<td>Scuba diving</td>
<td>Recreational diving in a specific area has the potential to cause deterioration of reef habitats and communities, particularly fragile erect biogenic reefs such as those of <em>Serpula vermicularis</em>.</td>
</tr>
</tbody>
</table>

#### SCIENTIFIC RESEARCH

<table>
<thead>
<tr>
<th>Activity</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific research</td>
<td>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.</td>
</tr>
</tbody>
</table>
### Appropriate Assessment Procedure

The following is adapted from Regulations 48 and 49 of The Conservation (Natural Habitats, &c.) Regulations 1994.

The Regulations require that, where an authority concludes that a development proposal unconnected with the nature conservation management of a Natura 2000 site is likely to have a significant effect on that site, it must undertake an appropriate assessment of the implications for the qualifying interests for which the area has been designated before deciding to grant any consent, permission or other authorisation for the proposed plan or project.

A person applying for any such consent, permission or other authorisation shall provide such information as the relevant or competent authority may reasonably require for the purposes of the appropriate assessment.

The relevant and competent authority involved should also consult the nature conservation body (Scottish Natural Heritage) and have regard to any representations made by that body. They shall also, if they consider it appropriate, take the opinion of the general public.

In the light of the conclusions of the appropriate assessment, the relevant or competent authority shall only agree to the plan or project if it does not adversely affect the integrity of the European site.

However, a plan or project could still be carried out after an assessment has shown negative implications within the site if there are no alternatives and there are imperative reasons of overriding public interest - including reasons of a social and economic nature. For priority natural habitats and priority species, plans or projects with negative implications for the site will only be permitted if the imperative reasons of public interest are based on issues of human health or public safety.
Appendix IV - Loch Creran Zoning Plan

Fishing
Mobile gear excluded in upper basin points beyond AJ - AK. Static gear only allowed in permitted creeling area.

Conservation Interests
- Serpulid Reef
- Horse Mussel beds
- Bedrock Reefs

Fishing Exclusion Zones
- Zone 1 - points A to D
- Zone 2 - points E to H
- Zone 3 - points I to AI

Inner boundary of Zone 3 at MLWS.

Permitted Creeling Area
- within points AL - AP

Shellfish diving is permitted throughout the loch, but removal of horse mussels is prohibited.
Co-ordinates for fishing zones

<table>
<thead>
<tr>
<th>POINTS</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>56 32.392</td>
<td>-5 24.497</td>
</tr>
<tr>
<td>B</td>
<td>56 32.437</td>
<td>-5 24.035</td>
</tr>
<tr>
<td>C</td>
<td>56 32.346</td>
<td>-5 24.002</td>
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<tr>
<td>D</td>
<td>56 32.308</td>
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<tr>
<td>E</td>
<td>56 32.241</td>
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<tr>
<td>F</td>
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<td>G</td>
<td>56 32.009</td>
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<tr>
<td>H</td>
<td>56 31.992</td>
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<tr>
<td>I</td>
<td>56 31.429</td>
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<tr>
<td>J</td>
<td>56 31.377</td>
<td>-5 22.97</td>
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<td>K</td>
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<td>Z</td>
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<td>AA</td>
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<tr>
<td>AB</td>
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<tr>
<td>AF</td>
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<td>56 31.201</td>
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<tr>
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<td>56 31.504</td>
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<tr>
<td>AJ</td>
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<td>AL</td>
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<tr>
<td>AN</td>
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<td>AQ</td>
<td>56 32.302</td>
<td>-5 25.060</td>
</tr>
<tr>
<td>AR</td>
<td>56 32.083</td>
<td>-5 25.043</td>
</tr>
</tbody>
</table>
Mariners should only use marked anchorages.

- Glaceriska Bay
- South Shian Bay (West of Sgeir Cailllich)
- Off the Creagan Inn
- Upper Basin - Head of Loch

**Conservation Interests**
- Serpulid Reef
- Horse Mussel beds
- Bedrock Reefs

Strategy of emergency only anchoring in operation within areas of serpulid reef and horse mussel beds.
CODE OF CONDUCT

Respect marine life
Look but don’t touch marine plants and animals.
Do not collect ‘souvenirs’.
Avoid driving boats through rafts of seabirds and drive slowly near seal haul-outs and nesting shoreline bird colonies.

Dive conscientiously
Maintain neutral buoyancy, practice good spatial awareness, watch your fins, and avoid gripping objects for support or to prevent drift. This is particularly important around areas of fragile serpulid reef in Loch Creran.
Diving instructors/dive guides must consider the proficiency of divers under their supervision. Novice divers in Loch Creran could potentially do great damage to the fragile reefs.

Watch your gear
Dangling gauges and equipment should be secured to prevent damage to the protected habitats.

Anchor in the right place
Don’t drop your anchor on the serpulid reefs or horse mussels beds in Loch Creran. To avoid the serpulids, only anchor in depths <6m or >15m.

Consider local residents
When launching or hauling out dive boats early in the morning and late at night, keep noise to a minimum. Do not let parked vehicles or boat trailers obstruct any boat slips. Please take account of the proximity of residences or businesses when operating compressors.

Remember fishermen
The marine SACs are a working environment. Do not touch or interfere with gear set by fishermen.

Don’t Litter
Please collect and retain all your rubbish for disposal at home or in a properly designated litter disposal facility.

Report any damage
If you see anyone intentionally damaging the protected habitats of the marine SACs, then please report it to Scottish Natural Heritage (01463 567218) or Argyll and Bute Council (01631 565745).

For further information see www.argyllmarinesac.org

Text: Marine and Coastal Development Unit - Argyll and Bute Council
Photography: Argyll & Bute Council, Ben James (SNH), David Ainsley, Hugh Brown (SAMs), Paul Naylor (from the book Great British Marine Animals) and Sue Scott
Design: DeeVA
Printed on environmentally friendly paper by CGL Oban

Funding support from:

This Code of Conduct is endorsed by:

Recreational Diving in the Firth of Lorn and Loch Creran Marine Special Areas of Conservation
Appendix V - Dive Code of Conduct

Firth of Lorn

The outstanding rocky reef habitats of the Firth of Lorn are the reason for its designation as a marine SAC. The rocky reefs support a phenomenal marine biodiversity with associated communities and species that are amongst the most diverse in both the UK and Europe.

It is the varied, tide-swept nature of the site, from exposed sounds to wave sheltered bays, that contributes to the high biodiversity. However, it is in the moderately exposed areas where the greatest variety of fauna and flora are found.

With such rich underwater scenery waiting to be experienced, it is understandable that this area provides some of the best sports diving in UK waters.

Protected Sites

The Firth of Lorn and Loch Creran Marine Special Areas of Conservation (SACs) are protected under the European Habitats Directive (Council Directive 92/43/EEC) on the conservation of natural habitats and of wild fauna and flora because they contain habitats that are rare, vulnerable or endangered in the European Community.

Site Management

A group of local and statutory stakeholders called the Argyll Marine SAC Management Forum has developed management plans to sustain the conservation interests of the SACs, allowing for the continued diversity of human uses in the area.

Recreational scuba diving, along with many other marine related activities, has the potential to impact the marine environment and it is important that this Code of Conduct is followed when diving within these sites.

Loch Creran

The Loch Creran marine SAC has been designated for biogenic reefs (reefs produced by living organisms) constructed by the serpulid tubeworm Serpula vermicularis and the horse mussel Modiolus modiolus. These fragile and slow-growing reef structures provide a unique and complex habitat for an exceptional variety of species. Over 2,500 animals have been counted on a single serpulid reef comprising over 70 different species. The site also contains some small but significant areas of bedrock reef.

Loch Creran is currently the most important site in Europe for serpulid reefs. They are only known to occur in two other locations: the Bay of Naples, Italy and Galway, Ireland.

Serpulid reefs are found within depths of 1-1.5 m below chart datum and form a narrow band around the periphery of the loch. The best developed reefs, however, occur in depths of 6-10 m. Individual reefs in Loch Creran can reach up to 75 cm in height and 1 m in diameter. However, adjacent reefs may combine to form structures up to 3 m in diameter.

Location of the Firth of Lorn Marine Special Area of Conservation

Location of the Loch Creran Marine Special Area of Conservation
<table>
<thead>
<tr>
<th>Competent/Relevant Authority</th>
<th>Fishing</th>
<th>Gathering and Harvesting from Foreshore</th>
<th>Aquaculture</th>
<th>Marine Recreation</th>
<th>Effluent Discharges and Marine Dumping</th>
<th>Shipping/Boating</th>
<th>Coastal/Marine Development</th>
<th>Land Use: Forestry and Agriculture</th>
<th>Scientific Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Argyll &amp; Bute Council</strong></td>
<td>Responsible for food safety aspects of shellfish fisheries. Shellfish toxin sample collection.</td>
<td>Responsible for food safety aspects of shellfish collection.</td>
<td>Responsible for food safety aspects of shellfish aquaculture industry. Issue shellfish licences with Food Standards Agency. Collect samples to monitor for toxins and water classification. Issue shellfish movement documents and locally enforce Temporary Prohibition notice system.</td>
<td>Responsible for public health and safety in relation to leisure activities in marine environment. Licence businesses e.g. charter boats or boat rental with capacity for 12 passengers or less.</td>
<td>Responsible for planning permissions on developments down to MLWS. Consulted on Water Environment (Controlled Activities) Regulations 2005 (CAR) authorisations. Statutory duty for littering/dumping on public ground. Removal of fly-tipping waste and prosecution of those responsible.</td>
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<tr>
<td><strong>Argyll Fisheries Trust</strong></td>
<td>Wild salmon &amp; sea trout fisheries management.</td>
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</table>

*Statutory consultee for The Crown Estate.*

**Fishing Gathering and Harvesting from Foreshore Aquaculture Marine Recreation Effluent Discharges and Marine Dumping Shipping/Boating Coastal/Marine Development Land Use: Forestry and Agriculture Scientific Research**
<table>
<thead>
<tr>
<th>Competent/Relevant Authority</th>
<th>Fishing</th>
<th>Gathering and Harvesting from Foreshore</th>
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<tbody>
<tr>
<td>Argyll Fisheries Trust</td>
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<tr>
<td>District Salmon Fisheries Board</td>
<td></td>
<td>Wild salmon &amp; sea trout fisheries management.</td>
<td>Consultee for commercial seaweed harvesting plans.</td>
<td>Statutory consultee on marine aquaculture lease renewal &amp; amendments, new sites and EIA.</td>
<td>Monitor catch returns for recreational fishing for migratory salmon and trout.</td>
<td></td>
<td></td>
<td>Consultee on coastal development and extraction of material from foreshore and seabed.</td>
<td>Consultee on land drainage and forestry.</td>
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<tr>
<td>Food Standards Agency</td>
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</tbody>
</table>
# Appendix VI - Competent & Relevant Authority Responsibilities

<table>
<thead>
<tr>
<th>Competent/Relevant Authority</th>
<th>Fishing</th>
<th>Gathering and Harvesting from Foreshore</th>
<th>Aquaculture</th>
<th>Marine Recreation</th>
<th>Effluent Discharges and Marine Dumping</th>
<th>Shipping/Boating</th>
<th>Coastal/Marine Development</th>
<th>Land Use: Forestry and Agriculture</th>
<th>Scientific Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestry Commission Scotland</td>
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</tr>
<tr>
<td>Maritime &amp; Coastguard Agency</td>
<td>Responsibilities for ensuring vessels are compliant with sea safety regulations.</td>
<td>Responsibility for preventing hazards to navigation and ensuring sea safety compliance for aquaculture floating facilities and vessels. Consulted on Coast Protection Act 1949 Section 34 consents for moorings at public consultation stage.</td>
<td>Responsibility to prevent hazards to navigation, ensure sea safety compliance and coordinate emergency rescues. All boats must comply with the MCA Code of Practice. Licence businesses e.g. charter boats or boat rental with capacity for 12 passengers or less. Consulted on Coast Protection Act 1949 Section 34 consents for moorings at public consultation stage.</td>
<td>Management of pollution at sea. Responsibility for controls over disposal of vessel bilge water and sewage outside harbour order area.</td>
<td>Responsible for National Contingency Plan to manage pollution at sea. Take responsibility for the management and co-ordination of large-scale incidents and establish a Shoreline Response Centre to co-ordinate agencies and resources. Responsibility for preventing hazards to navigation and ensuring sea safety compliance.</td>
<td>Consultee on extraction of material from seabed.</td>
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<tr>
<td>Competent/Relevant Authority</td>
<td>Fishing</td>
<td>Gathering and Harvesting from Foreshore</td>
<td>Aquaculture</td>
<td>Marine Recreation</td>
<td>Effluent Discharges and Marine Dumping</td>
<td>Shipping/Boating</td>
<td>Coastal/Marine Development</td>
<td>Land Use: Forestry and Agriculture</td>
<td>Scientific Research</td>
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</tr>
<tr>
<td>Northern Lighthouse Board</td>
<td></td>
<td>Responsibility for preventing hazards to navigation.</td>
<td>Consulted on mooring applications at public consultation stage.</td>
<td></td>
<td>Prevent hazards to navigation by wreck marking, buoy laying and lighthouse maintenance.</td>
<td></td>
<td>Statutory consultee for seabed lease.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scottish Environment Protection Agency</td>
<td></td>
<td>Regulate discharges through the Water Environment (Controlled Activities) Regulations 2005 by issuing CAR authorisations and monitor authorised discharges.</td>
<td>Statutory consultee for seabed lease.</td>
<td>Regulate discharges through the Water Environment (Controlled Activities) Regulations 2005 by issuing CAR authorisations and monitor authorised discharges.</td>
<td>Provide technical advice and monitoring assistance if there is a pollution incident. May sample any polluting discharges within 3 miles from shore. Participate in the Environment Group in event of large-scale incident.</td>
<td>Regulate activities involving the re-use or deposit of waste materials used for construction work e.g. sea defences.</td>
<td>Statutory consultee for land drainage, agriculture and forestry developments.</td>
<td>Undertake farm inspections (both ad hoc and routine) supported by incident response where required.</td>
<td>Respond to pollution incidents as required.</td>
</tr>
</tbody>
</table>
## COMPETENT AND RELEVANT AUTHORITY RESPONSIBILITIES

<table>
<thead>
<tr>
<th>Competent/Relevant Authority</th>
<th>Fishing</th>
<th>Gathering and Harvesting from Foreshore</th>
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<th>Coastal/Marine Development</th>
<th>Land Use: Forestry and Agriculture</th>
<th>Scientific Research</th>
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</thead>
<tbody>
<tr>
<td>Scottish Executive</td>
<td></td>
<td>Statutory consultee on marine aquaculture applications.</td>
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<tr>
<td></td>
<td></td>
<td>Issue Coast Protection Act 1949 Section 34 Consent.</td>
<td>Issue Coast Protection Act 1949 Section 34 consents for moorings which could cause hazards to navigation.</td>
<td>Issue Coast Protection Act 1949 Section 34 consents for pipelines which could cause hazards to navigation.</td>
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<tr>
<td>Scottish Executive Environment and Rural Affairs Department - Agriculture</td>
<td>Issue Environmentally Sensitive Area payment for seaweed gathering/harvesting.</td>
<td>Issue Environmentally Sensitive Area payment for seaweed gathering/harvesting.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Issue Coast Protection Act 1949 Section 34 consents for scientific research that may cause a hazard to navigation.</td>
<td></td>
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</tbody>
</table>
### COMPETENT AND RELEVANT AUTHORITY RESPONSIBILITIES

<table>
<thead>
<tr>
<th>Competent/Relevant Authority</th>
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<th>Land Use: Forestry and Agriculture</th>
<th>Scientific Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scottish Executive Environment and Rural Affairs Department - Fisheries Research Services</td>
<td>Monitors and advises on fish stocks. Undertake research in support of policy development. Undertake Shellfish toxin monitoring and sampling programme.</td>
<td>Consultee on commercial seaweed harvesting plans.</td>
<td>Issue Food and Environment Protection Act 1985 licence for fish farm developments such as jetties, piers, slipways and outfalls. Consulted on Water Environment (Controlled Activities) Regulations 2005 (CAR) authorisations. Responsibilities under Fish Diseases Acts and EC Fish Health Legislation. Shellfish toxin and water analysis to determine shellfish water classification.</td>
<td>Issue Food and Environment Protection Act 1985 licence for outfalls extending below MHWS. Consulted on Water Environment (Controlled Activities) Regulations 2005 (CAR) authorisations for discharges to tidal waters. Statutory duty under the Food and Environment Protection Act 1985 to control the deposit of articles or materials in the sea/tidal waters e.g. disposal of dredged material.</td>
<td>Provide full emergency cover to respond to marine incidents involving oil and chemical spills. Licence use of chemical dispersants in waters ≤ 20 m and within 1 nm of such waters to manage any pollution incident. Provide advice on spills. Participate in the Environment Group in event of large-scale incident.</td>
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<tr>
<td>Scottish Executive Environment and Rural Affairs Department - Sea Fisheries Division</td>
<td>Responsible for inshore fisheries management, policy and regulation.</td>
<td>Responsible for inshore fisheries management, policy and regulation.</td>
<td>Comment on fishing implications relating to marine aquaculture applications.</td>
<td></td>
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</table>

**Note:** Responsibilities under the Food and Environment Protection Act 1985 for coastal developments including defences, piers, and slipways extending below MHWS. Consultee on extraction of material from the seabed. Responsible for licensing deposits in the sea below MHWS.
<table>
<thead>
<tr>
<th>Competent/Relevant Authority</th>
<th>Fishing</th>
<th>Gathering and Harvesting from Foreshore</th>
<th>Aquaculture</th>
<th>Marine Recreation</th>
<th>Effluent Discharges and Marine Dumping</th>
<th>Shipping/Boating</th>
<th>Coastal/Marine Development</th>
<th>Land Use: Forestry and Agriculture</th>
<th>Scientific Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scottish Natural Heritage</td>
<td>Provide conservation advice to SEERAD on the impact of fisheries activities on the conservation interests within an SAC.</td>
<td>Provide conservation advice to SEERAD, Argyll and Bute Council and/or landowner on the impact of intertidal fisheries activities within an SAC.</td>
<td>Statutory consultee on seabed lease, development consent and Coast Protection Act 1949 Section 34 Consent. Consulted on Water Environment (Controlled Activities) Regulations 2005 (CAR) authorisations.</td>
<td>Statutory consultee for seabed lease and Coast Protection Act 1949 Section 34 consent for moorings. Requirement to publish Scottish Marine Wildlife Watching Code under Section 51 of the Nature Conservation (Scotland) Act 2004.</td>
<td>Statutory consultee on Food and Environment Protection Act 1985 licences. Consulted on Water Environment (Controlled Activities) Regulations 2005 (CAR) authorisations.</td>
<td>Provide advice concerning nature conservation interest of marine and coastal area.</td>
<td>Statutory consultee on the development of local plans, planning applications, Food and Environment Protection Act 1985 licences, Coast Protection Act 1949 Section 34 consents, and seabed/foreshore leases.</td>
<td>Statutory consultee on the development of local plans and forestry developments. Provide advice concerning nature conservation interest of marine and coastal area.</td>
<td>Issue license if research activities involve a species protected under the Wildlife and Countryside Act 1981 or a European Protected Species under the Habitats Directive. Provide advice to academic institutions on the effects of research on the conservation interests of an SAC.</td>
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<tr>
<td>Scottish Water</td>
<td>Issue consents for the treatment of industrial effluent via waste water treatment works. Responsible for the operation of public sewers and for the treatment and discharge of domestic sewage discharged to sewers. Consulted on Water Environment (Controlled Activities) Regulations 2005 (CAR) authorisations.</td>
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## Appendix VI - Competent & Relevant Authority Responsibilities

### Competent and Relevant Authority Responsibilities

<table>
<thead>
<tr>
<th>Competent/Relevant Authority</th>
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<tbody>
<tr>
<td>The Crown Estate</td>
<td>Fishing</td>
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<tr>
<td></td>
<td>- Issue licence for seaweed harvesting/collection if on Crown Estate owned foreshore or seabed.</td>
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<td></td>
<td>- Issue licence for the commercial collection of native mussels and oysters.</td>
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<td></td>
<td>Gathering and Harvesting from Foreshore</td>
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<td></td>
<td>- Issue seabed lease and development consent*.</td>
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<td></td>
<td>Aquaculture</td>
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<td></td>
<td>- Issue seabed lease for moorings and monitor leased moorings.</td>
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<td></td>
<td>Marine Recreation</td>
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<td></td>
<td>- Issue lease for discharge pipeline if over Crown Estate foreshore and/or seabed.</td>
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<td></td>
<td>- Consultee where discharge is direct to sea.</td>
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<td>- Required to ensure that leaseholders adhere to the conditions of their leases and remove all equipment when the lease is relinquished.</td>
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<td></td>
<td>Effluent Discharges and Marine Dumping</td>
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<tr>
<td></td>
<td>- Issue seabed lease for moorings and monitor leased moorings.</td>
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<td></td>
<td>Shipping/Boating</td>
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<tr>
<td></td>
<td>- Issue seabed lease if development is on Crown Estate land.</td>
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<td></td>
<td>- Issue foreshore or seabed lease for commercial extraction of material from seabed.</td>
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<td></td>
<td>Coastal/Marine Development</td>
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<td></td>
<td>- Consultee on forestry developments.</td>
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<td></td>
<td>Land Use: Forestry and Agriculture</td>
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<td></td>
<td>- Responsibilities for land drainage.</td>
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<td></td>
<td>Scientific Research</td>
</tr>
</tbody>
</table>

* In relation to shellfish and finfish farm developments, under the interim arrangements, The Crown Estate (CE) presently issue both the seabed licence and development consent. The local planning authority currently makes a recommendation to the CE on all finfish and shellfish developments. However, full statutory responsibility for granting the development consent is to be transferred to the local planning authority. Responsibility for the granting of the development consent will remain with the CE until the legislation is implemented.