

Atlantic Coast (Wester Ross) Project

Topic Paper:

Aquaculture

1. Introduction

This paper is one of a series which have been prepared to help inform the future use and development of the coast and inshore waters of Loch Broom, Little Loch Broom, the Summer Isles and Gruinard Bay. The paper represents the results of basic survey and evaluation work and should not be regarded as a policy document. It is however intended to help in the formulation of policy and to promote discussion. The Atlantic Coast project seeks to develop and test an integrated coastal zone plan for this area which can help in the evaluation of development proposals, guide investment, and minimise conflicts of interest. It aims to promote a balanced approach: one that can safeguard the area's core natural assets and sustain or enhance its productivity over the longer term.

Aquaculture is a significant component of the local economy, and provides employment in areas where the opportunities would otherwise be very limited. However, here as elsewhere on the West Coast, proposals for new sites or for expansion of existing ones sometimes encounter significant local opposition. This has been more marked in the project area in recent years as a result of a series of development proposals coming in quick succession. Also there has been no framework plan to guide aquaculture development in the area and to integrate it with other interests. If the finfish farming industry is to continue to gain wider acceptance and expand, it is important that it is seen to be developing sustainably, and with consideration for the many other interests in the area. A marine spatial plan can help this process of integration.

Although there is no shellfish farming in the project area at present, there is significant potential for this activity either in addition to finfish farming or as an alternative form of aquaculture. Around the country, shellfish growing is increasing in scale and becoming more mechanised, and it is important that it develops with due regard to other interests.

The issues that have been set out here have been formulated in response to concerns raised in the project area. Some have scientific backing; others are based on mainly anecdotal evidence from those directly involved in activities such as fisheries, fish farming, natural history and angling.

2. Historical Background

Fish farming in the project area began in the late 1970s, with small independent companies operating in sheltered sites in Loch Broom, Loch Kanaird, Little Loch Broom, and the Summer Isles. With increased competition in the industry and

economies of scale, some sites are now operated by larger companies. Improving technology has also meant that more exposed offshore sites can now be utilised. During the 1980s The Crown Estate granted a number of consents for salmon farming in the project area, some of which are still in operation today. These include sites operated by Wester Ross Salmon, Marine Harvest Scotland and Scottish Sea Farms.

There is no shellfish farming in the project area at present, although a number of consents remain current. Both mussel and scallop farms have operated in the area in the past.

Until 1986 the establishment of sites in Scotland was very lightly regulated, and there was no public consultation included in the process. Since October 1986 the Crown Estate has implemented an informal consultation procedure ensuring local consultation. This was superseded in 1998 by the introduction of interim planning arrangements, which were intended to pave the way for marine fish farming coming within the scope of statutory planning controls. Under the interim arrangements a fish farm developer requires consent from a number of different public agencies, as well as broad public acceptance. All consultation responses on an application for a seabed lease now go to the local authority which is expected to make a rounded and authoritative recommendation to the Crown Estate. The Environmental Impact Assessment (EIA) regulations which were amended in 1999 now apply to most applications for new or expanded finfish farms but not to shellfish farming proposals.

These factors mean that the application process tends to be more time-consuming and costly – particularly for finfish farm operators - but judgements on the principle of development are more soundly based and there is scope for developers to appeal against a refusal and have their case reviewed by the Scottish Executive Inquiry Reporters Unit if they wish.

After a long period of relative stability, a series of development proposals in the last few years for finfish farms in this area have proved contentious. This underlines the need for a clear framework for the development of aquaculture in the project area, taking into account the needs of the industry, wider environmental and landscape concerns, and interactions with other activities and interests in the area.

3. Current situation

3.1. Leases and locations

At present there are six active **finfish farm** sites within the project area, operated by three companies:

- Wester Ross Salmon holds consents for Corrie in inner Loch Broom, and for Loch Kanaird. There are two active consents within Loch Kanaird: the main production site to the east of Isle Martin and a second at the mouth of the River Kanaird. The latter may only be used as an alternative to the Isle Martin site;
- Scottish Sea Farms holds a development consent for the Summer Isles, with two cage groups in the bay of Tanera Mor and a third near Eilean Fada Mhor;
- Ardessie Salmon holds development consents for two sites in Little Loch Broom. These are currently operated by Marine Harvest (Scotland);
- Marine Harvest (Scotland) holds development consent for a site at Stattic Point. This site lay undeveloped for thirteen years, but was reactivated and stocked in 2003

There are a number of **shellfish farm** consents in the project area, although none are operational at present due to prevailing market conditions. There is local interest

in farming mussels, scallops and oysters. A scallop farm operated in Little Loch Broom close to the village of Scoraig for almost twelve years. However, problems with algal blooms and associated shellfish poisoning led it to close down. It is not clear if these problems would recur in future attempts to farm shellfish in the area, or if they were a localised or temporary problem. Little Loch Broom is classified as a shellfish production area. Oysters have been farmed in Horse Sound, and mussels have been grown in both Horse Sound and Little Loch Broom. Some problems were encountered with predation of mussels by eider ducks, but otherwise both species were grown successfully.

A Several Order for scallops exists in Little Loch Broom, covering an area of 7 hectares, and there is an application in process for a second in Loch Broom. Several Orders are granted under the terms of the 1967 Shellfish Act and give an individual exclusive rights to named species and makes it an offence for others to remove or disturb that species. Table 1 below gives details of the current leases within the project area.

Table 1: Current development consents for finfish and shellfish aquaculture in the project area

Location	Species	Permitted equipment	Consented maximum biomass (tonnes)	Lease expiry date	Lease holder	Operator
Tanera Mor (site 1)	Salmon	10 circular cages, 70m circumference	625	21/4/10	SSF	SSF
Tanera Mor (site 2)	Salmon	10 circular cages, 70m circumference	625	21/4/10	SSF	SSF
Eilean Fada Mor	Salmon	7 x 27m square cages	600	21/4/10	SSF	SSF
Loch Kanaird	Salmon, Cod	40 x 10.6m square cages; and 12 x 15m square cages	1050	30/6/18	WRS	WRS
Corrie (L. Broom)	Salmon	12 x 15m square cages and 60 x 10.6m square cages	1050	31/3/06	WRS	WRS
Ardessie	Salmon	12 circular cages, 80m circumference	662	2018	AS	MH
Stattic Point	Salmon	56 x 15m square cages	1400	30/4/08	MH	MH
Horse Island	Oysters	4 longlines (50m), 100 trestles (1x0.5x0.5m)		31/5/10		
Horse Island	Scallops	4 longlines (50m), 100 trestles (1x0.5x0.5m)		31/5/10		

[Sources: The Crown Estate 2004; SEPA 2004; Highland Council 2004]

3.2. Species

- All finfish farms in the area are currently farming salmon. However, Wester Ross Salmon is also trialling cod in its Loch Kanaird site, and the company is almost three years into the trial.

3.3. Synchronisation of production cycles for salmon farms

- Production cycles are synchronised between all salmon farming sites bar one. The Isle Martin site is one year out of step with the others.

- Because Wester Ross Salmon is a small independent company with all its operational sites within the project area, synchronisation of Loch Kanaird with the remaining sites would lead to alternate years of high output and no output; this would not make economic sense for the company.

3.4. Regulations

Loch Broom and Little Loch Broom are listed as Category 3 areas in the Scottish Executive's "Locational Guidelines for the Authorisation of Marine Fish Farms in Scottish Waters". This classification is based on predictive modelling to estimate nutrient enhancement and benthic impact. It represents the least constrained rating of the three available categories, indicating that there are good prospects of aquaculture developments satisfying environmental requirements in relation to these two factors in the project area. However, the guidelines make it clear that the detailed circumstances must be examined carefully in each case and computer modelling is always re-run on submission of each new application.

Applications for development consent are made to the Crown Estate. It then consults the relevant bodies directly and the general public via a notice in the local press and Post Office. The Crown Estate has publicly announced that it will accept the local authority's view in all cases unless the developer subsequently appeals against either a refusal or a qualified approval. Appeals are referred to the Scottish Executive Inquiry Reporters Unit whose recommendation will also be accepted by The Crown Estate. The Crown Estate is fully supportive of the transfer of planning powers to local authorities. It is expected that this transfer will be finalised by summer 2006.

4. Value of this sector

Within the project area, approximately 42 full-time jobs are provided by the finfish farming industry. The local farms in turn generate a number of jobs external to the project area in supporting activities such as smolt production, administration, processing, marketing and management. This is estimated at 66 full-time jobs.

The locally-based Wester Ross Salmon employs the most people in the project area, with up to 29 staff working on the farms and shore bases in the project area. This figure is the most recently available, and may fluctuate seasonally. A further 40 are employed outwith the project area on freshwater smolt farms, in administration, processing, management and other support activities associated with the sea farms.

Scottish Sea Farms employs eight people to work full-time on the Summer Isles farms, and these jobs are supported by an estimated 11 additional full-time jobs outwith the project area. An estimated two further full-time jobs are provided in contract work: diving, repairs and supplies.

Marine Harvest employs five people full-time on its two farms in the Little Loch Broom area, and there are probably about 13 supporting jobs - a similar number to those linked to Scottish Sea Farms' operations.

Shellfish farming does not at present employ anyone locally.

5. Key issues and priorities

This section seeks to identify the core assets, main issues, and current priorities for the aquaculture sector in the project area.

5.1. Assets

- The water quality in the project area is good, with the majority of the area falling into class 'A' in SEPA's coastal and estuarine classification system. The area immediately around the village of Ullapool falls into a lower category, but steps are being taken to remedy this.
- The value of the industry as an important provider of employment in this rural area is widely recognised.
- Salmon reared in the sea of Wester Ross have a good marketing image which can capitalise on the area's clean seas and reputation for fine scenery.

5.2. Issues

- The potential for new sites and possibly new forms of aquaculture in the project area, and the need to clarify what potential there may be for expansion or relocation of existing sites.
- Insecurity for fish farm companies and their employees – at present the companies cannot be sure that they will be able either to continue operating existing sites over the longer term, or obtain new ones. This inhibits effective forward planning.
- Elevated levels of sea lice and fish farm escapes can endanger local populations of wild migratory salmonids.
- Fish health and the potential for disease transfer to wild stock and vice versa, eg Infectious Salmon Anaemia.
- The impacts of nutrient enrichment and discharges from farms on benthic flora and fauna.
- A higher incidence of toxic algal blooms affecting coastal waters, with significant consequences for fish and shellfish growers.
- Visual impacts of both fish and shellfish farms - Loch Broom and the Summer Isles fall within the Assynt-Coigach National Scenic Area; Gruinard Bay falls within the Wester Ross NSA. In addition, much of the area, in particular the Summer Isles and the Scoraig peninsula, is remote and undeveloped and valued for this in its own right.
- Competition with fishermen for the use of sheltered inshore waters generally (winter fishing sites) and with recreational sailing interests for sheltered sites which are used as anchorages.
- Failure to agree on synchronised production and fallowing cycles as part of an Area Management Agreement (AMA).

5.3. Priorities for the aquaculture sector in the project area

- Build up trust with communities or interest groups in the area who feel threatened by the presence or expansion of aquaculture. Good practice and responsiveness to public opinion are key.
- Establish a clear framework for future aquaculture development in the area, including options for relocation, which has broad public support and takes account of the carrying capacity of the area.
- Investigate the potential for developing shellfish aquaculture and seabed ranching in the area, including assessment of environmental impacts.
- Seek to overcome the obstacles which have hindered the establishment of a comprehensive AMA.

5.4. Interaction with other sectors

- Finfish farming and wild salmonid interests interact in the areas of fish health and fish farm escapes. At the local level these matters are addressed through meetings between industry representatives and wild fisheries interests in an effort to establish an Area Management Agreement. However this process has recently foundered.
- Commercial fisheries and aquaculture can come into competition for use of sheltered sites; however creel fishing and aquaculture can, and frequently do, take place in close proximity.
- Recreation and tourism: the opportunities for outdoor recreation in the project area and the quality of coastal landscape here are fundamental to the local tourist economy (though they are also important aspects of the quality of life of many residents). Proposals for aquaculture installations in sensitive landscape areas may be seen as threatening to these interests. There is also a certain amount of competition with boating interests for use of sheltered sites which provide anchorages. However, some tour boats include fish farm visits in their tours. Local seafood is an attraction for many tourists – particularly if it is seen to come from sustainable sources, but this has to be balanced with an association with a healthy environment.
- Nature conservation: The Little Gruinard River is a candidate Special Area of Conservation for salmon. There is some concern over the possible impact salmon farming in surrounding areas might have on the river's native salmon population.
- Interaction with natural predators e.g. seals (at salmon farms) and Eider ducks (at mussel farms). Eiders were found to be a problem when trials were conducted at the Horse Island site.

6. Development opportunities

6.1. Outlook

- Public opinion is in favour of developing employment opportunities on the west coast, but needs to be reassured about environmental effects and is concerned about the visual impacts of some fish farms. Local opposition could decrease if these impacts could be reduced.

6.2. Opportunities for development or adaptation

- Clarification of the options for expansion and relocation of existing fish farms and the potential for new farms within the project area, including an assessment of carrying capacity and cumulative impacts.
- Synchronisation of production cycles to further improve control of disease and sea lice populations.
- Investigation of the environmental and economic implications of farming species other than salmon.
- Development of alternative technologies for farming - offshore, submersible or seabed cages.
- Investigate the economic case for development of land-based aquaculture with treatment systems for effluent.
- Sensitive development of shellfish farming.

7. Conclusions

This paper has identified a number of priorities for aquaculture development in the project area, some, but not all of which fall within the remit of the Atlantic Coast Project.

The Project is well placed to develop a spatial plan for the future of aquaculture in the area (including identifying potential sites for shellfish farms) in consultation with the industry and other stakeholder groups. It will form a core part of the integrated coastal zone plan for the area.

The Project will not be directly involved in the negotiation of an Area Management Agreement but will seek to incorporate the outcome of the AMA process into the coastal zone plan.

8. Acknowledgements

The Atlantic Coast Project is grateful to the Crown Estate and the Scottish Environmental Protection Agency for the use of their data on development consents, discharge consents and water quality.

9. Comments and additional information

Information in the paper was gathered from published documents, agency records, companies working in the area, and local individuals. If any of the information in the paper appears incorrect, or if there are significant elements missing, please contact the Atlantic Coast Project Officer at the address below.

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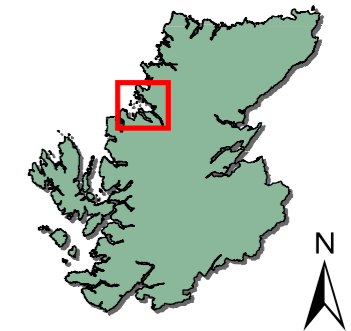
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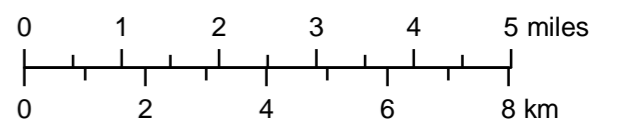
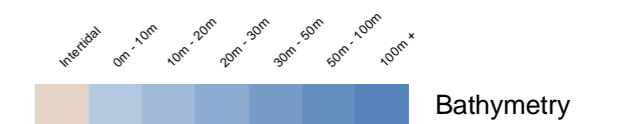
Atlantic Coast (Wester Ross) Project

Aquaculture



Legend

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|--------------------------------|----------------------------|
| Topic:
Aquaculture | Topic:
Map Base |
| Several Order | Settlement |
| Finfish | Main Peak |
| Shellfish | Trunk Road |
| Shorebase | A Road |
| EU Shellfish Directive Water | B Road |
| | Other |
| Topic:
Project Area | |
| Project Area Seaward Boundary | |



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