LITERATURE, LEGISLATION AND PLANNING REVIEW

ENVIRONMENTAL IMPACT ASSESSMENT
MARINE FISH FARMS

PREPARED FOR SCOTTISH AQUACULTURE RESEARCH FORUM, HIGHLAND COUNCIL, AND THE SCOTTISH EXECUTIVE.

Prepared
by

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Table of Contents

Executive Summary

Introduction

The purpose of this document is to present the findings of a review of the current system with respect to the efficiency of the existing EIA system. It was prepared as part of the production of the EIA guidelines commissioned by SARF, and provides a comprehensive evaluation of current practice was identified as a key priority to inform the guidelines. The review and subsequent production of guidelines was guided by the SARF Steering.

This document presents the review of current practice. The findings were informed by a review of selected environmental statements, a focused consultation process, an appraisal of relevant existing legislation and a review of relevant associated guidance documents.

Planning

The Planning Context Review of the Report describes the national and local planning policy frameworks relevant to the development of marine fish farming activities. The purpose of the review is to:

- Summarise the existing planning policy context of marine fin fish developments, considering relevant National Planning Policy (NPPGs), Scottish Planning Policies (SPPs) and Planning Advice Notes;
- Describe the relevant changes contained within The Planning etc. (Scotland) Act 2006; and
- Provide recommendations with a view to recognising the key role that the UK planning system can play in the development of marine fish farming activities.

The Report considers the merit of Aquaculture Framework Plans which have been produced by several Planning Authorities to introduce a traditional development plan approach to aquaculture development. Additionally Marine Spatial Plans pilot studies, which look to help balance industry, leisure and environmental pressures on the marine environment, are briefly examined.

Until the introduction of The Planning etc. (Scotland) Act 2006 the planning system primarily focused on onshore development. The offshore elements of fish farming have been outwith the statutory planning system that regulates development on land. The new Planning etc. (Scotland) Act 2006, from an aquaculture development perspective, addresses this anomaly by introducing some key changes. The report discusses these changes and provides brief comment on their likely impact.

The work of The Royal Town Planning Institute's 'Marine Spatial Planning Task Group' is briefly discussed as is the recent Department of Rural Affairs (DEFRA) consultation paper on a proposed marine bill for the UK.

The report concludes by stating that although Scottish Executive Guidance sets out a vision for a sustainable, diverse, competitive and economically viable aquaculture industry, not all of these can be addressed through the planning system. In general the assessment of the existing planning context indicates that there is a need for Planning Authorities to include specific policies for aquaculture development in Development Plans. The use of Aquaculture Framework Plans by some Councils, is a useful development provided these documents are adopted by Council as Council Policy.

Planning and CAR

The links between the Environment (Controlled Activities) Regulations 2005 (CAR) under which discharge consents are issued to fish farms and the Environmental Impact Assessment regulations was reviewed. The interaction between land use planning and environmental regulation has been considered in a number of reports and publications in the past with both SEPA and the fish farming industry suggesting that there should better interaction of the development/consent and environmental protection consenting regime.

The conclusions of the review indicated that greater sharing and exchange of information between the two systems ought to enable planning decisions to take fuller account of the environment protection implications that applications raise for local communities. Closer alignment between the two regimes should provide a better service to applicants and reduce the risk of applicants having to resubmit development/lease consent applications. However, there may be circumstances however where, in light of particular commercial considerations, applicants would prefer to see their applications considered sequentially rather than in parallel.

It is recommended that the Executive in consultation with SEPA and other interested parties should undertake a study to establish the scope for improving interaction between the statutory land use planning system and environment protection consenting regime. A detailed review of case studies, consultation and case law if necessary should be drawn together to identify the strengths and weaknesses of the current practice. Areas for development or opportunity should be discussed with respect to the options and of the reviews addressed in this report.

Consultations

In order to gather the views of a range of consultees, a semi-structured interview based on a pro-forma was undertaken. The pro-forma's were issued to a number of key individuals identified by the steering group who responded by email or, alternatively discussed the questions over a telephone discussion. Nine consultees agreed to provide input to the review and included one consultant, several statutory and non-statutory consultees and two competent authorities.

The consultation exercise identified several key recommendations that could improve the EIA process. These are summarised below:

- Pre-application discussions were considered to be highly beneficial to all parties. It is recommended that the pre-consultation process is promoted with developers and that there is more involvement of the non-statutory consultees if they wish to participate;
- It is recommended that the screening/scoping process should be streamlined and a consistent approach taken across the industry and guidance provided to give a standardised approach;
- The screening/scoping process in Shetland has been streamlined. Learning from the existing processes in Shetland would be beneficial in streamlining the existing methodologies to satisfy the new regime;
- It is recommended that the consultation process is structured in order that both the consultees and the developers are aware of who should be contacted and when they should be contacted. At present the consultation appears to be driven by the

competent authority, which is contrary to other industries where the developer contacts the non-statutory consultees;
- It is recommended that the benefits of public consultation are promoted as this is currently perceived as a weak area in the aquaculture industry;
- It is recommended that a specific study should be carried out into how the Water Environment (Controlled Activities) (Scotland) Regulations (CAR) interacts with EIA and how this can best be incorporated in the EIA process for aquaculture. At present the two systems are not synchronised and result in much confusion and duplication of effort;
- It is recommended that additional guidance be issued on the structure and layout of the EIA to overcome the existing variation in structure and content. Within the guidance, the importance of assessment of affects should be stressed, as this is an area of general weakness in the Environmental Statements. Guidance should also be provided to ensure that the applicant incorporates the scoping comments; and
- It is recommended that electronic documents with hyper-links to relevant data sections is promoted to allow the consultees to interrogate the data more efficiently.

Environmental Statement Review

This stage of the project undertook a systematic review of a small sample of Scottish marine finfish farm ESs, using a modified version of the Lee and Colley ES Package, a widely used and peer reviewed methodology, to assess overall quality and compliance with minimum statutory requirements. A sample of five ESs submitted under the Regulations were selected for assessment.

There was a range of quality across the ESs reviewed and within each ES the quality of the technical assessment also tended to be inconsistent. The analysis indicated several examples of consistently strong practices.

Scoping Report Review

Two scoping reports were also reviewed. Scoping reports allow the applicant to be clear about what the competent authority considers are the main effects from a development are likely to be, and where the ES should focus. In assessing the scoping reports, it is difficult to conclude how 'fit for purpose' as they do not conform to standard screening or scoping reports, neither can they be compared to an ES. In general both scoping reports were comprehensive, providing targeted environmental information where the developer has considered necessary. This appears to suit the local authorities and the advantages of this approach are numerous, in terms of streamlining the process and reducing costs to the developer. However the following disadvantages as where identified:

- The developer may use a methodology, which is inappropriate, requiring further assessment or work in addition to the report;
- The developer may not focus on an aspect of the assessment or provide too much attention in another aspect, requiring further work in the form of an ES, in addition to the report submitted; and
- Planning Authorities and consultees must assess a large volume of information within timescales set for scoping.

In conclusion this method may be way to increase the efficiency for modifications or renewals to existing sites, where there are few unanticipated effects, and where an ES has already been produced. However this method should be agreed with the relevant Planning Authority and statutory consultees prior to use.

1 INTRODUCTION

The Strategic Framework for Scottish Aquaculture (SFSA) identified that a working group should be established to draft a set of guidance notes and documentation on Environmental Impact Assessments (EIA) required for aquaculture developments under the Environmental Impact Assessment (Scotland) Regulations 1999 (as Amended). As part of the production of the guidance notes, a comprehensive evaluation of current practice was identified as a key priority to inform the guidelines. The review and subsequent production of guidelines was guided by the Steering Group identified in Annex 1.

This document presents the review of current practice. The findings were informed by a review of selected Environmental Statements, a focused consultation process, an appraisal of relevant existing legislation and a review of relevant associated guidance documents.

1.1 Objectives

The purpose of this document is to present the findings of a review of the current system with respect to the efficiency of the existing EIA system. This document is not intended to provide a comprehensive assessment of the EIA system, as there are already a number of publications setting out the system in detail, and other guidelines provide extensive coverage of the EIA process (a general review of existing EIA guidance is provided in Section 6).

The review included:

- A review of existing guidance documents;
- Consideration of emerging guidance;
- Consideration of any harmonisation of the Environmental Impact Assessment (Scotland) Regulations 1999 (as Amended) with new planning legislation; and
- Evaluation of the decision making process used by the Planning Authorities.

In addition, the review specifically focused on:

- Costs and time interaction between EIA and the planning system;
- The current scale of the EIA Process;
- Interaction between EIA and Water Environment (Controlled Activities) (Scotland) Regulations (CAR);
- Potential for streamlining applications; and
- Monitoring and enforcement of lease conditions.

1.2 Methodology

To ensure the review was comprehensive, the following actions were undertaken:

- Interview of key consultees and decision makers in the planning and assessment process to identify anomalies or inconsistencies in the current system;
- A review of relevant literature including guidance documents, legislation and best practice to inform the production of appropriate guidelines for ES;
- Review of the existing planning framework and potential implications under the new Planning Etc. (Scotland) Act 2006 regime;
- Review of a range of Environmental Statements for finfish farm applications; and

- Review of two scoping reports, which provided sufficient detail to negate the need for an ES.

1.3 Document Structure

The document is split into 6 different sections as follows:

Section 1 Introduction;
Section 2 Summary of the EIA process;
Section 3 Planning review;
Section 4 Planning and CAR;
Section 5 Responses from the consultation process;
Section 6 Literature review; and
Section 7 Environmental Statement Review.

2 SUMMARY OF THE EIA PROCESS

2.1 General Background

Since the introduction of the Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 1999 (The EIA Regulations), approximately 191 Environmental Statements have been submitted to the Crown Estate[1]. With the imminent introduction of new planning legislation and subsequent transference of planning powers to local authorities, a need has been identified to conduct a review of the existing system. In 2003, the Scottish Executive issued 'A *Strategic Framework for Scottish Aquaculture'* containing statements expressing some concern regarding the performance of EIA in the aquaculture sector and the quality of Environmental Statements. The *Strategic Framework*' presented a number of 'priority actions' one of which was the commissioning of an independent review of EIA (as it applies to marine aquaculture) to be implemented by the Convention of Scottish Local Authorities (COSLA).

2.2 EIA Process for Marine Fish Farms

An Environmental Impact Assessment (EIA) forms part of the process of determining most applications for marine fish farms. The EC Directive on Environmental Assessment (85/337/EC) as amended by Directive 97/11/EC seeks to ensure that where a development is likely to have significant effects on the environment, the potential effects are systematically addressed in a formal Environmental Statement. The Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 1999 brought the amended Directive into force and superseded the Environmental Assessment (Salmon Farming in Marine Waters) Regulations 1988. Under the new legislation these regulations will no longer apply to Scotland and instead only the Environmental Impact Assessment (Scotland) Regulations 1999 as amended by the Environmental Impact Assessment (Scotland) Amendment Regulations 2006 will apply to marine fish farming in Scotland.

As marine fish farming falls within the projects listed in Annex II to the Directive, these developments should be subject to EIA whenever they are likely to have significant effects on the environment. If a fish farm meets/exceeds one of the relevant criteria or thresholds set out in the regulations, an EIA will be requested. The regulations also apply to renewal of existing leases and changes or extensions to existing developments that may have significant adverse effects on the environment even where the original development was not subject to EIA.

The thresholds outlined in the regulations are as follows:

(a) Any part of the proposed development is to be carried out in a sensitive area[2], or

(b) The proposed development is designed to hold a biomass of 100 tonnes or greater, or

(c) The proposed development will extend to 0.1 hectare or more of the surface area of the marine waters, including any proposed structures or excavations.

Applications which meet any of these thresholds must be subject to a 'screening opinion' which is a formal determination by the relevant competent authority as to whether an EIA is required or not. Under the 'interim scheme' (see Section 2.2), the Crown Estate was the

[1] *Pers Comm*, Paul Bancks Crown Estate January 2006
[2] As defined in section 2 of the regulations

competent authority, with the exception of the Shetland and Orkney Islands Councils which were competent authorities under the Zetland County Council Act 1974 and the Orkney County Council Act 1974 respectively. Prior to 1 April 2007, the Crown Estate gave regard to the views of the local authorities and other statutory consultees on the need for EIA in specific cases.

2.3 Interim Scheme

From December 1998 to April 2007, an Interim Scheme for the Regulation of Fish Farming was in place. This was a non-statutory transitional arrangement, introduced following the publication of '*Marine Fish Farming – Review of Planning Arrangements'.* The Government decided that the authorisation exercised by the Crown Estate should be transferred to Scottish local authorities. The transference of authorisation followed the introduction of new planning legislation (Planning Act Etc. (Scotland) 2006). This legislation places local authorities as the designated relevant authority throughout Scotland. The powers and functions exercised by the local authorities in the Orkney and Shetland Isles (very similar to those of the Crown Estate) will also change.

Previously, the role of local authorities was as statutory consultee in the EIA process. Local authorities received responses from the public and other statutory consultees, in relation to an advertised proposal, before reaching a view for onward communication to the Crown Estate. Their view was critical for the decisions reached by the Crown Estate on a specific lease application.

2.4 Town and Country Planning (Marine Fish Farming) (Scotland) Order 2007

As of April 2007, the Town and Country Planning (Marine Fish Farming) (Scotland) Order 2007[3] came into force. This legislation transfers the responsibility for the authorisation of marine fish farming from the Crown Estate to the relevant Planning Authority. Additionally the Environmental Impact Assessment (Scotland) Regulations 1999 have been modified to suit the particular considerations that arise in relation to development in marine waters. This means that these Regulations will contain equivalent provisions to the Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 1999 which no longer apply to marine waters in Scotland.

The legislation defines which Planning Authority has responsibility for which marine planning zone. The designated Planning Authorities are local councils with the exception of the Loch Lomond and Trossachs National Park Authority.

The Crown Estate will continue to grant leases and collect rent as landlord after the change is implemented. Scottish Planning Policy 22, Planning and Fish Farming will provide guidance in this respect and is due for publication by 1 April 2007.

[3] At the time of writing this legislation was in draft format.

2.5 Roles and Responsibilities

Crown Estate (CE) - the Crown Estate is responsible for the management of the territorial seabed out to 12 nautical miles and around 50% of the Scottish foreshore between high and low water mark. Anyone wishing to establish a marine fish farm must apply to the Crown Estate for a lease of the seabed (and foreshore where appropriate) within which the marine fish farm will operate. It also maintains a register of marine fish farm leases and is able to supply non-commercial information on request.

District Salmon Fishery Boards - salmon fisheries management is devolved to district salmon fishery boards under the terms of the Salmon Act 1986. It is an offence for a person intentionally to introduce salmon or salmon eggs into inland waters in a salmon fishery district for which there is a board unless he has the written permission of the board or the waters constitute or are a fish farm within the meaning of the Diseases of Fish Act 1937, as amended.

Fisheries Research Services (FRS) (See also SEERAD) - establishing a fish or shellfish farm requires that the business and site are registered with the FRS for fish health purposes, to help maintain and improve the fish health status of Scottish waters. FRS has provided a modelling framework for determining the sensitivity and capacity of sea loch systems to organic waste and nutrients. The Aquaculture & Fisheries Bill will provide FRS with a statutory 'operational' regulatory responsibility for sea lice and containment measures as follows:

- Introduce a duty on fish farmers to collect, retain and make available for inspection information relating to fish parasites and containment of fish;
- Give powers to take samples of stock and measure levels of parasites;
- Allow enforcement action to be taken where farms do not have satisfactory measures in place to control parasites or contain fish;
- Regulate live fish movements into specified areas in marine waters;
- Allow Ministers to establish a scheme to make payments for any fish destroyed for the purposes of disease controls; and
- Increase powers to fund initiatives relating to sea fisheries, freshwater fisheries, aquaculture and inshore fisheries.

Fisheries Trusts - a number of Fishery Trusts, which are charitable organisations, have been set up to promote and undertake research to provide scientific advice on the fisheries resources particularly in the west and north of Scotland. The Trustees are drawn from, among others, local owners of fishing rights and the fish farming industry. Support is provided by a number of organisations including SNH, SEPA and the Scottish Executive through the Freshwater Fisheries Laboratory, Pitlochry.

Harbour Authorities - harbour authorities, in designated harbour areas, issue licences for the operation of marine fish farms. Applications for works licences require to be advertised and are subject to consultation procedures. Applicants should consult their local harbour authority on the particular procedures that apply.

Health and Safety Executive (**HSE)** – under the terms of the Health and Safety at Work Act 1974, the HSE inspects installations and facilities at marine fish farms. HSE has issued advice on minimum health and safety standards for the construction and use of floating fish farm installations used for finfish in inshore waters.

Historic Scotland – is an executive agency of the Scottish Executive, responsible for discharging Scottish Ministers functions in relation to the historic environment out to the 12 nautical mile limit of territorial seas. These responsibilities extend to Environmental Impact Assessment under the EIA (Scotland) Regulations 1999. However, Historic Scotland has had no involvement in marine EIA to date.

Ministry of Defence (MOD) - fish farming is one of a number of activities, which are excluded under byelaws from the Ministry of Defence. Certain controlled areas are used extensively by the UK, NATO and Allied nations for training purposes. The Ministry of Defence also administers the *Protection of Military Remains Act 1986*. This provides for the protection of military remains of any nationality in UK waters and includes vessels and aircraft lost at sea.

Planning Authorities - In April 2007 local Planning Authorities became responsible (the competent authority) for the marine fish farm proposals within designated planning zones and now assess Environmental statements as part of the process of consideration of planning applications . Prior to 1 April 2007, Planning Authorities advised the Crown Estate on marine fish farm proposals under the interim arrangements and pending the transfer of control to them under proposed changes to land use planning legislation. Under the Town and Country Planning (Marine Fish Farming) (Scotland) Order 2007, Planning Authorities will prepare statutory development plans in connection with marine fish farming under 23 marine planning zones. Loch Lomond and Trossachs National Park Authority will also have powers to include marine fish farming activities within the marine planning zone for which it has authority.

Scottish Environment Protection Agency (SEPA) – SEPA has a general duty and powers to minimise, remedy or mitigate the effects of pollution of the environment. SEPA authorises discharges of effluent, including medicine residues from fish farms to the marine and freshwater environments under licensing provisions of the Water Environment (Controlled Activities) (Scotland) Regulations 2005. SEPA's licensing process is informed by matters such as the characteristics of tidal flow and bathymetry at the site as well as natural heritage designations. SEPA has a role in both environmental regulation and in influencing other regimes such as land use planning in order to deliver defined outcomes. SEPA is a statutory consultee in marine fish-farming EIA's.

Scottish Executive's Enterprise, Transport and Lifelong Learning Department (SEETLLD) - where obstruction or danger to navigation is caused or is likely to result from a development, the prior written consent of the Scottish Ministers is required. SEETLLD administers this function. The Crown Estate assists by consulting with a wide range of navigational interests, including MCA, the Northern Lighthouse Board and the Royal Yachting Association as part of site application process. This division is also responsible for trunk roads and may need to be consulted where trunk roads is required.

Scottish Executive Development Department (SEDD) – publishes Scottish Planning Policies (SPPs) and Planning Advice Notes (PANs). These documents are considered as material considerations for Planning Authorities. PANs provide advice on good practice and other relevant information. Scottish Planning Policy 22 Planning for Fish Farming was published on 1 April 2007 and provides statements of Scottish Executive policy on nationally important use of the marine environment.

Scottish Executive Environment Rural Affairs Department (SEERAD) – is responsible for statutory measures under the Diseases of Fish Acts 1937 and 1983 and related EC Fish Health Legislation to prevent the introduction and spread of serious pests and diseased of

fish and shellfish which may affect farmed and wild stocks. All fish farms must be registered with SEERADs Fisheries Research Services (FRS) for disease control purpose. SEERAD is the formal point of contact for statutory notifications of escapes of farmed fish. In addition, SEERAD also has the following functions:

- Issues licences under Part II of the Food and Environment Protection Act 1985 for proposals, which extend below the mean high water mark on spring tides;
- Undertakes investigations to inform Ministerial decisions; and
- Wider responsibilities in relation to the protection of fish, fisheries and the marine environment. SEERAD's Fisheries Research Services carries out a wide range of marine fish farm research and offers advice on aspects of production and disease control.

Scottish Executive Directorate for Planning and Environmental Appeals- in certain cases where development consent is refused, appeals against refusal of planning permission, or against the attachment of conditions, can be made to Scottish Ministers by the applicant. The appeal is lodged with the Directorate for Planning and Environmental Appeals, formerly the Scottish Executive Inquiry Reporters Unit (SEIRU).

Scottish Natural Heritage (SNH) - SNH takes into account the proximity to and potential impact on wildlife, habitats and landscape. The factors considered include:

- Areas designated for natural heritage purposes, such as Sites of Special Scientific Interests, National Nature Reserves, SACs, SPAs and National Scenic Areas;
- Species protected by legislation, including the Wildlife and Countryside Act 1981 and Habitats and Species Directive (Annexes II, IV and V);
- Visual and landscape implications;
- The potential impact on remote or wild land qualities;
- Impact on general environmental quality and biodiversity;
- Impacts on natural heritage interest from pharmaceutical and other compounds used in aquaculture;
- The risk of genetic contamination of native stocks, particularly of Atlantic salmon; and
- The risk of introducing alien species and the likely consequences for wild animal and plant communities.

Shetland and Orkney Islands Councils – prior to 1 April 2007, these councils had powers to licence works in coastal waters, which they exercised in conjunction with their powers as relevant Planning Authority. Shetland operated under the Zetland County Council Act 1974 and anyone wishing to undertake marine fish farm development required a works licence from the Council. Under the Orkney County Council Act 1974, the Council exercised works licensing powers within certain designated harbour areas. The Town and Country Planning (Marine Fish Farming) (Scotland) Order 2007 amends these Acts to remove the requirement for a works licence for the placing or assembly of marine fish farming equipment in marine waters.

West Coast Fisheries Trusts – are charitable organisations which have been set up to promote and undertake research to provide scientific advice on the fisheries resources in the west and north of mainland Scotland. Support is provided by a number of organisations including statutory consultees.

2.5.1 Non-Statutory Consultees

There are a large number of non-statutory consultees who can be consulted. These will vary and are dependent on the individual application. They can include but are not limited to:

- Maritime and Coastguard Agency;
- Association of District Salmon Fisheries;
- Community Councils;
- Other fish and shellfish farms in the area;
- Association of Scottish Shellfish Growers;
- Association of West Coast Fisheries Trusts;
- Atlantic Salmon Trust;
- Fisheries Research Services;
- HM Coastguard;
- Highlands and Islands Enterprise;
- Historic Scotland;
- Mallaig and North West Fisherman's Association;
- MOD;
- Northern Lighthouse Board;
- Orkney Fisherman's Society Ltd.;
- Royal Yachting Association;
- Salmon and Trout Association;
- Scottish Association of Marine Science;
- Scottish Executive Development Department;
- Scottish Federation of Sea Anglers;
- Scottish Fishermen's Federation;
- Scottish Quality Salmon;
- Scottish Sports Council;
- Scottish Tourist Board;
- Scottish Trust for Underwater Archaeology;
- Scottish Wildlife and Countryside Link;
- Sea Fish Industry;
- Sea Mammal Research Unit;
- Shetland Fishermen's Association;
- Shetland Salmon Farmers Association and Seafood Shetland; and
- Western Isles Fishermen's Association.

3 REVIEW OF PLANNING CONTEXT

This Planning Context Overview describes the national and local planning policy frameworks relevant to the development of marine fish farming activities. Spatial planning is becoming increasingly relevant and important in the coastal and marine policy arena.

The purpose of this review is to:

- Summarise the existing planning policy context of the marine fin fish developments, considering relevant National Planning Guidelines (NPPGs), Scottish Planning Policies (SPPs), and Planning Advice Notes (PANs);
- Describe the relevant changes contained within The Planning Etc.(Scotland) Act 2006; and
- Provide recommendations with a view to recognising the key role that the UK planning system can play in the development of marine fish farming activities.

3.1 Planning Policy Context for Marine Fish Farming

As with other forms of development, the Planning Authority must assess each application for planning permission for a proposed aquaculture development against relevant Structure Plan and Local Plan policies. This assessment must recognize material planning considerations such as the raft of available National and Scottish Policy Guidelines. Those of most pertinence are outlined below.

National Planning Policy Guidelines (*NPPGs*) are in the process of being replaced by Scottish Planning Policies (*SPPs*). These provide statements of Scottish Executive Policy on nationally important land use and other planning matters. Existing *NPPGs* are a material consideration, and have continued relevance to decision making until such times as they are replaced by a *SPP*.

SPP1: The Planning System
This policy document sets out the Executive's key objectives for the planning system. It outlines the purpose of the planning system; indicates how planning can contribute to the Executive's wider objectives; sets out the main tasks for development planning and development control; identifies the Executive's expectations for an efficient and effective planning service; and, specifies the performance targets that the Executive and Planning Authorities should aim to meet in carrying out their statutory responsibilities.

Although it can be argued that an entirely separate planning system for the marine environment may be appropriate, at the moment this policy document remains of key relevance.

SPP2: Economic Development
SPP2 addresses how planning can assist in economic development whilst taking account of important social and environmental agendas. It outlines four key requirements for Planning Authorities, namely to;

- ensure that existing business locations are able to meet the anticipated changes in the economy and that they provide choice for a diverse range of economic developments;
- secure and support the delivery of sites for economic development in in sustainable locations by identifying key locations that are highly accessible by public transport;
- safeguard and enhance the environment by requiring that new development is of a high design quality; and
- encourage a positive culture of engagement with business interests by promoting dialogue between all those involved with business development.

In terms of aquaculture, this policy document would be a material consideration for any given proposal. The site specific Aquaculture Framework Plans, discussed later in this chapter, are considered to sit squarely with the requirements of this SPP.

NPPG5: Archaeology and Planning states that the Executive seeks to encourage the preservation of our heritage and landscapes of archaeological and historic interest. The guidance is aimed at local authorities, but is equally relevant to other bodies (including developers), the actions of which could have a direct impact upon the natural or built environment.

Fish farming could significantly impact on aspects of underwater cultural and historic heritage and may impact on protected coastal landscapes. Should a proposal not satisfy the requirements of this document it would be difficult for the Council as Planning Authority to approve the requisite planning application.

***NPPG10: Planning and Waste Management*.**
Waste is the unwanted by-product of industrial, commercial and domestic activities or anything otherwise discarded. Priority is now being given to: the reduction of waste at source; its reuse; its recovery by recycling; and to the use of waste as a source of energy. The guideline sets out planning policies for development involving the management of waste. It discusses how development plans should address waste, and explains how the planning system should operate in relation to other pollution controls.

PAN63: Waste Management Planning compliments *NPPG10: Planning and Waste Management* and builds on the information given on land use planning for waste management in the *National Waste Strategy: Scotland.* It is intended to help Planning Authorities with the transition in emphasis from waste disposal to integrated waste management by fostering good practice; consistency and clarity; and, encouraging more proactive approach to waste management planning in development plans and the development control decision making process

Both NPPG10 and PAN63 have direct relevance to aquaculture development. Clear and concise information on the management of waste products should be submitted with the planning application.

NPPG 11 Sport, Physical Recreation and Open Space Contains general information on planning for sport and recreation, including water-based activities. While planning can control the location, design and some aspects of the operation of coastal recreation facilities, some issues require to be addressed through a partnership approach to coastal zone management.

The contents of this NPPG are required to be considered to minimise the potential for competing uses of the coast to cause conflict.

NPPG13: Coastal Planning takes into account recent and likely development pressures on the coast and nature conservation designations. It sets out how planning can contribute to achieving sustainable development, whilst maintaining and enhancing biodiversity on the coast. It highlights the need to distinguish between policies for the developed, undeveloped and isolated coast. It also outlines policy guidance for developments, which require a coastal location, such as proposed aquaculture development.

NPPG 13 states that the coastal zone comprises 3 main elements: the land, the inter-tidal zone, and the sea. Statutory planning control does not extend to the entire coastal zone, although some development, such as fish-farming, which occurs off-shore may impact on-shore. Conversely, discharge of pollutants into the sea may affect fish stocks and possibly the subsequent livelihood of coastal communities. Planning Authorities are expected to recognize the inter-relationship between onshore and offshore activities.

For statutory planning purposes the limit of the coastal zone in the seaward direction is the Mean Low Water Mark of Ordinary Spring Tides. The landward limit of the coast is more difficult to define but can be determined by the geographical effects of coastal processes and coastal related human activity. It is for Planning Authorities, based on the particular characteristics of an area, to define the extent of the coastal zone in their area.

For planning purposes, the coast can be viewed as developed, undeveloped or isolated:

- The Developed Coast includes towns and cities as well as substantial free standing industrial and energy developments. It may also contain sites of significance for national and international nature conservation, important cultural heritage resources as well as valuable areas of open space and recreation such as golf courses.
- The Undeveloped Coast includes agriculture and forestry land, low intensity agricultural uses and smaller settlements, which depend on the coast for their livelihood. Extensive sections of the undeveloped coast are protected by national and international natural heritage designations and contain important cultural heritage resources.
- The Isolated Coast is distant from centres of population and lacks obvious development or other signs of human activity. Such areas are likely to be relatively inaccessible. Some parts of the isolated coast may be protected by national and international natural heritage designations and may contain important cultural heritage resources..

Planning Authorities should therefore work with the fish farming industry as well as local and environmental interests, including District Salmon Fishery Boards and Fisheries Trusts, in the preparation of their development plan.

Developments plans should include policies which:

- Support the Scottish Ministers' commitment to the growth of an aquaculture industry that is sustainable, diverse and competitive;
- Recognise the locational constraints identified in published guidance and identify areas or sites where, for overriding environmental reasons, development proposals would only be allowed in exceptional circumstances; and
- Provide a clear development control framework for fish farming; and
- Signs of development or other signs of human activity. Such areas are likely to be relatively inaccessible. Some parts of the isolated coast may be protected by

national and international natural heritage designations and may contain important cultural heritage resources.

This categorisation is intended to serve as a policy framework for the coast and not as an additional statutory designation. It is for Planning Authorities, in their structure and local plans, to identify which stretches of coast should be regarded as developed, undeveloped or isolated and set out adopted policies which should apply in these areas. A development plan supplementary advice note may provide developers with useful policy guidance.

The significant contribution that fish farming makes to the rural economy is acknowledged, as is the need to balance economic and environmental factors. Policy in these and other SPPs/NPPGs is therefore relevant to fish farming development. Planning Authorities are expected to take this into account when preparing polices for inclusion in development plans and in considering applications for planning permission.

An updated version of this policy document is due imminently.

NPPG14: Natural Heritage sets out national policy considerations in relation to Scotland's natural heritage and summarises the main statutory obligations in relation to the conservation of natural heritage. The guidance describes the role of the planning system in safeguarding sites of national and international importance, and draws attention to the importance of safeguarding and enhancing natural heritage beyond the confines of designated areas.

NPPG 14 states that the maintenance and enhancement of the natural landscape, exceptional in both quality and diversity of character, is beneficial to all. National planning policy and advice also emphasises the importance of fit and design of new development in the landscape.

Proposals for aquaculture development should be mindful of the content of this *NPPG* and examine not only the impact of the proposals on the natural landscape, but also consider its impact on the wider environs.

PAN60: Planning for Natural Heritage gives basic advice in relation to development and natural heritage. It compliments *NPPG14: Natural Heritage* and in addition to giving general advice this *PAN* also introduces a number of useful examples of initiative and provides case studies. It aims to draw together elements of natural resources under one topic heading e.g. recreational use, landscape and woodlands. It reiterates the Government's commitment to the protection and enhancement of the natural heritage, while emphasizing that it is not only related to rural environments.

NPPG15: Rural Development sets out how the statutory land use planning system can assist Scotland's rural areas to achieve sustainable development, whilst identifying development opportunities designed to meet those needs in a way that enhances environmental quality. While accustomed to land based development, Planning Authorities are expected to recognise that the marine environment community includes those who live near a development and may include inshore fishermen, sailors and yachtsmen, anglers, recreational users of the sea etc. It may also involve inter-authority cross-boundary issues.

NPPG18: Planning and the Historic Environment deals primarily with listed buildings, conservation areas, world heritage sites, historic gardens, designed landscapes and their settings and sets out planning policies with a view to protection, conservation and

enhancement. This may impact on proposed aquaculture development depending on the nature of the proposed development and the relevant application site parameters.

PAN51: Planning and Environmental Protection give advice on the role of the planning system in controlling pollution and its relationship to a number of environmental protection regimes. The town and country planning system and the statutory environmental protection regimes are separate and complimentary. The *PAN* also advises Planning Authorities on the statutory responsibilities of the environmental protection bodies, as well as informing those bodies about the planning system.

In terms of the relevance of *PAN51* to fish farming, reference is made to marine protection and *The Food and Environment Protection Act 1985.* The deposit of substances or articles in the sea or under the sea bed within the United Kingdom or United Kingdom controlled waters is regulated by licensing under Part II of the Food and Environment Protection Act 1995 (FEPA) (as amended by EPA 1990). The main purpose of this Act is the protection of the marine environment, the living resources which it supports and human health and to prevent interference with other legitimate uses of the sea.

The main interface between the planning system and the environmental protection regimes occurs during the development control process. Since planning applications have to be determined in accordance with the development plan, *PAN51* emphasises that it is vital that the environmental protection bodies contribute fully to the preparation of development plans and do not rely only on their role in development control.

PAN51 concludes by acknowledging the complex nature of environmental protection issues, and seeks to ensure that arrangements are in place which minimise the risks to public health and to the environment. It states that it is the responsibility of Planning Authorities and the environmental protection bodies to collaborate in the task of protecting the environment, and critically to apply controls so that duplication is minimised and overlap is avoided whenever possible.

PAN53: Classifying the Coast for Planning Purposes. Sets out criteria which Planning Authorities in Scotland should use in deciding whether the coast should be regarded as developed, undeveloped or remote. The stipulated criteria have been agreed by a working group comprising figures from central government. Local authorities and other interested parties. A pilot study carried out on the Aberdeenshire coast has demonstrated the robustness of the methodology.

The proposed framework seeks to provide a practical model within which Planning Authorities, in their structure and local plans, can classify the coast as a basis for promotion of development.

Policies in other *SPPs* and National Planning Policy Guidelines (*NPPGs*), such as *NPPG 13: Coastal Planning* and *NPPG 15: Rural Development*, emphasise the importance of promoting and guiding new development to sustainable locations. *NPPG 13*, in particular, sets out how planning can contribute to achieving sustainable development, whilst maintaining and enhancing biodiversity on the coast. It highlights the need to distinguish between policies for the developed, undeveloped and isolated coast, and indicates how Planning Authorities should respond to the risk of erosion and flooding in the coastal zone. It also outlines policy guidance for developments, which may require a coastal location.

PAN54: Planning Enforcement provides best practice in the implementation of enforcement measures and provides advice on the range of powers available to Planning

Authorities within the current legislative framework. It also contains working models for the serving of enforcement, stop and breach of condition notices. The measures that the new Planning etc. (Scotland) Act 2006 introduces are discussed elsewhere in this Report.

This *PAN* details the range of planning enforcement powers available to Planning Authorities. Following the grant of planning permission, an applicant is expected to comply with the approved plans and any planning conditions attached to the approval. Should these approved plans and conditions not be addressed in full, the Council as Planning Authority may serve a formal notice requiring the remedy of the suspected breach of planning control.

PAN58: Environmental Impact Assessment is of key relevance to this marine fish farming. It provides information and advice on the legislative background to Environmental Impact Assessment (EIA) and the evaluation of environmental information by the Planning Authority. It also defines the EIA process and refers the reader to additional sources of information and advice. It relates only to EIA for development projects authorised under planning legislation. It also includes Annexes on the regulations and reviews the content of an Environmental Statement.

The statutory requirement for EIA applies to the types of projects described in the Environmental Impact Assessment (Scotland) Regulations 1999 (Schedules 1 and 2). EIA is only required for a Schedule 2 project if it is judged likely to have significant environmental effects.

The *PAN* stipulates clearly that for the overwhelming majority of development projects however, normal planning powers are perfectly adequate to gain environmental information and EIA is not required. This is an important statement of government policy.

This *PAN* also provides information and advice on:

- The legislative background to EIA;
- EIAs in Scotland;
- The process of environmental impact assessment;
- Environmental studies and statements;
- The evaluation of environmental information by the Planning Authority, and
- Implementation through the planning decision.

The EIA Scotland Regulations (1999 No. 1) transpose the European Council's EIA Directive as amended into Scottish planning law. With regard to Town and Country Planning matters they supersede the Environmental Assessment (Scotland) Regulations 1988 and all amendments. These Regulations set out the statutory procedures, list the types of project to which they apply, specify the information to be contained in an Environmental Statement, list the consultation bodies and provide criteria for deciding whether projects are likely to have significant environmental effects.

The Town and Country Planning (Scotland) Act 1997 and The General Permitted Development Procedure Order 1992 provide Planning Authorities with wide ranging duties and powers to collect and evaluate information from consultees and the applicant before determining any planning application. This may involve consultation and discussion as appropriate with statutory bodies such as SNH and SEPA, amenity bodies, community councils, the general public and other council departments or services.

The planning system therefore provides a means for assessing the environmental effects of all planning applications. The absence of a formal EIA does not mean that environmental issues are not being considered nor appropriate mitigation measures put in place.

A wide range of development proposals have 'permitted development proposals' which effectively means that the submission of an application for planning permission is not required. Where, however, such proposals require EIA under the Regulations, permitted development rights are withdrawn and planning permission must be sought. This is an important point of clarification.

There are additional environmental controls, which are likely to share information requirements with an EIA. These include Integrated Pollution Control, which deals with discharges from major industrial processes, and the Control of Major Accident Hazards Regulations. Each has its own legislative requirements and applications are not necessarily prepared and submitted concurrently or sequentially. *PAN51: Planning and Environmental Protection* makes reference to this occurrence.

Special Protection Areas (SPAs) and Special Areas of Conservation (SCAs) under the E.C. Habitats Directive (92/43/EEC) are collectively known as 'Natura 2000' sites. Planning Authorities are required to make an appropriate assessment of whether a proposal significantly affecting a Natura 2000 site is likely to damage a conservation interest of that site, and in doing so they must consult SNH. The assessment is required whether or not the proposal is subject to a full EIA. If an EIA is carried out for a proposal affecting a Natura 2000 site, the Environmental Statement should address the impact of the proposal on the conservation interest of the site in question. The Environmental Statement will help the Planning Authority to make its assessment of whether a proposal is likely to have a detrimental effect on the conservation interest and therefore whether they may grant planning permission for the proposal.

The Government's policy is clear here insofar as proposed Natura 2000 sites, and sites designated under the under the Ramsar Convention on Wetlands of International Importance, should be protected to the same extent as if they had the status of designated SPAs or SACs.

PAN58 illustrates, in the manner below, that the overall EIA process may be subdivided into a number of steps:

- Project Initiation – Design with the Environment;
- Screening;
- Scoping and pre-application discussions;
- Environmental studies;
- Preparation of Environmental Statement (ES);
- Submission of planning application with ES;
- Review of the ES by Planning Authority and consultees (possible request for further information);
- Evaluation of environmental information and other material considerations by the Planning Authority;
- Decision : refuse or grant (with or without planning conditions); and
- Implementation and Monitoring

At several steps in the EIA process, a range of consultation bodies have a duty if requested to provide information and advice: to the Planning Authority on the scope of the EIA, to the applicant during the preparation of the ES, and to the Planning Authority during their

evaluation of the ES and consideration of the planning application. During the EIA process, as additional information is made available the initial views of consultees may develop, but there is an expectation that their advice will be consistent on points of principle.

There is also the requirement for public involvement. The submission of an ES must be advertised and copies made available for inspection or purchase. Local and national interest groups may all have interesting comments to make. Public meetings, leafleting of local residents and questionnaires have all been used to elicit an understanding of public views and concerns.

Where EIA is required for a planning application the requirements of the Regulations must be fully met regardless of whether or not the application is in outline form. A Planning Authority may decide, given the circumstance of a case, that they are unable to entertain an outline application unless further details concerning the siting, design, external appearance, access or landscaping have been submitted (Article 4(3) of The General Development Procedure (Scotland) order 1992).

The Planning Authority has a statutory responsibility for deciding whether an EIA is required for Schedule 2 projects. An EIA is always required for Schedule 1 projects. This process is known as *'Screening.'*

Once a proposal is established as a Schedule 2 development, to require an EIA it must be judged by the Planning Authority as likely to have significant environmental effects.

For Schedule 2 developments the need for an EIA has to be determined on a case by case basis.

The applicant should identify the key issues for EIA before the detailed studies commence. This process is known as *'Scoping.'* The requirement for pre-application discussions, a has been formalised in the new Planning Etc. (Scotland) Act 2006, are an opportunity for both parties to discuss the scope of the EIA. For the Planning Authority in particular, this is an opportunity to provide early advice on the EIA process, methodologies, sensitive issues and sources of information. *PAN58* states clearly that the early involvement of all parties in the process is encouraged.

The purpose of scoping is:

- To focus the EIA on the environmental issues and potential impacts which need the most thorough attention;
- To identify those which are unlikely to need detailed study; and
- To provide a means to discuss methods of impact assessment and reach agreement on the most appropriate.

By drawing on the knowledge of the Planning Authority and consultees, a scoping exercise will help the developer to identify the main issues quickly. It also gives an early indication of where mitigation measures may be necessary and should help to reduce requests for further information once the ES is submitted. The matters identified by the scoping exercise will derive from the nature of the project, the site and the environment.

A good scoping exercise will lay the foundations for a good EIA. It is a critical and essential stage. Further advice is available in 'Guidance on Scoping (European Community, 1996) and also in 'A Good Practice Guide in the Preparation of Environmental Statements (DoE, 1995).'

The *PAN* proceeds to provide information on:

- Baseline Information;
- Predicting and Assessing Impacts;
- Elimination of Adverse Environmental Impacts and Mitigation;
- Schedule of Environmental Commitments;
- Monitoring;
- Content of the Environmental Statement;
- Evaluation and Review;
- The Planning Report and Decision;
- Development Plans; and
- Other EIA Regimes.

It concludes by stating that studies should be focused on the key issues on which the acceptability of the project rests, and not be unnecessarily elaborate. Environmental issues must be seen alongside other concerns and considerations. EIA should nevertheless play a key role in decision making at all stages of a project, bringing benefits to applicants, consultees, the public, interest groups and interest groups.

Further guidance on the detailed siting and design of marine aquaculture developments, both onshore and offshore, is found in *Marine Aquaculture and the Landscape: The siting and design of marine aquaculture developments in the landscape* by SNH, The Crown Estate and Scottish Quality Salmon, 2000. This guidance offers advice on how to assess and address the landscape and visual impact of marine aquaculture developments. It aims to ensure that those involved in aquaculture developments are well informed on landscape issues.

Given that many of the issues such as visual and cumulative impact are similar, policies underpinning site selection for marine fish farms should be the same for those in freshwater lochs.

3.2 Aquaculture Framework Plans

Several Planning Authorities have produced aquaculture Framework Plans for the purposes of introducing a traditional development plan approach to aquaculture development. They generally look to balance the need for sustainable aquaculture development with the requirement to protect natural and cultural heritage interests.

The Framework Plans are effectively development plan policies. All proposed aquaculture development is assessed against the terms of each individual Framework Plan and other relevant local and structure plan policies. Proposals which do not comply with these policies are unlikely to obtain the benefit of planning permission.

The planning status of these Framework Plans has been recognized and upheld at the planning appeal stage. Developers should therefore attach significant weight to their significance.

This attempt to transfer terrestrial land use planning policies and procedures to the arena of aquaculture development is to be commended. Perhaps in time it may be a legislative requirement that Council's prepare such Plans for coastal areas within their jurisdiction.

For the purposes of this report the following Optimisation Plan and Aquaculture Framework Plans were examined:

Western Isles
- The Loch Roag Optimisation Plan.

The Highland Council
- The Loch Eriboll Aquaculture Framework;
- The Loch Bracadale Aquaculture Framework;
- The Loch Hourn Aquaculture Framework;
- The Loch Inchard Aquaculture Framework; and
- Loch Sunart Aquaculture Framework Plan

The Loch Roag Site Optimisation Plan (SOP) was the pilot for the introduction of SOPs throughout the Scottish aquaculture industry. It concludes that the proposals for the Loch Roag SOP are a significant improvement in the environmental and resource management of the loch system relative to the current practice. The information provided within the report could be used as a baseline from which aquaculture development and performance can be monitored, post SOP, in respect of the loch environment, the viability of the businesses within it and other relevant factors.

The Loch Eriboll Aquaculture Framework Plan (AFP) was prepared by a small team within the Highland Council's Planning and Development Service, and involved consultation with the local community, commercial and recreational users of the loch. The Council's AFPs represent an innovative approach to the issue of conflicting pressures for the use of inshore waters. They are unique in the UK but have attracted international interest. They show how the development plan approach can be applied in an understandable way to the area below the low water mark. The plan's policies balance the need for sustainable economic development and safeguard natural heritage interests.

This AFP implements at a local level national policy guidelines on aquaculture and the Council's Structure Plan's sustainability objectives. It identifies specific development opportunities and constraints in the marine and coastal area to guide aquaculture interests. Aquaculture developers can now tailor their applications for seabed leases with a clearer picture of the issues and interests to be addressed, and have a better feel for the likely outcome of their proposals.

The Loch Bracadale AFP highlights the success of its area policies. In general terms the Plan adopts a presumption in favour of development in a policy zone already containing an aquaculture installation. It is emphasized that in some areas a continued aquaculture use may be acceptable but that further expansion may be inappropriate.

The Loch Hourn AFP stipulates that in seeking to reconcile marine fish farming with employment, other economic benefits as well as environmental and conservation considerations, the following factors are of particular relevance. These factors are material considerations, along with national and local policy, when assessing individual proposals. They should be addressed, where appropriate, in the environmental assessment and conditions attached to leases:

- Landscape and visual impact;
- Effect on recreation and tourism;
- Effect on fishing and navigation;
- Aspects of pollution, disease and carrying capacity;

- Nature conservation interests, including wild fish populations;
- Access and infrastructure requirements, and
- Methods of operation (e.g. lighting impacts, associated noise etc).

This AFP states that each application will be assessed in accordance with development plan policies, the applicant's case for the proposed development, the environmental implications and other material considerations

The Loch Inchard AFP identifies three main objectives:

- To identify opportunities for aquaculture development compatible with other interests;
- To raise public awareness of the multi-faceted resources of Loch Inchard and its environs; and
- To identify investment priorities for infrastructure to support the development of aquaculture and to maximize the general economic and recreational value of the Loch.

Since Highland Regional Council first published a plan for Loch Inchard in 1988 there was modest development pressure for finfish farm sites in the inner loch. In the subsequent twelve year period, changes in the technology and the economics of finfish farming have meant that such developments are now limited to the outer reaches of Loch Clash and Loch Inchard itself. The AFP states that current aquaculture installations are different from those envisaged at the time the last framework plan was produced.

3.3 Marine Spatial Plans

One of the provisions under the Town and Country Planning (Marine Fish Farming) (Scotland) Order 2007, are for marine planning zones. A number of pilot schemes have been launched under the Scottish Sustainable Marine Environment Initiative (SSMEI) Marine spatial plans aim to help balance industry, leisure and environmental pressures on the marine environment.

Marine spatial planning pilots are already underway for:

- The Shetland Isles;
- Firth of Clyde;
- St Abbs and Eyemouth for coastal communities along the Berwickshire Coast; and
- The Sound of Mull

The individual pilots are aimed at testing experimental approaches at a range of scales and locations.

3.4 The Planning Etc. (Scotland) Act 2006

Previously the planning system has primarily focused on onshore development. The offshore elements of fish farming have been outwith the statutory planning system that regulates development on land. The new *Planning Etc. (Scotland) Act 2006*, from an aquaculture development perspective will address this anomaly by introducing the following amendments:

- The definition of development is now extended to include fish farming within 12 nautical miles from the baselines from which the territorial sea is measured

(subsection(1)(b)). A nautical mile is defined as 1852 miles. Fish farming in inland waters is already subject to planning control under the terms of *The Town and Country Planning (Scotland) Act 1997* and these provisions are retained.

Comment: The Act now determines that aquaculture development, including fish farming within the prescribed 12 mile nautical limit, falls within the extended definition of development. Such development requires the submission of a planning application to the relevant Council, as Planning Authority, to obtain planning permission.

- Subsection (1)(c) allows the Scottish Ministers to make orders regarding the placing or assembly of equipment for the purpose of fish farming in waters described in section 26(6)(b) or (c) of the 1997 Act. Provision is also made for the Scottish Ministers to allocate responsibility in the order to a particular Planning Authority or National Park authority, having consulted SEPA and every Planning Authority, and other suitable persons or bodies as they see fit.

  Comment: This subsection allows the Planning Authority to ensure that the stipulated equipment is in place for any given site in terms with the requirements of the order.

- Also of note is the introduction, in section 27A, is the introduction of the ***'Notification of Initiation of Development.'*** These new provisions require the Planning Authority to be informed by the developer when development is to be commenced. The Planning Authority is to issue a notice to the applicant informing them of this requirement.

  Comment: The introduction of what is effectively a 'Start Notice' will enable the Planning Authority to trigger a scheme of site monitoring. Council planning enforcement regimes remain under resourced and in some cases marginalized. If effective monitoring of planning conditions is to be undertaken, this resource will require additional funding.

- In section 27B, the ***'Notification of Completion of Development'*** is introduced. This subsection contains provisions requiring the Planning Authority to be informed by the developer when development has been completed. Where the development is to be carried out in phases, the Planning Authority is to impose a planning condition on the planning permission requiring the developer to inform the Planning Authority of the completion of each phase.

  Comment: This 'Stop Notice' has a similar purpose to the 'Start Notice' referred to above, and affords the Planning Authority the opportunity to schedule a site monitoring visit to establish that both the approved plans and planning conditions have been complied with in full.

- The Act makes commencement of development without informing the Planning Authority of initiation of development a breach of planning control (subsection (2)).

  Comment: This subsection indirectly appears to reinforce the importance Scottish Ministers place on developments being carried out in accordance with submitted and approved plans.

- Section 33A gives the Planning Authority the power to issue a ***notice requiring the owner of the land, and other parties, where planning permission has not been granted, but development has already been carried out, to make an application***

for planning permission. Issuing such a Notice constitutes enforcement action under section 123(2) of the 1997 Act.

Comment: The existing provisions in the 1997 Act only provides that planning permission for development already carried out may be granted.

- The Act places a ***duty on the applicant for planning permission for certain prescribed classes of development to comply with the pre-application procedures set out in section 35B before submitting an application for planning permission.*** The classes of development are to be prescribed by regulations or a development order and different classes can be prescribed for different areas.

  Comment: This is an important element of the 'Act. It is now a formal requirement that applicants (or agents acting on their behalf) enter into meaningful discussions with the Planning Authority, for certain prescribed classes of development, including aquaculture development, before a planning application is submitted to the Council for consideration and determination. A 'pre-application consultation report' is to be submitted in such a form as may be prescribed by the Council. Further advice will be issued by the Scottish Executive in this regard in due course.

- ***Regulations or a development order may set out which developments are subject to pre-determination hearings.*** These hearings give the applicant and anyone else referred to in the regulations an opportunity to appear before and be heard by a committee of the Planning Authority.

  Comment: This provision allows for developers, or their agents, to present their proposals to the relevant Council Planning Committee in a pre-determination hearing. This forum, which would only convene for certain prescribed forms of development, would afford the developer an opportunity to inform Council Members of the perceived merits of their proposals prior to the determination of the application.

- Section 14 of the Act sets out the ***additional grounds in which a Planning Authority may decline to determine an application for planning permission.***

  Comment: This section of the 'Act introduces additional grounds in which a Planning Authority or the Scottish Ministers may decline to determine a planning application for planning permission for the development of any land. Significantly, one of these grounds is that the pre-application procedures, set out in section 35B of the 'Act, have not been complied with. The aim of this emphasis on pre-application procedures is presumably to lessen the time that planning applications take to determine. If solutions to problems can be reached before the application is formally submitted the application should swiftly progress through to approval within a reduced timescale.

- There is now a ***duty on the Planning Authority to refuse an application for planning permission if the applicant*** has failed to comply with the pre-application consultation requirements introduced by section 35B of the 'Act. The Planning Authority is required to inform the applicant of the reason for refusing the application, but may request additional information from the applicant before doing so.

  Comment: If the applicant does not submit a competent 'pre-application consultation report,' containing the level of detail required by the Council, the 'Act states that this

alone would be sufficient grounds for refusing the submitted planning application. This is a bold affirmation of the emphasis that the Scottish Ministers are placing on resolving potential problems at the pre-application stage of the decision making process.

- A party aggrieved by a Council's decision on a ***review of a delegated decision the right to appeal to the Court of Session rather than to the Scottish Ministers.***

  Comment: Prior to the new 'Act all planning appeals, even those for arguably the most minor of developments, were submitted to and determined by the Executive's Inquiry Reporter's Unit (SEIRU). An appeal will now be determined by the Court of Session and not the SEIRU. This step, in conjunction with the Executive's plans to review The General Permitted Development (Scotland) Order to remove from planning control minor householder developments, will result in Council planners being able to devote more time to applications of greater import.

- Section 19 of the Act states that under the new subsections (1) and (2) ***a planning permission lapses after <u>three years</u> unless the development is begun within that time.***

  Comment: Previously the time period that applied here was 5 years. The aim of this new provision is presumably to reduce the number of planning approvals that have not been implemented within what was considered to be a generous 5 year time period.

- Section 20 of the Act introduces ***'Planning Permission in Principle'*** replacing Outline Planning Permission and lapses on the expiry of a period of ***<u>two years</u> after the date on which the approval is given unless development has begun before that date.***

  Comment: Previously the time period that applied here was 3 years.

- The concept of ***'Planning Obligations'*** is introduced (in the new Section 75) whereby a person may enter into a planning obligation, either by agreement with a Planning Authority or unilaterally.

  Comment: This new measure replaces the 'old' Section 75 Agreement and provides for a 'planning obligation' whereby the development or use of land is restricted, either permanently or during a specified time period. The obligation may be unconditional or may be subject to conditions. An interesting note here is that a planning obligation is not enforceable against a third party who has acquired right to the land (whether or not that person has completed title) prior to the relevant instrument being so recorded or registered.

- The Act also introduces ***'Good Neighbour Agreements'*** which allow a person to enter into such an agreement with a community body. Bodies which are considered to be community bodies, for the purposes of a good neighbour agreement, are detailed.

  Comment: This provision in many ways is similar to Section 75 and appears to be a tool to address the problem of a proposed development detrimentally affecting the amenity of adjacent land uses. This may be of relevance in the aquaculture

environment where a proposed fish farm could be construed to be detrimental to the amenity of nearby residential properties.

- Part 4 of the Act addresses Enforcement. Section 24 sets out the circumstances in which Planning Authorities may issue ***temporary stop notices.***

  Comment: This would be of relevance in the aquaculture environment if the Planning Authority can determine that there has been a breach of planning control consisting in engagement in an activity, and it is expedient that the activity (or part of the activity) is stopped immediately, a temporary stop notice can be served. This Notice can be served on a person who appears to the authority to be engaged in the activity, and a person who appears to the authority to have an interest in the land (whether as owner or occupier or otherwise).

- The 'Act also introduces fixed penalty notices where the terms of a served notice have not been complied with in full.

- Part 9 of the Act addresses ***Business Improvement Districts (BIDs).***

  Comment: Section 31 enables a local authority to make arrangements for a BID in a defined area within a local authority's boundary for the benefit of those identified in the BID proposals.

3.5 Other Control and Regulatory Regimes

A number of regulatory regimes interact with the existing planning system. Section 4 provides more detail on the interaction with marine fish farm EIA and CAR. These include:

- The requirement for a discharge consent, currently obtained from SEPA under *The Water Environment and Water Services (Scotland) Act 2003 and associated statutory instrument, the Water Environment (Controlled Activities)(Scotland) Act (CAR);*
- *The Fisheries and Aquaculture (Scotland) Bill (Draft)* will provide new powers to the Fisheries Research Agency to enforce provisions relating to fish health and welfare;
- Consent from the Scottish Executive Enterprise, Transport and Lifelong Learning Department for a consent under *Section 34 of the Coast Protection Act 1949*; and
- Deposits in the sea require to be licensed under *Part II of the Food and Environment Protection Act 1985 (FEPA)*.

Planning guidance and circulars repeatedly state that the planning system should not be used to secure objectives that are more properly achieved under other legislation. The grant of planning permission does not remove the need to seek other statutory consents nor does it imply that these consents will be forthcoming.

3.6 Marine Spatial Planning Task Group

The Royal Town Planning Institute (RTPI) has established a Marine Spatial Planning Task Group at national level, largely in response to a suggestion from members of the Institute in Scotland who began to appreciate the increasing importance of spatial planning to coastal and marine policy. Since then this task group has promoted the concept of marine spatial

planning which was outlined in the recent Department for Rural Affairs (DEFRA) consultation paper on a proposed marine bill for the UK.

The RTPI has actively been assisting respective government departments to explore the concepts of spatial planning in the marine environment with a wide range of stakeholder interests.

3.7 Development Planning

The Development Plan framework (structure plan/local plan) provides the opportunity for Planning Authorities to set out policies for fish farming and to provide more detail on areas to which specific policies apply. Development plans provide the planning context for considering planning applications and guiding development to appropriate sustainable locations.

It is proposed that the current system of structure and local plans be replaced by Strategic Development Plans for the four main city regions, and Local Development Plans that will set out detailed policies and proposals for development and land use. In addition, where the Local Development Plan (LDP) Area is not covered by a Strategic Development Plan, the LDP would include a 'vision statement.'

The proposals will also introduce requirements for better performance and monitoring, including measures such as development plan schemes and action programmes.

These revisions to the development plan scheme in Scotland could provide an ideal opportunity for Planning Authorities to update their Development Plans to include bespoke policies targeted specifically at aquaculture development.

3.8 Development Control

Development control decisions should be underpinned by a clear planning policy framework set out in the development plan.

Prospective developers should discuss their proposals with the Planning Authority and statutory agencies before submitting formal applications. Developers may undertake informal discussions with local groups, which may help to identify potential constraints at an early stage and the need for and potential scope of any Environmental Impact Assessment. Applications should be supported by sufficient information to enable the Planning Authority and their consultees to assess the likely effects.

It is important that a consistent approach to decision making is adopted to allow individuals, communities, environmental and development interests to be clear about what will be allowed and the standards that will be sought in terms of siting or design.

In seeking to reconcile the opportunities for local employment and other economic benefits arising from fish farming with other interests, including environmental and conservation considerations, certain factors are particularly relevant along with national and local policy, when assessing individual proposals for fish farms. They should be addressed, where appropriate, in an Environmental Impact Assessment and conditions attached, where appropriate, to planning applications. The factors are:

- Landscape and visual impact;
- Siting and design;

- Effect on natural heritage and the historic environment;
- Effect on fishing and navigation;
- Aspects of pollution, disease and carrying capacity;
- Access and infrastructure requirements, and
- Methods of operation (e.g. lighting impacts, associated noise etc)

3.9 Conclusion

Scottish Executive Guidance sets out a vision for a sustainable, diverse, competitive and economically viable aquaculture industry. Not all of these issues can be addressed through the planning system.

In general the assessment of the existing planning context indicates that there is a need for Planning Authorities to include specific policies for aquaculture development in Development Plans. The use of Aquaculture Framework Plans by some Councils is a useful format, but it should be stressed that these plans need to be formally adopted as Council Policy and not merely given the status of advice notes.

The Planning Etc (Scotland) Act 2006 introduces planning control over marine fish farms up to the 12 nautical mile territorial limit.

The 'Act states that the current system of structure and local plans is to be replaced by Strategic Development Plans for the four main city regions, and Local Development Plans that will set out detailed policies and proposals for development and land use.

These revisions to the development plan scheme in Scotland could provide an ideal opportunity for Planning Authorities to update their Development Plans to include bespoke policies targeted at aquaculture development.

4 INTERACTION BETWEEN PLANNING AND CONTROLLED ACTIVITIES REGULATIONS

4.1 Introduction

Under the Water Environment (Controlled Activities) Regulations 2005 (CAR), SEPA sets consent limits for sea lice medicines, biomass and nutrients, which are subsequently issued under an authorisation to discharge. Both SEPA and the fish farming industry have suggested that there should better interaction of the development/consent and environmental protection consenting regimes. This view was also expressed in The Royal Commission on Environmental Pollution[4].

In considering the potential interaction of the CAR regime within the existing planning system, it is useful to compare the arrangements under CAR with the Pollution Prevention and Control system (PPC)[5]. New industrial developments often require an EIA under the regulations and some must also make an application for a PPC permit to SEPA for discharges to the environment in much the same way an EIA and CAR consent are required for the fish farm industry. The review of the interaction between PPC and land based planning systems also shows similarities with fish farm applications. Relevant examples are drawn from this system as required.

4.2 The Scale of the Interaction

From 1998 to 2005, there have been approximately 191 marine fish farm planning applications lodged with the Crown Estate.

4.3 Existing Interactions

The interaction between land use planning and environmental regulation has been considered in a number of reports and publications, including a recent report published by the Scottish Executive; 'The Interaction Between Land Use Planning and Environmental Regulation' Environmental Resources Management Ltd (2004). Similarly, the Royal Commission on Environmental Pollution's (RCEP) 23rd Report on "Environmental Planning', "Options for Change", the Scottish Executive research report on a future Planning Bill, and the Policy and Financial Management Review (PFMR) of SEPA. These all identify the potential for improvements in the interaction between land use planning and environmental protection regimes to facilitate appropriate development whilst protecting the environment and engaging local communities in decision-making processes.

In PAN 51, the Scottish Executive has advised that as a matter of good practice, land use planning applications that give rise to environment protection considerations should be considered in parallel with the license application or authorisation. In reality however, the two processes tend to take place sequentially, with SEPA sometimes considering the detailed environment protection implications of proposals before an EIA has been submitted or receiving a consultation request for an EIA before a CAR application has been made. This can result in SEPA having insufficient information about a particular proposal to enable it to provide the authority with fully considered advice on all aspects of the proposal. It is SEPA

[4] Scottish Executive Environment Group. Policy and Financial Management Review of the Scottish Environment Protection Agency. March 2003. Paper 2003/11
[5] The PPC Regime is an environmental permitting system for a list of prescribed, mainly industrial processes under the Pollution Prevention and Control (Scotland) Regulations 2000

policy to object to an EIA if all the information required for a CAR application is not included with the ES.

4.4 Current Practice

SEPA can seek further EIA information when consulted, and are able to maintain a holding objection to the lease/development consent application until this is forthcoming. As noted above in relation to planning decisions made against SEPA's advice, SEPA is concerned about cases where it requests further information but this is not provided, as SEPA can find itself under pressure to remove rather than maintain its objection.

It is clear that current practice does not follow the model of parallel applications encouraged by current guidance. There appear to be a number of reasons for this:

- The differing requirements of the systems, and in particular the levels of design detail needed to support their respective applications;
- Applicants' wish to retain flexibility in their submission strategy to minimise the costs of abortive work and delay that might otherwise be incurred; and
- There may also be a general unawareness of the planning guidance on parallel applications.

The majority of developments proceed sequentially, first through planning to establish the principle of the proposed fish farm development, and then into the detailed development. In some cases the CAR application was submitted after the planning application, at a stage when further development of the proposals had been undertaken, but this was still prior to determination of the planning application. The two therefore proceeded to some degree in parallel. There were no cases reported in which the two were determined at the same time.

A CAR authorisation can be granted in advance of planning permission, the applicant in these circumstances could choose to continue with the application for CAR whilst appealing the planning decision. If this were to happen SEPA would utilise resources to process a CAR application in circumstances where it may not be implementable due to the absence of planning permission. If granted in time, the existence of a CAR permit could become a relevant factor in a planning appeal.

4.5 Comparison with PPC

New industrial developments often require an Environmental Statement under the regulations and some must also make an application for a PPC permit to SEPA for discharges to the environment in much the same way an ES and CAR consent are required for the fish farm industry. The general trend in industry is to submit the PPC application at the same time as the EIA or after the EIA has been determined. This however, is largely controlled by the financial implications of undertaking a PPC without planning permission already in place rather than any specific controls in place to ensure that the applications interact in a suitable way. Guidance does exist recommending that they are undertaken in parallel but this is often seen as impractical and the applications can be undertaken separately[6]. It was however considered that stronger guidelines might improve the interaction. With reference to one specific review of PPC applications, both SEPA and the Planning Authority have indicated that there would have been significant advantages in the ES addressing more of the requirements of PPC. This would have avoided the long delays

[6] Interaction Between Land Use Planning and Environmental Regulation, Scottish Executive Development Department, Social Research (2004)

introduced by the requests for further information and allowed SEPA to advise more clearly on whether it had any objections to the granting of planning permission.

4.6 Options for Improvement

In its input to its PFMR, and in line with PAN 51, SEPA argued for the parallel approach on grounds of avoiding delay, duplication, waste of scarce resources.

Current practice does seem to cause delay and these delays are a cause for frustration from developers and a potential lack of confidence in the process. There is also a cost to SEPA (and other statutory consultees) in responding to consultations, particularly as this arises in advance of any fee being received for a CAR application. Where consultations are delayed due to lack of information or complexity of issues, these costs may be substantial. However early consultation and compliance with scoping requests should save time and money in the long run, provided all parties make appropriate responses to the process.

A number of reviews believe that it is worth exploring the feasibility and worthwhile for parallel consideration of applications to become a more standard practice. Given the complexity of the issues covered and the information required by the two systems, it is important that any consideration of changes to current practice take into account the views and opinions of the Planning Authorities, stakeholders and the full range of potential applicants. Ensuring better information is provided at the EIA stage may also be relevant.

As noted above, the review of the PPC system suggested that strengthening the current guidance on parallel applications for planning and environmental consents may be a possible solution to overcome the issues of retaining the flexibility of timing but still retaining the parallel application. This would need to be carefully considered to see if the system could accommodate the cases where it is necessary to apply for a CAR authorisation before planning to test a new technology could meet the requirements before proceeding to planning.

Several advantages of retaining a sequential/flexible approach are as follows:

- It may offer opportunities for efficiencies to applicants as described above;
- It may offer applicants benefits in terms of securing progressive investment support;
- It provides opportunities for inputs to be made by the different authorities at various stages, from the early stages of development as projects come into the planning system, to the late stages of detailed design.

If strengthening the guidance on parallel applications is not recommended, due to stakeholders wish to retain flexibility, then the following options may be considered:

- Adoption of a formalised sequential consenting process where prior consents must be obtained before a final consent is given;

- Adoption of formally coordinated consenting process with a single lead agency appointed to manage combined information and consultation processes.
    - The EIA process could be managed by one consenting body and be used to inform the different consent regime and this should be reflected in the scoping process. This would help ensure the ES provided all the information for all necessary consents and registrations. This would also simplify the system for developers, offering a ‘one-stop-shop’. This approach has been adopted in the Netherlands.

The options discussed above should be explored in much greater detail through a process of consultation with stakeholders.

Although endorsed by SEPA and other authorities, strengthening the current guidance on parallel applications may not be the best mechanism to address the interaction of the systems. Attention should perhaps focus on using other mechanisms to ensure adequate information is available at the planning stage, including enhanced communication and coordination between the authorities and improved information dissemination. Under new planning legislation, consultation has been more formalised.

4.7 Conclusion and Recommendations

Greater sharing and exchange of information between the two systems ought to enable planning decisions to take fuller account of the environment protection implications that applications raise. Closer alignment between the two regimes should provide a better service to applicants and reduce the risk of applicants having to resubmit development/lease consent applications. However, there may be circumstances where, in light of particular commercial considerations, applicants would prefer to see their applications considered sequentially rather than in parallel.

It is recommended that the Executive in consultation with SEPA and other interested parties should undertake a study to establish the scope for improving interaction between the statutory land use planning system and environment protection consenting regime. A detailed review of case studies, consultation and case law should be drawn together to identify the strengths and weaknesses of the current practice. Areas for development or opportunity should be discussed with respect to the options and of the reviews addressed in this report.

5 CONSULTATION RESPONSES

In order to gather the views of a range of consultees, a semi-structured interview pro-forma was designed. The pro-formas were issued to a number of key individuals identified and agreed by the steering group who responded by email or in a telephone discussion. Nine consultees agreed to provide input to the review. Respondents included one consultant, several statutory and non-statutory consultees and two competent authorities. The responses are summarised below.

5.1 Pre-Application Discussions

The general consensus of all those interviewed was that pre-application discussion was a beneficial tool. It was commented that the nature of the discussion is dependent on the extent and size of the site. Discussions were more likely to occur with larger, experienced operators. Non-statutory consultees tended not to be involved in the pre-application discussions, but commented that they were involved in the process within other industries and considered them highly beneficial to all parties. All interviewees would encourage greater pre-application discussion, although resource issues were raised on several occasions.

The consultee response indicated that there was considerable variation in the methods used for screening and scoping across the country with no standardised approach taken. Screening and scoping of an EIA is carried out as a joint process in most instances but at present there are variations in the methodology between the different competent authorities. It was commented that in Shetland the screening/scoping format was not always used and the works license application was often used in its place. This was attributed to the commercial confidentiality and competition for sites in Shetland. Additionally in Shetland scoping reports were never used whereas the scoping report format was used for mainland sites. The quality of the scoping reports obtained from mainland sites was noted to vary which interviewees attributed to a lack of suitable guidance in the area.

The statutory consultees tend to receive a formal scoping document from the competent authority and are given the opportunity to respond. The degree of communication with the consultees and stakeholders varies between regions with Shetland stating that there was a continual dialogue, while in contrast very little communication was undertaken on the mainland. SNH suggested that scoping meetings before and after the scoping exercise would be useful. A ‘round table’ discussion format was suggested including a selected range of statutory consultees and the developer to encourage a joint approach and minimise duplication. It was recognised that this was not necessarily practical or essential, but would be welcomed for complex sites.

Timescales for scoping were generally noted to be short and turnaround can be delayed beyond the recommended length in some cases.

Non-statutory consultees noted that they were often not consulted early enough in the process and were generally only contacted if there was a specific issues highlighted in their area. This is very different for the input in other industries where there is full involvement of the non-statutory consultees such as RSPB.

5.2 Consultations

The overall impression of the consultation process obtained from the range of interviewees indicated that the process had little structure and the success of the process varied. Much of the emphasis on consultation was placed on the competent authority rather than on the developer. Shetland appeared to have the most successful consultation process where, under the Zetland County Council Act 1974 legislation, there is a need to 'take heed' of other interested parties, this places the consultation responsibility for consultation on Shetland Council through the work license system.

Slight confusion appears to exist over the roles and responsibilities each of the statutory and non-statutory consultees. There was a suggestion that this reflected a lack of sufficient funding and training in EIA. It was also commented that there is a degree of duplication of effort by the various consultees, often commenting on the same issues.

Generally, there was agreement that there is currently very little proactive consultation with the public and non-statutory consultees carried out by the developer. It would be beneficial to the developer to incorporate this into the process.

5.3 Planning and CAR

The consultee responses indicated that CAR is a problematic area of the EIA process and the level of duplication was acknowledged throughout the process. The present system allows for a CAR application to be submitted in advance of the EIA. Retaining this flexibility is considered important as it allows the operator to identify if their site and equipment will meet consent levels before they invest in an EIA. It does however raise numerous issues with respect to the SNH remit (impact on flora and fauna). The comment was made that CAR applications submitted prior to EIA did not have enough information to enable a comprehensive assessment of impacts, resulting in time-consuming delays to the application and frustration for both the developer and statutory consultees.

Synchronisation of the two processes would benefit the industry by reducing the duplication of effort by the developer and statutory consultees. It was identified that the industry often considers that once consent has been issued, the environmental considerations have been accounted for and will not be an issue at development consent stage. As a result, problems can arise if an objection is raised to the development and planning refused.

In response to the need to see CAR-related information in an ES, responses indicated that it was often necessary to have this information to assess impacts relevant to another statutory consultee. Examples were provided to illustrate the impact of water quality on natural heritage issues and the results from hydrographic modelling were cited as necessary to assess these.

5.4 Natural Heritage Interests

SNH will request an Appropriate Assessment (AA) only if they have insufficient information to judge if there is likely to be a significant effect. SNH indicated that the AA is the responsibility of the competent authority.

It was noted that industry guidance for aquaculture in sensitive areas[7] at a European level was under development. This would provide better guidance in this area for proponents.

[7] This is based on the Poseidon Report which is discussed in section 6.6 of this document.

5.5 Costs and Timescales

Currently, the timescales associated with submission of and ES and planning application are defined in the Regulations and summarised in the table below. These will change with the introduction of the Town and Country Planning (Fish Farming in Marine Waters) Order 2007.

Stage	**Current Timescale under the EIA (Fish Farming in Marine Waters) 1999**	**Future Timescale EIA (Scotland) Regulations (as Amended) 1999**
Screening	The Planning Authority must adopt its screening opinion within 6 weeks of receipt. This can be extended if agreed in writing[8].	The Planning Authority must adopt its screening opinion within 3 weeks of receipt. This can be extended if agreed in writing[9].
Scoping	A Planning Authority must determine a scoping opinion within 6 weeks of receiving a request. This can be extended if agreed in writing[10].	A Planning Authority must determine a scoping opinion within 5 weeks of receiving a request. This can be extended if agreed in writing.
Environmental Statement	The competent authority has 28 days from submission of the ES to consult with statutory consultees The competent authority has 28 days from submission of the ES to consult with statutory consultees.	The competent authority has 28 days from submission of the ES to consult with statutory consultees The competent authority has 4 months to determine the application.
Provision of additional information	Where required information has not been provided the authority can require the applicant to provide further information. Any information provided in response to such a written request must be publicised, and consulted on, in a similar way to the document submitted as an ES. There is no timescale associated with this.	Where required information has not been provided the authority can require the applicant to provide further information. Any information provided in response to such a written request must be publicised, and consulted on, in a similar way to the document submitted as an ES. There is no timescale associated with this.

There was no consensus of opinion on the timescales involved in EIA, with some believing that the timescales were tight but with proper planning, these timescales could be met, whilst others indicated that they were unachievable. It was noted that meeting of timescales was dependent on available resources and existing workloads.

[8] The 6 week time period is double the period of time as specified in the standard Environmental Impacts Assessment Regulations (Scotland) 1999.
[9] Environmental Impact Assessment (Scotland) Regulations (as Amended) 1999
[10] Again, this is double the figure under the standard EIA (Scotland) Regulations 1999.

There was insufficient information returned to comment on financial cost of the process although it was acknowledged that Shetland had sufficiently streamlined the process to reduce cost and time.

5.6 Existing Guidance

All interviewees agreed that there were considerable guidance documents available but that these were rarely adopted or used by the proponents. Most interviewees did not report why Crown Estate guidance had not been adopted, often stating that these guidelines were adequate. One suggestion indicated that these were very generic in nature. In cases where the guidance was adopted, the outcome was generally reflective of the structure of the guidance. It was suggested that too many guidance documents were available for the developers to interpret and that it could benefit from being consolidated into a more useful guide.

Shetland found that the guidance was generally too centred on the Scottish mainland industry and did not provide enough guidance from a Shetland perspective. Consequently, very specific local processes had been adopted, which were regarded as streamlined. Shetland cited the example of migratory salmonids, and hydrographic guidance which are significant issues on mainland Scotland, but without the same relevance in the Shetlands.

5.7 Data Availability

Consultants indicated that the availability of marine data was often fragmented in many areas, affecting the whole marine planning process. Consultants considered the availability of data was not sufficient and was expensive to secure.

Statutory consultees acknowledged that insufficient or inappropriate monitoring data meant reliance on modelling results. More data would be advantageous, but obtaining (especially seasonal) data will always be time consuming and expensive.

5.8 Environmental Statement Assessment and Content

Comments on the Environmental Statement assessment process provided a variety of responses but a general consensus that the presentation of an Environmental Statement, particularly structure, was a common problem. The layout and content tended to vary depending on the level of knowledge the developer or consultant. Similarly, the absence of full methodologies within the reports makes the results and recommendations harder to assess, as a result, the consultees often spent excessive time ‘reading between the lines’ during their assessment.

The documents were often too long, with much redundant data (sea lice data sheets were cited on two occasions) and interviewees suggested that developers should be encouraged to keep their Environmental Statements more focused and succinct.

A frequent, and significant omission encountered in the ESs was a lack of assessment of impacts. It was noted from one response that the assessment of significance in line with the Regulations was not encouraged in some instances by other statutory consultees.

The extent to which the screening/scoping comments were incorporated varied and interviewees generally identified that information requested at screening/scoping was not fully incorporated. Requests for further information were common with SNH frequently

requiring more information on alternative options, landscape issues and benthic assessments. An example was provided where expensive but irrelevant environmental information had been submitted.

Hydrographic assessments were consistently of higher quality than other assessments, with landscape, benthic and ecological issued often poorly undertaken.

The consultant interviewed indicated it would be beneficial if there was an agreed risk analysis framework in place in order to use an approved approach. Additional suggestions for improvement included an ES template and a word limit. A number of interviewees suggested the ES be prepared as an electronic document with links to the relevant technical sections and annexes, improving interrogation of data.

5.9 Value of Environmental Impact Assessments

It was generally regarded that EIA results in more environmentally sound developments although there was extensive scope for improvements in the process. Comments were made that there is still much subjectivity in the process and the Regulations could be better structured to be more specific.

It was also perceived that the EIA process was time consuming from the consultees point of view and that the process was fruitless due to the manner in which the Crown Estate incorporates recommendations from statutory consultees into the seabed lease. This resulted in the overall process being considered as a 'waste of time'.

5.10 Conclusions and recommendations

The consultation exercise identified several key recommendations that could improve the EIA process. These are summarised below:

- Pre-application discussions were considered to be highly beneficial to all parties. It is recommended that the pre-consultation process is promoted with developers and that there is more involvement of the non-statutory consultees if they wish to participate;
- It is recommended that the screening/scoping process should be streamlined, ensuring that important issues are covered and that a consistent approach is taken across the industry with sutiable guidance provided;
- The screening/scoping process in Shetland has already been streamlined. Learning from the processes in Shetland would be beneficial in streamlining the existing methodologies to satisfy the new regime;
- It is recommended that the consultation process is structured in order that both the consultees and the developers are aware of who should be contacted and when they should be contacted. At present the consultation appears to be driven by the competent authority, which is contrary to other industries where the developer contacts the non-statutory consultees;
- It is recommended that the benefits of public consultation are promoted as this is currently perceived as a weak area in the aquaculture industry;
- It is recommended that a specific study should be carried out into how the Water Environment (Controlled Activities) (Scotland) Regulations (CAR) interacts with EIA and how this can best be incorporated in the EIA process for aquaculture. At present the two systems are not synchronised and result in much confusion and duplication of effort;

- It is recommended that additional guidance be issued on the structure and layout of the EIA to overcome the existing variation in structure and content. Within the guidance, the importance of assessment of affects should be stressed, as this is an area of general weakness in the Environmental Statements. Guidance should also be provided to ensure that the applicant incorporates the scoping comments; and
- It is recommended that electronic documents with hyper-links to relevant data sections are promoted to allow the consultees to interrogate the data more efficiently.

6 LITERATURE REVIEW

A brief review of the relevant literature is presented in the following sections:

- European Legislative Framework;
- UK Legislation;
- EIA Guidance;
- Best Practice; and
- Other studies and reports.

6.1 European Legislative Framework

The United Kingdom is subject to international environmental legislation, the most significant of which are the directives agreed by the Council of the European Communities. These directives are transposed into UK law by means of Regulations. There are four directives which are particularly important in the marine fish farming, namely:

- The Dangerous Substances Directive;
- The Water Framework Directive;
- The Habitats Directive; and
- The Wild Birds Directive;

The Dangerous Substances Directive (76/464/EEC) defines principles for the control of lists of substances, ranging from those which are toxic, persistent and which bioaccumulate (List I substances) to those which have "deleterious effects upon the aquatic environment" (List II substances). Some chemicals used within marine fish farming fall within the List II definition. The Directive requires Member States to introduce programmes to reduce pollution by List II substances by ensuring their authorisation on the basis of emission standards calculated from water quality objectives (in UK terms, environmental quality standards). These programmes may involve product substitution (requiring the use of a less hazardous chemical) and shall take into account the "latest economically feasible technical developments". Regulations are in place which transpose the directive into UK law.

The Water Framework Directive (2000/60/EC) (WFD) is a wide-ranging piece of European environmental legislation that has been transposed into Scots Law through the Scottish Parliament as the **Water Environment Water Services (Scotland) Act 2003**. Further subsidiary Regulations are however required to fully introduce the new control regimes set out in the Directive. The overall objective of the WFD is to bring about the effective coordination of water environment policy and regulation across Europe in order to:

- Prevent deterioration and enhance status of aquatic ecosystems, including groundwater;
- Promote sustainable water use;
- Reduce pollution; and
- Contribute to the mitigation of floods and droughts.

The aims present major challenges to those with an interest in the aquatic environment and will heavily influence the way SEPA regulates marine fish farming.

The Habitats Directive (92/43/EEC) and the **Wild Birds Directive** (79/409/EEC) concern the protection and conservation of natural habitats. They were transposed into GB law by the 'Conservation (Natural Habitats &c.) Regulations 1994' which came into force on 30 October

1994. Areas may be designated as Special Areas of Conservation (SAC) where they support rare, endangered or vulnerable natural habitats and species of plants or animals (other than birds). Where areas support significant numbers of wild birds and their habitats, they may become Special Protection Areas (SPA). SACs are designated under the Habitats Directive and SPAs are classified under the Birds Directive. SNH have responsibility for the implementation of the directive in Scotland on behalf of the Scottish Ministers.

6.2 UK legislation

A full description of the Environmental Impact Assessment (Scotland) Regulations (as Amended) 1999 is provided in Section 2.2.

The Environment Act 1995 SEPA was established and exists to carry out the functions transferred or assigned to it by or under the Environment Act 1995 (EA 95). Section 21(1)[a] of the EA 95 identifies SEPA's pollution control functions with respect to water pollution. The EA 95 also defines SEPA's general duties and responsibilities. It is important to stress that these general duties have precedence over all internal SEPA policies and procedures. SEPA must always be able to demonstrate that it operates in a manner, which is consistent with its EA 95 duties.

The Diseases of Fish Acts 1937 and 1983. Certain diseases of fish are made notifiable under the Diseases of Fish Acts. The Acts provide for powers to designate areas where there are reasonable grounds for suspecting that the inland or marine waters are, or may become, infected with a notifiable disease. A Thirty Day Notice (TDN) or a Designated Area Order (DAO) made under these Acts prohibits the movement of live fish, or eggs of fish, into or out of a fish farm without the permission of the Scottish Ministers.

The Diseases of Fish (Control) Regulations 1994
The Diseases of Fish (Control) Regulations implement Council Directive 93/53/EEC introducing minimum Community measures for the control of certain fish diseases. The Regulations describe the control measures to be applied in the event of the suspicion or confirmation of the presence of certain diseases of aquaculture animals. They are amended by The Disease of Fish (Control) Amendment (Scotland) Regulations 2000, which allow for the withdrawal of fish infected with infectious salmon anaemia (ISA) and the use of otherwise prohibited vaccines for ISA in accordance with approved schemes.

Wildlife and Countryside Act 1981 sets out a number of provisions on the protection of all wild birds, and certain species of wild animal (for example, otters). Species listed in Schedule 5 of the Act are protected from disturbance, injury, intentional destruction or sale. Other provisions outlaw certain methods of taking or killing listed species.

Archaeological Monuments and Archaeological Areas Act 1979 defines sites that warrant protection due to being of national importance as 'ancient monuments'. These can be either Scheduled Ancient Monuments or "any other monument which…..is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it".

Protection of Wrecks Act 1973 provides protection for designated wrecks. Section 1 of the act provides for wrecks to be designated because of historical, archaeological or artistic value. Section 2 provides for designation of dangerous sites.

Coast Protection Act 1949 Consents are issued under the Coast Protection Act 1949 for navigational safety on behalf of the Scottish Ministers by the Scottish Executive Enterprise, Transport and Lifelong Learning Department. Expert external advice on applications is

obtained from the Maritime and Coastguard Agency, the Northern Lighthouse Board and the Royal Yachting Association.

Food and Environment Protection Act 1985 applies throughout UK controlled waters from the tidal limit of Mean High Water Spring tides out to the limit of areas designated under section 1(7) of the Continental Shelf Act 1964. In practice applications are assessed and licences are issued on behalf of the Scottish Ministers by the Fisheries Research Services, an Executive Agency of the Scottish Executive Environment and Rural Affairs Department. Policy responsibility however rests with the Water Environment Division.

The Animal By-Products (Scotland) Regulations 2003
The Animal By-Products Regulation provides a definition of high risk and low risk material and prescribes the appropriate methods of disposal of such material. High risk material includes fish that have died but were not slaughtered for human consumption. High risk material must be disposed of by rendering, incineration or, in exceptional circumstances only, burial.

The Animals and Animal Products (Import and Export) (Scotland) Regulations 2000
Any person importing live fish or shellfish from a third (non-EU) country must obtain a licence from the official service (FRS). Import consignments from third countries must be cleared at a Border Inspection Post (BIP) and must be accompanied by the appropriate health certificates. One working day's notice must be given to the official veterinarian of the BIP through which the consignment is to be imported. Export consignments must be accompanied by an export health certificate. The Animals and Animal Products (Import and Export) (Scotland) Regulations provide for powers for veterinary inspectors to inspect import consignments and associated documentation and to issue notices requiring the isolation and detention or slaughter of animals, or the destruction of animal products, in specified circumstances. For example, where a veterinary inspector knows of, or has reason to suspect, any cause likely to constitute a serious hazard to animals or humans.

The Fish Health Regulations 1997
The Fish Health Regulations implement Council Directive 91/67/EEC concerning the animal health conditions governing the placing on the market of aquaculture animals and products. The Regulations are amended by The Fish Health Amendment (Scotland) Regulations 2002. It is an offence to market aquaculture animals that show clinical signs of disease on the day of loading or that are destined for destruction or slaughter under a scheme for the eradication of certain diseases. Aquaculture animals must be transported such that the duration of the journey is as short as possible. The means of transport must be cleaned and disinfected prior to dispatch and no water should escape from the vehicle if the animals are transported overland, unless the transport water is changed at an approved water station. Consignments of aquaculture animals must be accompanied by identification that enables the farm of origin to be traced and a movement document (for movements within the European Community). The Fish Health Regulations provide powers for veterinary inspectors to conduct inspections and take samples and to require the slaughter of aquaculture animals and disinfection of equipment if the result of a test for the presence of certain diseases is positive.

Health and Safety at Work Act 1974
The Act sets out the general duties, which employers have towards employees and members of the public, and employees have to themselves and to each other. The associated statutory instrument *The Management of Health and Safety at Work Regulations 1999 (the Management Regulations)* generally make more explicit what employers are required to do to manage health and safety under the Health and Safety at Work Act. Like the Act, they apply to every work activity. The main requirement on employers is to carry out

a *risk assessment.* Employers with five or more employees need to record the significant findings of the risk assessment.

6.3 EIA Guidance

Environmental Assessment Handbook. Guidance on the Environmental Impact Assessment Process. SNH. 2005. David Tyldesley and Associates. provides comprehensive guidance about the entire EIA process, including a review of EIA case law. The manual specifically concentrates on the treatment of natural heritage issues, but the information provided can be easily applied to wider environmental topics. A section on the effects on the marine environment is provided as a technical appendix and relevant guidance is provided for specific assessments such as landscape.

Guidelines for Environmental Impact Assessment. 2004. Institute of Environmental Management and Assessment. This document focuses on the principles and processes of EIA and not specific impacts. The stages of EIA from screening through to the planning application are provided in steps.

Crown Estate Environmental Assessment Guidance Manual for Marine Salmon Farmers This is a general document outlining the process of environmental assessment and how this may be utilised by the marine fish farmer. The document highlights recommended approaches to environmental impact assessment rather than detailing particular actions for individual areas of concern and as such there is no specific section regarding the effects of waste. There is no comprehensive reading list for any subjects requiring a specialist approach and neither do any of the annexes contain anything specific. This may partly explain why this guidance document has not been fully adopted by the industry.

Guidelines for Ecological Impact Assessment. Institute of Environmental and Ecological Management. These guidelines are specifically for assessing the ecological impacts of a development and cover the main steps from inception to monitoring. Although focused toward terrestrial systems, useful information is provided in making sound judgements of significance of impacts and determining value of ecological receptors.

6.4 Best Practice

Scottish Executive Locational Guidelines for Fish Farming: Predicted Levels Of Nutrient Enhancement And Benthic Impact. 2002. PA Gillibrand, MJ Gubbins, C Greathead and IM Davies. Scottish Fisheries Research Report Number 63/2002. This document presents the technical detail for various models developed for predicting the waste impacts arising from nutrients and other inputs. Calculations are shown for various aspects affecting the impacts (flushing and dispersion factors, amounts of nitrogen and carbon etc.) and the concepts of equilibrium concentration enhancement (ECE), nutrient enhancement index and benthic impact index are explained. Although the document is not specific to EIA use, the theory is directly applicable. The Appendices include papers on the measured waste production of salmon and halibut.

A Code of Good Practice for Scottish Finfish Aquaculture. The Code of Good Practice originates from collaboration between industry, regulators, government and other stakeholders. The compressive structure of the document means that, when followed, aquaculture sites operate in compliance with relevant legislative framework ensuring the

economic and environmental sustainability. The scope of the guidance covers consumer assurance, fish health, environmental protection, welfare and husbandry, feed and feeding and sets out the standards that farmers must demonstrate. The structure allows the document to function as an auditing tool.

SEPA Fish Farming Manual This is a guidance manual for SEPA staff involved in the regulation of fish farming. It sets out the details for the application process, consent procedure and subsequent monitoring. Annex D gives specific guidance on environmental assessment procedures, Annex E on water column monitoring and Annex F on seabed monitoring. In addition there are a number of attachments and templates for monitoring and baseline survey procedures.

Developing a Framework for a Sustainable Fish Waste Management Infrastructure, SEPA 2004. This document deals with the management and disposal of a variety of wastes arising from the fishing industry in general. The problems of waste arsing from caged fish farms is not dealt with specifically.

SEPA 2003 Waste Arising from fishing and fish relating industry in Scotland. This general document appears to deal more with wastes arising from mortalities, processing, packaging and litter than those specific to marine cage fish farming. Statistics are presented for a variety of fish wastes in Scotland.

Improving The Regulation Of Environmental Impacts From Marine Caged Fish Farms: Revised Methodology to Assess Impacts in Marine Sediments and Derive Consent Limits On Maximum Fish Biomass. 2004. This is a position paper outlining some of the methodologies currently available for assessment (use of AZE etc) and highlights the development of the AUTODEPOMOD software designed for waste impact prediction and the consultation on its use. The report concludes with the subsequent steps that will be taken to develop a firm methodology and the situations where it will need to be applied.

SEPA Aquaculture Waste Minimisation Guide This is a well-written document, which presents pragmatic information in an easy to understand manner. Much of the document is very thorough in terms of the minimisation guidance it provides and there are very specific details for certain areas of concern (e.g. ten keys steps for successful waste minimisation; examples as how to measure progress; how to reduce energy consumption in site offices). However the absence of any discussion regarding the issues associated with waste produced from feed is highly notable. It may be that this specific subject is part of a separate document however since such a significant aspect of fish farm waste is due to that arising from food waste and faecal matter, this is a surprising oversight.

Scottish Executive Review and Synthesis of the Environmental Impacts of Aquaculture 2002 A significant portion of this 80-page document is dedicated to the discharge of waste nutrients and their effects on the marine environment. Section 2 gives a good summary of the effects of solid and dissolved wastes and identifies the areas where research gaps exist. Considerable detail is given to the development and effects of harmful algal blooms and the assimilative capacity of different locations. The report concludes that the effects of fish waste are too small to have had many of the alleged effects however that more research is needed, specifically in terms of increased data collection; investigations into the variability of nutrient inputs from different sources, and the continued development of durable mathematical models.

SEPA Policy 40: Policy of Regulation and Expansion of Caged Fish Farming of Salmon in Scotland details SEPA's regulation policy was developed to cater for the steady

change and development of fish farming in Scotland in the late 90s. Several of the constraints associated with waste from uneaten food and faeces are detailed (carbon enrichment, anoxic conditions, bacterial films, sulphate reduction, nutrient enhancement, algal blooms).

6.5 Locational Guidance

Scottish Executive 1999 Policy Guidance Note: Locational Guidelines for the Authorisation of Marine Fish Farms in Scottish Waters as amended by the Advice Note: Marine Fish Farming and the Environment. 2003 In the Locational Guidance, the concept of 'Constrained Areas' is described for particularly environmentally sensitive areas. A categorisation for zones was developed, based on an index system, which considers the relative level of nutrient enhancement and extent of heavy organic deposition on the sea bed. Similarly the Natural Heritage resource is also considered.

6.6 Further Studies and Reports

A range of fish health and welfare documents have been published by the aquaculture Health Joint Working Group and Fisheries Research Service including **Disease Risks and Interactions between Farmed Salmonids** and **Infectious Pancreatic Necrosis**.

A Review of Environmental Impact Assessment for Aquaculture Developments (Unpublished, draft 2004) BMT Cordah . This report carried out a similar type of review as to the current exercise and suggested a series of recommendations for the following areas:

- Co-ordination of EIA and other related environmental legislation;
- Strengthening and supervision of enforcement mechanisms;
- Interaction between EIA and any future SEA focussing on marine aquaculture;
- Development of a time management mechanism for aspects of EIA process;
- Production of improved guidance on implementing EIA and preparing Environmental Statements;
- Improving the effectiveness of scoping; and
- Review mechanism for evaluating the adequacy of ESs.

Some aspects of the Environmental Impact of Aquaculture in Sensitive Areas. Final Report. Poseidon Aquatic Resource Management Ltd. July 2006. This report looks at the interactions between fish farming systems and the nearby species, habitats or conservations areas across Europe. The report was designed to provide a framework for a future code of practice document for aquaculture in sensitive areas. It additionally recommends the creation of a decision support tool for setting up a site adjacent tot a sensitive area.

7 REVIEW OF ENVIRONMENTAL STATEMENTS AND SCOPING REPORTS

7.1 Environmental Statement Review

The Environmental Statement (ES) is the document reporting on the Environmental Impact Assessment (EIA) that is submitted to the competent authority with the application for planning consent. ESs are required under the Directive on Environmental Assessment (85/337/EC) and the Environmental Impact Assessment (Scotland) Regulations (as amended) 1999 (hereafter, the Regulations) to contain certain information as a minimum. It is important that ESs contain the required information presented clearly and concisely, with a structure that facilitates assessment by consultees to inform decision makers when coming to a view to grant consent.

This stage of the project undertook a systematic review of a small sample of Scottish marine finfish farm ESs, using a modified version of the Lee and Colley ES Package[11], a widely used and peer reviewed methodology, to assess overall quality and compliance with minimum statutory requirements. This methodology has been established means of analysing ESs for over 10 years and has been used to locate the strengths and weaknesses of ESs for a wide range of project types. It was recently used in a review of the use of EIA in the review document 'The Planning System and Electricity Act Applications', published by the Scottish Executive in 2006 and also in a similar study undertaken by BMT Cordah in 2004[12]. A summary of this method is provided in section 7.3 below.

7.2 Objectives

The purpose of the review is summarised below:

- Assess general practice regarding the quality and acceptability of an ES as a planning document;
- Identify the level of legal compliance of ESs with the Regulations;
- Identify examples of 'best practice'; and
- Identify general areas of strength and weakness to ensure these are addressed in guidelines for EIA.

7.3 Methodology

7.3.1 Selection of Environmental Statements

A sample of five ESs submitted under the Regulations were selected for assessment. Two of the five ESs were subject to detailed review of the technical quality. The selection criteria for the ESs were based on the following parameters:

- **Geography** – a sample was selected over a range of local authority areas;
- **Author** – these included a range of consultants, and one ES carried out in-house, by a developer; and
- **Date** – ESs were selected over timescales ranging from 2002 – 2005.

[11] Lee, N & R. Colley, J. Bonde and J. Simpson, 1999. Reviewing the Quality of ESs and Environmental Appraisals. Occasional Paper. Number 55 (1999). Planning & Landscape, School of Environment and Development, University of Manchester
[12] A Review of Environmental Impact Assessment for Aquaculture Developments. A report for SNH and RSPB. BMT Cordah Ltd. 2004. Unpublished, Draft Report.

Copies of the ESs were secured from the SEPA office in Dingwall. No projects currently awaiting planning permission were used in the assessment. The status of the application, decision and the decision making process was not always readily available, and subsequently comments from statutory consultees and associated procedural assessments of each case were not considered. Similarly, the ESs reviewed did not take into account any further submissions of information or subsequent revisions. A summary of the ESs selected for review is provided in Table 7.1.

Table 7.1 Summary of ESs selected for review.

Environmental Statement	Local Authority	Author
REVIEW 1	The Highland Council	Developer
REVIEW 2	Argyll and Bute Council	Consultant
REVIEW 3	Shetland	Consultant
REVIEW 4	Orkney	Consultant
REVIEW 5	Highland Council	Consultant

7.3.2 Environmental Statement Review - Quality

The reviewer was instructed to read all of the advice for reviewers and read the review topics (areas, categories, subcategories) for familiarity. A key part of the evaluation was whether the ES was found to be:

- Focused on the key questions;
- Scientifically and technically sound; and
- Clear and coherently organised so that it can be understood.

The reviewer was made aware of areas of weakness, omission or concealment in the ES. These may occur when:

- Certain tasks are omitted, unsuitable or *ad hoc* approaches are taken;
- Bias or inaccurate supporting data (references) is provided; and
- The rationale or justification for conclusions is not given.

The review was then carried out in line with the Lee & Colley methodology. This method considers the quality of ESs in four separate review areas as follows:

- Description of the project and the environment;
- The identification and evaluation of key impacts;
- The treatment of alternatives and mitigation; and
- The communication of the information.

These are further broken down into categories and subcategories. In total, each ES was assessed against 55 criteria. The grades for each criterion were combined to give a grade for each category and subsequently each review area, and final grade for the ES. The grades are as described in Table 1.2.

Table 1.2 Grading system for Assessing the Quality of ESs

Grading	Explanation
A	Relevant Tasks well performed no important tasks left incomplete.
B	Generally satisfactory and complete, only minor omissions and inadequacies.
C	Can be considered just satisfactory despite omissions and inadequacies.
D	Parts are well attempted but must, as a whole be considered just unsatisfactory because of omissions and/or inadequacies.
E	Not satisfactory, significant omissions or inadequacies.

F	Very unsatisfactory, important task(s) poorly done or not attempted.
NA	Not applicable. The Review Topic is not applicable or is irrelevant in the context of this Statement.

An overall grade for the ES is built up by grouping together grades for each of the criteria within the review areas. The list of the assessment criteria is provided in the review itself, and details of the systematic assessment for each ES are provided in Annex 1.

7.3.3 Environmental Statement Review – Legal Compliance

Submitted ESs should, as a minimum, contain the information specified in Part II of Schedule 4 of the Regulations. This means that the following information must legally be included in an ES:

- A description of the development comprising information on the site, design and size of the development;
- A description of the measures envisaged in order to avoid, reduce and, if possible remedy significant adverse effects;
- The data required to identify and assess the main effects which the development is likely to have on the environment;
- An outline of the main alternatives studied by the applicant and an indication of the main reasons for his choice, taking into account the environmental effects; and
- A non-technical summary of the information provided under the above bullet points.

Criteria relating to the information, which is legally required in an ES, have been highlighted in grey in the systematic assessment of ESs. An overall score was assigned based on the combined score of these aspects.

7.4 Results

7.4.1 Overall Results – Environmental Statements

The assessment overall used all the criteria to provide a general indication of the quality of the ES, taking into account the Regulations and good practice. A total of five ESs were reviewed and Table 1.3 shows summarises the overall results from the detailed analysis.

As the sample number of ESs is small, it would not be accurate to evaluate trends or performance and care is needed to when interpreting the results from the analysis. Instead the review intends to provide an 'all round' approach to the quality of the ESs. To supplement this, two further assessments considered the general quality of the technical aspects.

Table 1.3 Results of Environmental Statement Review

Reference	Type	Description of Project/Environment	Key Impacts	Alternatives/ Mitigation	Communication of Information	Total	Legal Compliance
REVIEW 1	ES	B/C	C/D	B	B/C	B/C	B/C
REVIEW 2	ES	B	C	B/C	B/C	B/C	B/C
REVIEW 3	ES	C	D	D	C/D	D	C
REVIEW 4	ES	A/B	A/B	B	A/B	A/B	A/B
REVIEW 5	ES	B/C	C/D	C	B	C	B/C

7.4.2 General Findings

There was a range of quality across the ESs reviewed and within each ES the quality of the technical assessment also tended to be inconsistent. The analysis indicated several examples of consistently strong practices. A detailed assessment of each ES is provided in Annex 1, with summaries and justification of the review for each ES. General observations are indicated under the headings in line with the review criteria below.

Description of the Project and Environment

- Site descriptions were generally comprehensive and in line with the Regulations, although the quality varied e.g. clarity of mapping figures.

- The project description frequently provided comprehensive details of the operational phase, however consistent omissions of the description of construction and decommissioning phases were common. This basic omission resulted in potentially significant impacts such as localised disturbance of seabed, transport, vessel traffic, or loss/abandonment of equipment being neglected in later assessments.

- The range of baseline assessment quality for the various technical assessments was varied between each ES and also within each subsection of the technical assessments within the ES[13]. General observations include:

    - The hydrographic, and modelling aspects were relatively higher quality than over assessments, although background concentrations of chemical substances were often omitted, as were anthropogenic inputs;
    - Baseline information relevant to SNH's remit such as benthic ecology, protected areas, landscape and marine flora and fauna was variable, but often inadequate in terms of methodologies adopted and presentation of data. The taxonomic resolution for baseline benthic ecology was often low (e.g. 'sea urchin', 'brittle star');
    - Impacts on aspects such as navigation and commercial fisheries were generally well considered and presented; and
    - Information on baseline assessments for other factors such as noise, traffic, access, and recreation were often not provided.

- The structure of the baseline description of the environment was not always as specified in the Regulations and consequently there was not always a clear delineation of the description of the baseline data and subsequent impact assessments. In addition, assessments were often addressed together. This approach to report structure does not encourage efficient assessment by consultees who are likely to spend time locating relevant information specific to their remit during assessment. One ES was structured logically and cross-referenced as appropriated to other sections.

- The description of alternative sites varied in quality, however in most ESs there was an attempt to present the methodology regarding site selection process and provide at least a basic rationale of the decision-making process.

- There was generally no attempt to assess the sensitivity of receptors. This is an important step to assess the significance of the impact.

[13] Note that there was limited access to all scoping responses from statutory consultees. This meant that assessments could not be compared against scoping responses. Where specific assessments where excluded, an assumption was made that this was not requested, unless specified in the ES.

- A number of statements related the developments to local planning policies, with some assessment of Aquaculture Framework Plans where applicable. Greater consideration of the existing planning policies and locational guidelines would be useful to set the policy context.

The identification and evaluation of key impacts

- Consultation and scoping was not addressed adequately in most ESs. Not focusing on this aspect means that the ES did not justify the focus on key impacts from the outset. In many ESs the consultation phase was poorly described, ranging from a short list of consultees, to occasional brief references in the text. Only one ES provided a fully adequate description. The assessor of the ES may be unable to identify the key impacts identified by consultees and conclude if they have been addressed appropriately.

- A significant omission of most of the ESs reviewed was the lack of any form of systematic impact assessment to determine significance. Lack of any assessment was common, and encouraged authors to make generalised statements on impact without a rigorous rationale or justification.

- A number of ESs provided no attempt to rate the sensitivity of receptors, or apply an impact assessment methodology. This approach encouraged the use of unsupported or unsubstantiated statements such as '*no impact on marine biology*' when no adequate assessment was carried out.

- Descriptions of some impacts were usually restricted to qualitative assessment when a simple quantitative assessment would improve confidence in evaluation and robust appraisal of the impact e.g. X number of boats will arrive daily.

- The evaluation of key impacts was often inadequate due to the differing quality of baseline assessments.

- A key indication of an impact is the comparison with the future of the site without the proposed development (often termed the 'do nothing' approach). This was omitted or only briefly mentioned, despite the potential, for some proposals (particularly consolidation proposals), to result in numerous benefits for some issues.

- As described above, the impacts arising from the construction phase were routinely omitted, or briefly mentioned at one or two points in the text. An ES should consider all aspects of the development during all phases as the impacts associated with each phase can create different impacts of differing magnitudes.

- The hydrographic aspects and associated waste impacts were generally well referenced and followed to some extent. However in other assessments, where other guidance exists, e.g. landscape assessment guidance, this was only occasionally referenced in the text and was often poorly attempted or followed.

- Some impact assessments (noise, cultural heritage, ornithology) were routinely ignored. Although these may be minor assessments for the sites investigated, there should be some indication that effort has been made to ensure that any specific qualities will not be impacted. This can be as simple as addressing a scoping response to justify no further assessment.

- There was limited treatment of cumulative effects for various technical issues, although this was often attempted with varying success in the hydrographic section and occasionally, landscape.

The treatment of alternatives and mitigation

- Mitigation measures outlined were generally reasonable and comprehensive, although the justification for measures did not always follow logically from the assessment of impacts or the iterative EIA process. It often appeared that the design had been determined prior to EIA process.

- Alternative mitigation methods were occasionally investigated for aspects such as sea lice treatments and anti-predator measures.

- Extensive academic discussions featured in 2 ESs. Consideration of alternatives is beneficial, however this format would benefit from a more simplistic approach such as a tabular format briefly indicating key advantages and disadvantages of specific approaches. An ES is not an appropriate format for this type of discussion.

- Little data was provided on developer-led monitoring of cages.

The communication of the information

- A common weakness related to the structure and layout of the ESs. Impacts, mitigation and baseline conditions frequently occurred throughout the ES with information scattered throughout text and little linearity of approach. This structure would benefit from clear separation of subsections relevant to each technical assessment, to be further structured into baseline, assessment and evaluation of significance sections. This would facilitate assessment by different consultees.

- The ESs assessed were generally easy to read and not overburdened by technical jargon.

- Non-technical summaries were always present, and generally complied with legislation. One ES provided extensive additional information in the NTS, which was not included in the ES.

- One example showed evidence of 'cut and paste' data, resulting in repetition of information throughout the ES and confusing assessment due to minor discrepancies in repeated data.

- Some ESs, provided excessive unnecessary information e.g. sea lice treatment data sheets, copies of each scoping letter sent to consultees and protracted discussions over selected technical aspects.

7.4.3 Previous Studies

A similar study carried out by BMT Cordah[14] carried out a review of 4 Environmental Statements. The findings of this report are summarised in italics below with corresponding comments on any agreement with the findings identified in this review:

- *The style, content and length of ESs is variable. The length style and structure of the ESs make the comprehension of content difficult for all parties. Although data can often be present in the ES, the format and style can be inaccessible, requiring consultees to raise unnecessary queries regarding the data;*

Comment: This review agrees with the variability identified and the lack of structure, however in more recent examples of ESs there was clear improvement on this aspect;

- *There was a tendency for sections on project description and baseline environment to be longer and more informative than sections focusing on impacts and significance.*

Comment: this is a general flaw of ESs and was verified during this assessment. Some ESs made no or only a poor attempt to define the significance and impact of the development.

- *ESs focus exclusively on the proposed site, with no attention paid to wider context, e.g. the baseline situation at the time of the EIA is taken as baseline. There was no attempt to consider potential changes and there was no consideration of a 'no-development' option. Very little attention paid to cumulative effects.*

Comment: These aspects were discussed briefly for one consolidation proposal, with good treatment from one ES. Generally, however this review agrees with the findings of the report.

- *No ES makes reference to the 'Environmental Assessment Guidance for Marine Salmon Farmers' issued by the Crown Estate (2000) as a basis for EIA work.*

Comment: Verified, very few ESs were reviewed during this assessment referenced this document.

7.5 Review of Scoping Reports

In marine fish farming screening and scoping are combined, which is a technique used in a number of sectors to improve the efficiency of the EIA process[15]. The developer must include the same information as would be required to accompany a request for a screening opinion and both requests may be made at the same time. There is a trend by the industry to improve the efficiency of the EIA process by providing comprehensive environmental information at the scoping stage. The approach of providing extensive environmental information in a scoping report has been adopted as a means to substantially reduce costs, timescales and effort, which would otherwise be fully required in an EIA.

To consider the quality of this approach, two 'scoping' reports, which accompanied applications for a modification to a lease to the Crown Estate, were also selected for review.

[14] A Review of Environmental Impact Assessment for Aquaculture Developments. A report for SNH and RSPB. BMT Cordah Ltd. 2004. Unpublished, Draft Report.
[15] Streamlining EIA for Aggregates through Better Scoping. Centre for Sustainability at TRL Ltd. 2006. http://www.dclgaggregatefund.co.uk/docs/final_reports/samp_2_21_tc.pdf

7.5.1 Review of Scoping Report

The quality of the scoping reports has been assessed with reference to the basic requirements as specified in the regulations for screening, which should be included in the scoping report. Circular 15/1999 Environmental Impact Assessment also suggests that a developer may also wish to supply a draft outline of the ES, giving an indication of what he considers to be the main issues to provide a focus for the Planning Authority's considerations.

7.5.1.1 Review Criteria for Scoping Reports

A review methodology was developed based on the Regulation 4 and 6 of the EIA (Fish Farming in Marine Waters) Regulations 1999. These state that a screening and scoping opinion should be accompanied by:

- A plan showing the location and extent of the proposed fish farm;
- A brief outline of the proposed annual scale of production in tonnes (dead weight), the biomass capacity of the development, the equipment to be installed on site and the possible effects of the development on site and of the possible effects of the development on the environment;
- A statement of the proposed servicing methods and of any intended associated development; and
- Such other information of representations as the person making the request may with to provide or make.

7.5.2 Analysis of Scoping Reports

The detailed review of scoping reports is provided in Annex 2. Both reports complied with the legal requirements specified in the Regulations. In both cases extensive information was provided, in addition to comprehensive details of proposed operation, husbandry and management.

7.5.3 Results and Conclusions

Scoping reports allow the applicant to be clear about what the competent authority considers are the main effects from a development are likely to be, and where the ES should focus. In assessing the reports, it is difficult to conclude how 'fit for purpose' as they do not conform to standard screening or scoping reports, neither can they be compared to an ES. Instead this approach has been adopted as a tool to provide supplementary environmental information to support an application made to the Crown Estate. In general both scoping reports were comprehensive, providing targeted environmental information where the developer has considered necessary. This appears to suit the local authorities and the advantages of this approach in streamlining the process are numerous, in terms of streamlining the process and reducing costs to the developer. However this approach may raise a number of disadvantages as follows:

- The developer may use a methodology, which is inappropriate, requiring further assessment or work in addition to the report;
- The developer may not focus on an aspect of the assessment or provide too much attention in another aspect, requiring further work in the form of an ES, in addition to the report submitted; and
- Planning Authorities and consultees must assess a large volume of information within timescales set for scoping.

In conclusion this method may be a way to increase the efficiency for modifications or renewals to existing sites, where there are few unanticipated effects, and where an ES has already been produced. However this method should be agreed with the relevant Planning Authority and statutory consultees prior to use.

ANNEX 1
STEERING GROUP

Mark James (Chair)	Scottish Aquaculture Research Forum (SARF)/Fisheries Resource Management Ltd.
John O'Brien	Scottish Executive Development Department
Judith White	Scottish Executive Environment and Rural Affairs Department SEERAD/SARF
George Hamilton	The Highland Council/SARF
James Bromham	The Highland Council
Ewan Gillespie	Scottish Environment Protection Agency/SARF
Richard Slaski	Federation of Scottish Aquaculture Producers/SARF (withdrew 22/2/06)
George Lees	Scottish Natural Heritage /SARF
John Webster	Scottish Salmon Producers Organisation (co-opted to replace Richard Slaski)

ANNEX 2
DETAILED REVIEW OF ENVIRONMENTAL STATEMENTS

REVIEW 1
General Summary

This ES was collated by a developer for a site located within the Highland Council area, and describes a proposal to consolidate existing fish farm interests, resulting in an overall reduction of fish pens in the local area. The site is near a marine Special Protection Area (mSAC) and the ES deals with the potential effects of nutrient enrichment and medicinal products on the environment. The generally well-written and comprehensive assessment is compromised by several omissions, including the lack of a clear systematic impact identification for potential ecological effects on the nearby mSAC.

Description of the Development, Local Environment and Baseline Conditions

Water Quality
The methods used for establishing baseline sediment quality conditions are described. The following technical observations have been made regarding the review:

- Baseline sediment quality is described briefly. However, full details of baseline measurements are not provided. Instead the reader is referred to further reports available from the site owners. Baseline data should be summarised in the ES or an appendix; and

- No data are provided on background concentrations of chemical substances in either water or sediment.

Noise
The ES makes one reference to baseline noise environment as follows, "*The remoteness of the proposed site on the south side of the loch, with few adjacent dwellings and no villages, means that this potential noise disturbance is unlikely to affect any neighbouring properties*." Whilst the impacts of noise from the development may be minor, no indication of the location of receptors is provided for the reader to assess this.

Marine Biology/Predators
The section on local environment does not explain how data was acquired or that any baseline survey was conducted for seals, cetaceans or otters, yet it is acknowledged that numbers of each are present in the area. Furthermore sightings of cetaceans are referred to demonstrate that cetacean activity is the same with or without seal scrammers. However, no data are provided and the statement appears to be anecdotal. If so, the source should be referenced to provide confidence that the information is correct.

An Appendix provides information from video transects. The photographic stills from the videos that are presented in the Appendix are of a fine enough resolution to identify the majority of species, but this has not been done. Instead, species have been identified as, for example, "brittle stars", "urchins", "prawns", etc. This low level of taxonomic resolution is unlikely to be sufficient to identify particular species that require protection in the SAC.

The report acknowledges the presence of least two species given full protection under the Habitats Regulations and Wildlife and Countryside Act 1981 (as amended) the harbour porpoise *Phocoena phocoena* and the European otter *Lutra lutra*, the latter of which has qualified the area as a mSAC. It also notes that a species of tern (all species of tern breeding in the UK are listed in Annex 1 of the Birds Directive) nest on a local island.

Landscape and Visual Impact

The character of the existing landscape surrounding the proposal is dealt with in detail. There is also cross-referencing to the relevant chapters within the main ES dealing with cultural heritage and ecology, which contribute to landscape character. The study area is set within its national and regional context as set out in the Landscape Character Assessment undertaken by SNH. This divides the area into five landscape character types, which are described in the text and illustrated in Figures.

Navigation and Fisheries
Navigation and fishing issues are covered in the ES in terms of the whole rationalisation project. Consultation has taken place with local fishermen and agreement reached over the location of the farm. Lease areas (not cage areas) have been reduced to allow fishing of *Nephrops* closer to the fish cages. It is noted that there is very little sailing activity this far into the loch.

Wild Fisheries
The location of any wild stock migration routes are not given, it is not known if this is not applicable or has not been considered.

SCORE – B/C

Identification and Evaluation of Key Impacts

Water Quality
The ES clearly presents predicted carbon accumulation levels in the vicinity of cages, using the AutoDEPOMOD modelling package. However, it would be useful for the ES to predict quantitatively what the effects on oxygen availability might be, for comparison with any measured values, even if there is high uncertainty in these predictions. There is some discussion of deep basin deoxygenation, with supporting information for a nearby site, and the information in the Annex suggests that deep-water deoxygenation may be a problem in the environment. However, the ES explains that the oxygenation survey was abandoned after discussion with SEPA when it was learned that SEPA were planning a similar, but more extensive, survey. These objective conclusions should be supported with at least a summary table of the SEPA data referred to. Other observations are as follows:

- There is almost no margin of safety between the proposed fish biomass (1500 T) and the maximum allowable biomass predicted by AutoDEPOMOD (1501 T) at the location. This is briefly mentioned in the ES.

- There is no discussion of antifouling chemicals used on fish pens, although their use will be inevitable;

- There is considerable discussion of the overall reduction in solids, carbon and degraded area as a result of reducing the number of locations. However, there is insufficient discussion of the substantially increased impacts at the three proposed sites.

- There are extensive discussions regarding the estimated mass of dissolved nitrogen that would be released from the proposed fish farms (both individually and cumulatively), and makes predictions of the likely environmental concentrations that result from these loads. These calculations are well-described and based on current data and models. They provide a high degree of confidence that nutrient EQS will not be exceeded as a result of the proposed fish farms.

- There is a discussion of the likely impacts of the fish medicines cypermethrin, azamethiphos and emamectin benzoate on the environment. The discussion is based on quantitative modelling with AutoDEPOMOD. The ES would benefit if full descriptions of the modelling runs were included in an Appendix so that they were available for checking or re-running. There is an extensive and honest discussion of the potential impacts of emamectin benzoate.

- The ES describes the use of a “simple box model” and a “Gowen” model to predict nutrient and benthic indices, and concludes that *“the nutrient enhancement index was 1, and the benthic impact index was 2.”* No supporting data are provided in the ES to support these conclusions.

- There are no references in the ES to possible new EQS under the Water Framework Directive (WFD). Annex VIII of the WFD requires Member States to set EQS for "specific pollutants", including pesticides, biocides, or substances released into the environment in significant quantities. It therefore seems likely that many fish farm chemicals will require new EQS's. The procedure for deriving these standards can lead to substantially more stringent water column EQS values than those currently applied by SEPA[16]. The SEPA (2005) fish farm procedures manual refers to the potential impact of the WFD on fish farm operations, and this should be considered in an ES;

Marine Biology/Predators

The impacts are well described and discuss even unpopular actions such as the shooting of individual nuisance seals, though it does not go on to describe the conditions under which this would occur e.g. under licence. There are certain omissions that could have an effect on marine life in particular the disposal of the unwanted pens. Further observations on the content of this chapter are detailed below:

- In the assessment, the ES falls short of following any recognised framework such as the IEEM guidelines for Ecological Impact Assessment. It does not detail the status of any of the species that has been identified as present and does not follow a clear mechanism for assessing the effects.

- There is no discussion of "in combination" effects on sensitive receptors from different stressors in the nearby SAC, as required under the Habitats Regulations;

- In recent research[17], seal scrammers have been identified as having a dispersive effect on cetaceans (Gordon and Northridge, 2002). In light of this, the data used to demonstrate no effect should be fully detailed and displayed. Without more detailed survey for these three animal groups it is difficult to show that the consolidation process would be beneficial, or that the optimum location has been chosen to minimize the effects on important wildlife and in particular those protected under the Habitats Regulations.

Although the proposals would result in a reduction of fish farms in the area and intuitively suggest a benefit to marine ecology, the positioning and management of the fish pens that would remain may have a greater impact on important marine ecology than the net impact of the existing sites. In general, the assessment deals with the potential effects in a very superficial way.

In order for a decision to be made full details of the number and distribution of the protected species would be required. Furthermore the EIA Regulations require adequate provision of data to identify and assess the main effects, which the development is likely to have on the environment. Whilst it is possible that the proposed development may indeed reduce the existing effects on wildlife, there is no clear information to support this. When the proposals could have an effect on the interests of a European site, the possibility of an appropriate assessment under Regulation 48 of the Habitats Regulations should at least receive consideration, even if it is to state that there would be no significant effect on the interests of the mSAC. Failure to do this could render the planning decision being unlawful.

Landscape and Visual Effects
Working from the existing comprehensive baseline assessment, a more detailed assessment was carried out to provide the local landscape context within which the proposals would fall. This was undertaken in line with the *Guidelines for Landscape and Visual Impact Assessment* and identified areas with a *"distinctive local landscape character"* which were described in the text and illustrated in Figures by representative photographs. Key visual receptors including buildings, footpaths and roads are identified.

[16] Note that sediment quality standards are unlikely to be required under the WFD for the foreseeable future, so these will not change.
[17] Gordon and Northridge (2002) of the Sea Mammal Research Unit (SMRU) at St Andrews

The annex provides an assessment of the environmental effects on the landscape character of the study area, and also an assessment of the visual effects of the proposed developments. To inform the assessment, details of the development proposals were provided, which illustrate the locations of present and proposed sites, and the proposed lease areas and pen layouts. Additional information is provided in an Appendix that includes descriptions and locations of proposed new feeder barges, with accompanying plans and diagrams. Another Appendix provides photographs of existing sites, facilities and receptors.

The assessment of environmental effects on landscape character is provided and was undertaken in accordance with the methodology detailed above. The assessment includes impacts of the development before and after mitigation and assumes that the mitigation proposals are implemented. In line with best practice, the worst case scenario has been used in the assessment i.e. the feeder barge unladen when it sits highest in the water, on a clear, bright, winter day. Cumulative impacts on character of the local area have also been considered.

The impacts on landscape character have been evaluated according to magnitude to change, sensitivity to change and intervisibility.

Cumulative landscape and visual impacts of the two expanded and new site are addressed, together with the resultant impact taking account of the removal of several of the existing sites.

The overall landscape and visual assessment has taken account of the resultant impacts following the consolidation of fish farming activities at the site, resulting in the enlargement of the existing sites, the siting of a new facility and the removal of seven other sites. However, a fundamental requirement of this assessment is that is addresses not only the permanent impacts relating to the operational lifetime of the proposed development but also the short-term impacts associated with its construction and also possible decommissioning.

Noise
The text mentions that a decrease in boat traffic will result in a reduction in noise and discusses noise from feed systems as follows: '*Although there is a degree of noise associated with the new feed systems, that is not apparent with hand-fed systems, this can really only be detected close to the installation and is negligible at distances >150m'.*

With respect to impacts on cetaceans the ES states *"exclude acoustically sensitive animals, such as cetaceans, from a much larger area."* It is concluded, *"…the use of low powered acoustic devices does not exclude cetaceans from the loch system"*. Both these statements are unsupported and again lack any systematic assessment of significance.

Navigation and Fisheries
Although access and fishing may be restricted in specific areas, the ES identifies that overall; the reduced number of sites increases access for sailing and fishing activities. The presence of the farm and associated structures provide increased mooring facilities rather than obscuring any recognised anchorages. These positive impacts would benefit from clearer approach, in order that the competent authority could assess the positive and potential negative benefits of the proposal with clarity.

SCORE – C/D

Alternatives and Mitigation of Impacts
There is not a separate section in the ES in which impact significance and mitigation measures are discussed. Instead, these issues are explicitly or implicitly discussed jointly in a section entitled "Potential Impacts and Mitigation Measures." It would be clearer to the reader if different sections were used to describe impact significance and mitigation.

SCORE - B

Communication of Results

This ES would benefit from better editing for readability. Fonts appear to change regularly and there are large slabs of text without full paragraph breaks. Use of more subheadings, or removal of text into completely different sections (e.g., impact significance, mitigation, and follow up), would also assist readability. The structure could be slightly improved and there should be more emphasis on the impacts on the mSAC.

SCORE – B/C

TOTAL SCORE FOR REVIEW 1 – B/C
LEGAL COMPLIANCE – B/C

REVIEW 1
Systematic Assessment

Description of the development, the local environment, and the baseline conditions.		***Score***
Objective	**Comments**	
Explanation of purpose and objectives of the development.	Summary of rationale for development. Excellent site selection section.	A
The design and size or scale of the development should be described. Diagrams, plans or maps will usually be necessary for this purpose.	Map of existing sites provided and proposed site locations. Comparative scale provided from outset	B
There should be some indication of the physical presence or appearance of the completed development within the receiving environment.	A number of photomontages of the one site, showing 'before' and 'after' images.	B
The nature and quantities of raw materials needed both during construction and operational phases should be described. Where appropriate, the nature of the production processes.	Comprehensive section on production, however construction phase not assessed.	C
OVERALL SCORE		**B**

Site description: The cage surface area and seabed requirements of the development and the duration of each use.		***Score***
Objective	**Comments**	
The area taken up by the development should be defined and clearly shown on a map.	Lease area defined for all three sites. Existing shore development not clearly marked.	B
The uses to which the development will be put should be described and the different areas demarcated.	Detailed pen design not to scale and detailed layout of pen arrangement not provided.	B/C
The estimated duration of the construction phase, operational phase and if appropriate the decommissioning phase should be given.	No information provided.	F
The numbers of workers and /or visitors entering the development site during construction and operation should be estimated. Their access to the site and means of transport should be given.	Operational staff numbers provided although not broken down by site, no estimates on construction phase.	C/D
OVERALL SCORE		**C/D**

Residuals: the types and quantities of residual and/or waste matter and energy should be estimated, the expected rate of production given, and the proposed routes to the environment described.		Score
Objective	**Comments**	
The types and quantities of waste matter, energy and residual materials and at which rates these will be produced, should be estimated.	Waste data accurate and generally comprehensive although no organic carbon data provided. Some limited discussion on general waste production and handling (ensiling, incineration etc.).	B
The ways in which is it proposed to handle and/or treat these wastes should be indicated, together with the routes by which they will eventually be disposed of to the environment.	Generally compliant.	B
The methods by which the quantities of residuals and wastes were obtained should be indicated. If there is uncertainty this should be acknowledged and ranges or consent limits given where possible.	Methodologies explained, referenced and details provided.	A/B
OVERALL SCORE		**B**

Environment Description: the likely geographical extent of the affected environment should be described.		***Score***
Objective	**Comments**	
The environment expected to be affected by the development should be delimited with the aid of a suitable scale map.	Plots of allowable zone of effect provided for waste and chemotherapuetants. Basic landscape zone of theoretical influence provided. Limited data on other aspects (noise, traffic etc.)	B
The significant environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site, for example the dispersion of pollutants, infrastructural requirements of the project, traffic etc.	Well defined for aspects such as carbon deposition and the emamectin benzoate depositional footprint. Some definition for other aspects e.g. noise and little definition for remainder of assessments	C
OVERALL SCORE		**B/C**

Baseline conditions: a description of the environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site. These may be caused by the affected environment as it is currently, and as it could be expected to develop if the project were not to proceed, should be presented.		Score
Objective	**Comments**	
The important components of the affected environments should be identified and described. The methods and investigations undertaken for this purpose should be disclosed and should be appropriate to the size and complexity of the assessment task. Uncertainty should be indicated.	Good description of most aspects of existing environment. Methodology described and uncertainty highlighted for a number of impacts (mainly waste). More emphasis placed on waste/hydrography requirements despite landscape issues identified as the most important impact.	B
Existing data sources should have been searched and, where relevant, utilised. These should include local authority records and studies carried out by, or on behalf of, conservation agencies and/or special interest groups.	Existing data for area held by company interrogated. SNH data provided.	B/C
Local land use plans should be consulted and other data collected as necessary to assist in the determination of the baseline conditions i.e. the probable future state of the environment, in the absence of the project, taking into account natural fluctuations and human activities.	Aquaculture framework plan for Loch Sunart mentioned but no assessment on how this fits in with development. No other consideration of local plans.	D
OVERALL SCORE		**C**

Identification and Evaluation of Key impacts

Definition of impacts: Potential impacts of the development on the environment should be investigated and described. Impacts should be broadly defined to cover all potential effects on the environment and should be determined to as the predicted deviation from the baseline state.		***Score***
Objective	**Comments**	
Impacts are not confined to immediate effects. Consideration should be given to effects, which may be; positive or negative; cumulative; short or long term; permanent or temporary; direct or indirect.	Assessment of cumulative effects ranges: detailed treatment of potential area of potential seabed calculated. References to cumulative impacts from landscape and lighting made.	B/C
The above types of impact should be investigated and described especially with regard to identifying effects on or effecting human beings; flora and fauna; water, air, climate, landscape, material assets; cultural heritage and interactions between these things.	Impacts identified for main assessments. Quantitative impact assessment for each parameter (waste, landscape etc.) varies.	C
Consideration should not be limited to events, which will occur under design operating conditions. Where appropriate, impacts, which might arise from non-standard operating conditions, due to accidents, should also be described.	Escapee's policy and procedures referenced, minimal attention to other non-standard events such as spillages.	B/C
The impacts should be determined as the deviation from baseline conditions, difference between the conditions, which would obtain if the development were to proceed and those predicted to prevail as a consequence of it.	Extensive information provided for some aspects e.g. carbon accumulation in sediment.	B
OVERALL SCORE		**B/C**

Identification of impacts: methods should be used which are capable of identifying significant impacts.		Score
Objective	**Comments**	
Impacts should be identified using a systematic methodology such as a project checklist, matrices, panel of experts, extensive consultations, etc. Supplementary methods may be needed to identify secondary impacts.	No systematic methodology employed although impacts discussion generally comprehensive.	D/E
A brief description of the impact identification methods should be given as should the rationale for using them.	No rationale provided for impact identification, although well discussed.	D/E
OVERALL SCORE		**D/E**

Scoping: Not all impacts should be studied in equal depth. Key impacts should be identified and the main investigation centred on these.		***Score***
Objective	**Comments**	
There should be a genuine attempt to contact the general public and special interest groups – clubs, societies etc – to appraise them of the project and its implications.	Scoping response from one statutory consultee referenced. Issues arising from an objection addressed	D/E
Arrangements should be made to collect the opinions and concerns of relevant agencies, special interest groups, and the general public. Public meetings, discussion groups etc. may be arranged to facilitate this.	Little reference to scoping, consultation or communication. Evident that consultation was carried out although extent and results unknown.	E

Key impacts should be identified and selected for more intense investigation, scoping methods should be described and their use justified.	Impacts identified but no justification on how these were selected. No information on scoping.	E
OVERALL SCORE		**D/ E**

Prediction of impact magnitude: The likely impacts of the development environment should be described in exact terms wherever possible.		***Score***
Objective	**Comments**	
The data used to estimate the magnitude of the main impacts should be sufficient for the task and should be described clearly. Any gaps in the data should be indicated and accounted for.	Data for discharge quantification comprehensive. Uncertainties accounted for. Difficult to estimate impact from some other aspects of baseline data.	D
The methods used to predict impact magnitude should be described and the appropriate to the size and importance of the projected disturbance.	Methods for assessing impact magnitude not described clearly.	D
Where possible, estimates of impacts should be recorded in measurable quantities, ranges and or confidence limits as appropriate. Qualitative descriptions if necessary should be fully defined as possible (e.g. insignificant measure perceptible for more than 100 m distance).	Again, impacts for discharges described in detail with corresponding figures. Details of other impacts lacking or not as thorough .	B/C
Mitigation methods considered should include modification of the project and the provision of alternative facilities as well as pollution control.	Mitigation methods include pollution control, contingency plans and modification.	B
Is should be made clear to what extent the mitigation methods will be effective. If effectiveness is uncertain or depends on assumptions about operating processes, climatic conditions etc, and data should be introduced to justify the acceptance of assumptions.	Extent of mitigation generally described.	B
OVERALL SCORE		**C**

Assessment of Impact Significance: the expected significance that the project will have for society should be estimated. The sources of quality standards, together with the rationale, assumptions and value judgements used in assessing significance, should be fully described.		***Score***
Objectives	**Comment**	
The significance to the affected community and to society in general should be described and clearly distinguished from impact magnitude. Where mitigating measures are proposed, the significance of any impact remaining after mitigation should also be described.	Socio economic factors recognised in specific section of ES. Negative impacts highlighted. Significance after mitigation not detailed.	**C**
The significance of an impact should be assessed, taking into account appropriate national and international quality standards where available. Account should also be taken of the magnitude, location and duration of the impact in conjunction with the national and local societal values.	Assessment of significance ranges in quality from reasonably justified conclusions supported by quantitative data to unjustified statements. ES would benefit from more systematic assessment.	**C**
The choice of standards, assumptions and value systems used to assess significance should be justified and any contrary opinions should be summarised.	Good quantitative assessment for waste/nutrient/medicines etc. Some discussion provided where uncertainty present. Again, survey lacks provision of systematic assessment.	**C**
OVERALL SCORE		**C**

Alternatives and Mitigation

Alternatives: feasible alternatives to the proposed project should have been considered. These should be outlined in the Statement, the environmental implications of each presented, and the reasons for their rejection briefly discussed, particularly where the project is likely to have significant adverse environmental effects.		***Score***
Objectives	**Comment**	
Alternative sites should have been considered where these re practicable and available to the developer. The main environmental advantages and disadvantages of these should be discussed and the reasons for final choice given.	Comprehensive review of alternative sites.	A/B
Where available alternative processes, designs and operating conditions should have been considered at an early stage of the project planning and the environmental implications of these investigated and reported where the proposed project is likely to have significant adverse environmental impacts.	Alternative methods considered for anti-predator devices, justification for site consolidation. As project relates to existing sites and results in reduced environmental impact, alternatives have essentially been investigated.	A/B
If unexpectedly severe adverse environmental impacts are identified during the course of the investigation, which are difficult to mitigate, alternatives rejected earlier in the planning phases should be	Demonstrated that existing sites with unacceptable impacts were excluded. Not Applicable.	N/A

reappraised.		
OVERALL SCORE		**A/B**

Scope and effectiveness of mitigation measures: all significant adverse impacts should be considered for mitigation. Evidence should be presented to show that proposed mitigation measures will be effective when implemented.		***Score***
Objectives	**Comment**	
The mitigation of all significant adverse impacts should be considered and where practicable, specific mitigation measures should be put forward. Any residual or unmitigated impacts should be indicated and justification offered as to why these impacts should not be mitigated.	Reasonable detail provided regarding specific mitigation. Residual mitigation justified e.g. anti-predator devices.	B
Mitigation methods considered should include modification of the project, compensation and the provision of alternative facilities as well as pollution control.	As the nature of the project (existing site consolidation) results in a modification for minimised environmental impact. this is expressed as a mitigation measure Based on the existing situation. Pollution control not clearly described.	C
It should be made clear to what extent the mitigation methods would be effective when implemented. Where the effectiveness is uncertain or depends on assumptions about operating procedures, climatic conditions etc. data should be introduced to justify the acceptance of these assumptions.	Extent of effectiveness of mitigation described but level of detail varies for each assessment. Generally provided, although data not always introduced to justify conclusions.	B/C
OVERALL SCORE		**B/C**

Commitment to mitigation: the developer should be committed to carrying out the mitigation measures and should present details plans of how he proposes to do so.		***Score***
Clear details of how the mitigation measures will be implemented and functioning time span for which they are necessary should be given.	No time span but clear details of implementation.	B/C
When uncertainty over impact magnitude and/or effectiveness of mitigation exists, monitoring programmes should programmes should be proposed to enable subsequent mitigation measures as necessary.	Evident that extensive monitoring carried out by developer by existing data from sites, however the proposed monitoring activity has not been clearly set out in ES.	C
OVERALL SCORE		**B/C**

Communication of Results

Layout: the layout of the statement should enable the reader to find data easily and quickly. External data sources should be acknowledged		***Score***
Objective	**Comments**	
There should be an introduction briefly describing the project, the aims of the environmental assessment and how those aims are to be achieved.	Good introduction describing site selection process. No description of EIA process and how aims are to be achieved.	B/C
Information should be logically arranged in sections or chapters and the layout of important data should be signalled in a table of contents or an index.	Information arranged reasonably logically, although impact and mitigation considered together.	C
Unless chapters themselves are very short, there should be a chapter outlining the main findings of each phase of the investigation.	N/A	-
When data, conclusions, or quality standards, from external sources are introduced, the original source should be acknowledged at that point in the text. A full bibliography should also be included either with the acknowledgement, with a list of references.	References provided, although little reference paid to legislation for specific assessments.	B/C
OVERALL SCORE		**B/C**

Presentation: care should be taken in the presentation of information to make sure that it is accessible to the non-specialist.		***Score***
Objective	**Comments**	
Information should be presented so as to be comprehensible to the non-specialist. Tables, graphs and other devices should be used as appropriate. Unnecessary or obscure technical language should be avoided.	ES would benefit from layout improvement. Some technical language difficult to understand by layman.	C
Technical terms, acronyms and initials should be defined, either when first introduced into the text or in a glossary.	Technical terms generally defined	B
The statement should be presented as an integral whole. Data	Data in appendices discussed in text.	B

presented in appendices should be fully discussed in the main body of the text.		
OVERALL SCORE		**B/C**

Emphasis: Information should be presented without bias and receive the emphasis appropriate to its importance in the context of the ES.		Score
Objective	**Comments**	
Prominence and emphasis should be given to potentially severe adverse impacts. The statement should avoid according excessive space to impacts, which have been well investigated or are beneficial.	Emphasis on discharges although main impact was landscape and visual impacts. Given extent of designations	C/D
The statement should be unbiased; it should not lobby for any particular point of view. Adverse impacts should not be disguised by euphemisms or platitudes.	Unbiased, clearly states unpopular actions and statements generally justified.	A/B
OVERALL SCORE		**B/C**

Non-technical summary: There should be a non-technical summary outlining the main conclusions and how they were reached.		Score
Objective	**Comments**	
There should be a non-technical summary of the main findings of the study. Technical terms, lists of data and detailed explanations of scientific reasoning should be avoided.	NTS provided summarising most aspects of the ES, potential to expand some.	A
The summary should be comprehensive, containing at least a brief description of the project and the environment, an account of the main mitigation measures to be undertaken by the developer and a description of any remaining or residual impacts. A brief explanation of the methods by which these data were obtained and in indication of the confidence, which can be placed in them, should also be included.	Summary contains all necessary information.	B
OVERALL SCORE		**A/B**

REVIEW 2
General Summary

Summary of ES
This ES considers a new salmon/cod site submitted to Argyll and Bute Council in 2005 by a Consultant. This ES provides a clear picture of the development and sets out the production process. There is good baseline information provided on sediment quality and hydrographic data however some of the additional assessments, particularly landscape are weak.

Description of the Development, Local Environment and Baseline Conditions
A generally good discussion of baseline conditions is provided for hydrographic conditions, benthic macro fauna and sediment chemistry. Detailed technical reviews are provided below:

Landscape
The description of landscape is purely geographical and does not provide any indication of the landscape setting into which the development is to be located, there is little detail provided on any archaeological and historical features, although one reference is made:
"There are believed to be no historic or archaeological sites affected by this proposed development".

There is also no supporting evidence to accompany statement such as *"Although the South and West coast of (the site) is a rural community, it is not thought of as an isolated or sensitive countryside in this context".* However, this review identified details of the sites historical past including the remains of the medieval church, together with information of recent initiatives to revive the island.

Marine Ecology, Ornithology and Predation
The baseline conditions for marine ecology, ornithology and ecology are confined to academic discussion, not always focusing on the characteristics of the site. There is little documentation of a scoping exercise, desk study or any baseline surveys relating to this aspect.

Some statements are not referenced properly e.g. "*Locally occurring species include several species of gulls, herons, gannets, shags and cormorants. For example, (the site) is a breeding area for the Lesser Black-backed gulls (Larus fuscus), being some 2km from the proposed cage site at the north of the Island*." It is unknown how this data was gathered, or if it was provided.

The farm site is said not to lie in the path of any wild stock migration routes and any possible fish escapes or disease would not affect the wild population. This would cover the situation where wild stocks may become infected by passing through a farm site, but it is not known if lice from the farm could potentially be transported on tidal currents to the location of wild stocks.

Water Quality
Baseline sediment quality is described in body of the ES, supported by more detailed information in Appendices. This information is extensive, comes from two different survey techniques, and provides good, quantitative information on the benthos, organic carbon concentrations and sediment particle sizes at the proposed site.

No information is provided on background concentrations of chemical substances, in either water or sediment, other than organic carbon in sediment. It is likely that concentrations of anthropogenic substances are low, but it would be good practice to establish the baseline concentrations of substances likely to be released into the environment as a result of fish farm operations.

TOTAL SCORE - B

Identification and Evaluation of Key Impacts

Marine Ecology
The ES ignores the presence of several marine mammals in the area several of which are given full protection under domestic and European law i.e. cetaceans. Whilst the effects identified are probably realistic and due to the reluctance to use shooting and acoustic deterrents to reduce the predation of

caged fish by seals, they should be dealt with more thoroughly because of the legal status of the cetaceans.

Due to inherent uncertainties about the effects of waste discharges, the ES sensibly states *"Regular monitoring of the sediment conditions and macrofaunal community at the proposed site would be essential if development permission is granted."* However, it would be useful for the ES to predict quantitatively what the effects on oxygen availability and benthos might be, for comparison with any measured values, even if there is high uncertainty in these predictions.

Natural heritage designations are summarised in an appendix but no assessment of the relationship of the proposed development to these sites has been carried out.

Landscape
The methodology used to assess landscape matters references *the SNH document "Marine Aquaculture and the Landscape: The siting and design of marine aquaculture developments in the landscape",* with a full visual impact assessment provided. There is no further description of the landscape and visual resources at national, regional or local level. There is no reference to the Landscape Character Assessment document published for the area. There is also no reference to the location or importance of walks in the local area from where there may be views of the proposed development. These include the long distance West Island Way (on Bute) and Cowal Way (on Cowal Peninsula) and the locally promoted route at St Ninian's Point, which is close to the site on the east.

The quality of the baseline information has influenced the quality of the assessment. For example, other sources point to an important 6th century chapel at St Ninian's Point, *"… on the west coast opposite Inchmarnock Island. Not only is the chapel of great historical interest but is also a vantage point from which spectacular panoramas of the coast, sea and island are afforded".* There data are not included in the ES and consequently it is difficult to establish how the extent and importance of potential landscape and visual effects was later assessed. Further comments on the assessment of landscape are as follows:

- There is no information on the detailed methodology that has been used to assess the landscape and visual impacts of the proposed development, although the ES states that a full visual impact assessment has been undertaken in accordance with *"Marine Aquaculture and the Landscape: The siting and design of marine aquaculture developments in the landscape".* This SNH publication provides a simple checklist of the steps that a developer should follow when undertaking a visual assessment. This has not been carried out in the assessment.

- The visual assessment provided in the ES is contained solely within one paragraph, and deals with all landscape issues. It comprises little more than a single page of text, together with 6 small photographs, a small plan showing the location of the photographs and a Figure which provides a graphic representation of the visual impact area, based on on-site and general topography.

- The predicted impact does not have accompanying photographs to illustrate points, and errors in assessment state '(*the site) is uninhabited and as far as is known, is rarely visited, restricting the visual impact of the cages from the west (towards the east)".* There have been recent initiatives to revive the island.

- There is no indication of how the proposed development will affect different users on adjacent land (motorists, cyclists, walkers, horse riders), even though there are long distance routes such as the West Island Way & the Cowal Way.

- There is no indication as to when the visual survey was carried out although the vegetation would appear to indicate that the photographs were taken in the summer. Corresponding photographs from these viewpoints during the winter are not included. Neither is there any indication or illustration to show what the likely effects of lighting will be even though *"Navigational lights will be used at the site, to mark the cages during the hours of darkness"* 5.4.2 (para 5).

- In addition to the limitations to the visual impact assessment of the proposed cages, there is no assessment at all of the impact on the landscape arising from the associated feeding barge. The only reference to it appears in the Executive Summary, which states that *"The use of black low profile cages and feed barge will result in minimal visual impacts".* Details of the feed barge explain that *"The proposed sea cage site will be serviced from feed barges positioned permanently at the site"* which will house a bridge, office and food storage facilities, with feed delivery being made by sea directly from Greenock. Dimensions of the feed barge are not included but two photographs are provided which show an *"Example of a well situated high specification feed barge at a fish farm site".* It is clear from these pictures that any visual impact assessment cannot be undertaken without reference to such an element, which is the most prominent feature of the development in landscape terms.

- A fundamental requirement of a landscape assessment is that it addresses not only the permanent impacts relating to the operational lifetime of the proposed development, but also the short-term impacts associated with its construction and also possible decommissioning. This has not been covered. Neither is there any information on whether there are other fish farms planned or in operation in the locality and what, if any, consequential cumulative impacts might result.

In general, the review highlights significant flaws in the approach to and implementation of the landscape and visual impact assessment for the proposed facility, which need to be fully addressed. The content of this part of the ES does not accord with the statement in the Executive Summary that *"Visual impact has been assessed in detail in line with SNH requirements on siting of fish farms"*.

Navigation and Fisheries
With regard to water users, there is reference that the cages should not create a navigational hazard to local boat traffic since *"…few people, other than local fishermen and recreational boat users are known to frequent the area".* The acknowledges that *"The (site) also relies on tourism as a major part of its income"* and that *"sea angling and angling are common recreational activities for tourists'"* and states that *"it is difficult to determine the effect of siting the cages on this element* [tourism]*, as they may be both an attraction and a deterrent……*.[but] *it is unlikely to affect it at the proposed location of this farm".* However, there is no evidence to support this conclusion.

Water Quality
The methodology and values for calculating waste loading into the environment are clearly described. However, point estimates are used in these calculations to represent ranges, and it is not always clear where a selected point estimate lies along a range. For example, a value of 21.2% from Cuthbertson (2000) is used to represent the relationship between faecal output and feed consumption, although this is clearly a summary statistic from a range of possible values. Even when it is clear where a point estimate lies on a range, the reason for its selection may not always be clear. For example, on page the ES states a value of 30% used to estimate the amount of phosphorous in feed that is excreted as soluble phosphorus, although the two references cited by the ES authors report a maximum value of 35%. No explanation is provided for why 30% rather than 35% was selected. There are two main ways in which risk assessors usually summarise and analyse information from ranges:

- The methodology and values for calculating the concentrations of chemicals and therapeutants within cages are clearly described. When estimating cage loads of EXCIS (cypermethrin), SALMOSAN (azamethiphos) and SLICE (emamectin benzoate), general reference is made to SEPA guidelines. The SEPA guidelines that were used (e.g., Policy 17 for azamethiphos, Policy 29 for teflubenzuron, Policy 30 for cypermethrin, and SEPA 1999[18]) should be specified.

- The ES and accompanying Appendix clearly describe use of the model AutoDepomod to estimate doses of in-feed anti-lice medicines (teflubenzuron and emamectin benzoate) that are consistent with sediment EQS compliance for these chemicals.

- The ES identifies copper as the only antifoulant active substance proposed for use in the fish farm. No information is provided on likely leaching rates and environmental concentrations as

[18] SEPA. 1999. Emamectin benzoate: An environmental risk assessment. Fish Farm Advisory Group, June 1999.

a result of its use. The ES states that "*Regular sediment samples will be taken to check for levels of copper after the antifoulant has been applied."* It would be useful if these measurements were compared with estimated concentrations in water and sediment to determine whether measured concentrations are higher or lower than predicted.

- Other chemicals that may be released into the environment from fish farm operations are considered briefly. This is sufficient given the low volume use of these substances.

- The methods used for establishing baseline sediment quality conditions are described, with further information available in Appendices. The ES states, *"All surveys were conducted in line with advice and protocols issued by SEPA and SNH."* An Appendix states that the benthic survey was performed according to guidance in the SEPA Fish Farming Manual (SEPA 2001). An additional Appendix reports on a Remotely Operated Vehicle Survey, but does not state whether this survey complied with any published guidance. It would be useful if the report on the latter survey specifically identified the SEPA/SNH protocol that was followed.

- There are no references in the ES to possible new Environmental Quality Standards under the Water Framework Directive (WFD). Annex VIII of the WFD requires Member States to set EQS for "specific pollutants", including pesticides, biocides, or substances released into the environment in significant quantities. It therefore seems likely that many fish farm chemicals will require new EQS. The procedure for deriving these standards can lead to substantially more stringent water column EQS values than those currently applied by SEPA. The SEPA (2005) fish farm procedures manual refers to the potential impact of the WFD on fish farm operations, and this should be considered in an ES.

- The ES presents predicted carbon accumulation levels in the vicinity of cages, both in text and a figure and concludes *"Given the moderate/fast seabed current speeds, and existing nature of the sediment, it is unlikely that excessive wastes would accumulate under cages."* However, the magnitude of any effect of these carbon concentrations on dissolved oxygen concentrations is not predicted in the ES.

- The ES discusses the estimated mass of dissolved nitrogen that would be released from the proposed fish farm. However, no predictions of the likely impacts of this are made. The ES only states that *"The mid-water and seabed currents at the sites were moderate to fast, which means that frequent flushing is highly likely to occur."* Some effort to predict water column concentrations of Dissolved Inorganic Nitrogen and the potential effects of these should be made.

- There is a discussion on the likely impacts of the fish medicines cypermethrin, azamethiphos, emamectin benzoate, teflubenzuron and hydrogen peroxide on the environment, but the discussion is often either only qualitative, or presents quantitative results that have not been related to this specific fish farm development[19]. It would be useful to provide quantitative estimates of the likely concentrations of cypermethrin in water and sediment so that these values may be compared with current or potential future EQS values. These also apply to the ESs discussion of potential effects from use of azamethiphos and hydrogen peroxide. The ES does in an earlier section consider appropriate doses of the in-feed anti-lice medicines emamectin benzoate and teflubenzuron to achieve sediment EQS;

- ES section 4.4 discusses the potential impacts of the antibiotic amoxicillin on the environment. Once again likely concentrations in the environment are not quantified. Instead, the ES concludes that *"The surface current speeds recorded at both sites and any exposure-related water disturbance, would allow antibiotics entering the water to be dispersed. The relatively high seabed current speeds would mean that any antibiotic entering the deeper water environment, either through uneaten feed or fish excretion, is likely to be rapidly*

[19] For example, in the case of cypermethrin the ES states that *"Concentrations of cypermethrin that are lethal to zooplankton are likely to occur close to the cages for a short period immediately following treatment, prior to dilution and dispersion in the water column. Effects on molluscs and benthic crustaceans (crabs and lobsters) will depend on the amount of dilution that occurs before the chemical reaches the seabed. Particle-bound cypermethrin may have a potentially higher effect on these organisms than that in aqueous phase."*

dispersed thus reducing accumulation in sediments. It is of note that the use of antibiotics is likely to be limited to one or two occasions per production cycle, meaning that accumulation and impacts from repeated us should not present an undue environmental impact."

- ES section 4.5 discusses the potential impacts of antifoulants, and vitamins and minerals. As before, there is no attempt to predict environmental concentrations, although in the case of vitamins and minerals this is unlikely to be necessary because of the low volumes used.

- It is surprising that more quantitative estimates of chemical concentrations have not been provided in the ES, as SEPA use predictive models to set limitations on the quantities and rate of release of substances, such as fish medicines, so that they meet relevant EQS outside an allowable zone of effects, based on the hydrographic characteristics of each site.[20]

With the exception of organic carbon and in-feed anti-lice medicines, the ES does not quantify the concentrations of chemical substances likely to be found in the vicinity of the proposed fish farm. It is not therefore possible for the authors of the ES to predict the magnitude of any impacts in anything other than a qualitative way. As a result of this it is also not possible for them to quantify the significance of any impacts.

TOTAL SCORE – B/C

Alternatives and Mitigation of Impacts

It is not clear how several of the proposed mitigation strategies will be monitored to determine whether they have the desired environmental and human health effects.

It has been recognised that the development of a fish farm at this location will produce some restriction to fishing and less so to recreational use. Specific issues relating to positioning of the farm have been resolved with The Clyde Fisherman's Association to allow manoeuvring of scallop vessels in the area.

The ES concludes that this *"small impact on the aesthetic nature over a relatively small area of the western Bute coast … should be minimized due to the use of a low-lying cage design, black colour of the above water structures, and the proposed positioning of the cages close to the Island"*. This conclusion fails to adequately address the impact of the feed barge(s) or that resulting from underwater and navigational lighting. In this respect there is further scope for both assessment and for further mitigation.

TOTAL SCORE – B/C

Communication of Results

The language of the report has less technical data than other ESs reviewed in this exercise, however much of the information is repeated throughout the various sections. The bullet points in the executive summary are quite detailed and could be briefer since they repeat much of the information presented later.

Several chapters are not dealt with as distinct chapters or sub-sections and so there are difficulties in locating relevant data quickly and easily. In addition, some baseline information is included in other chapters. The main text falls under one section but this information is not logically arranged into baseline, assessment and mitigation sections and lacks the necessary detail of a comprehensive landscape and visual impact assessment. It also requires more and clearer illustrative material.

This is a well-written and logically laid out ES. Considerable effort is made to convert technical language into Plain English, but without sacrificing necessary details.

TOTAL SCORE OF REVIEW 2 – B/C

[20] SEPA. 2000. Policy on Regulation and Expansion of Caged Fish Farming of Salmon in Scotland. Version 1.0, September 2000.

LEGAL COMPLIANCE – B/C

REVIEW 2
SYSTEMATIC ASSESSMENT

Description of the development, the local environment, and the baseline conditions.		***Score***
Objectives	**Comment**	
Explanation of purpose and objectives of the development.	Clear description of proposals.	A
The design and size or scale of the development should be described. Diagrams, plans or maps will usually be necessary for this purpose.	Map provided and good description of location, reasonably detailed drawing of cage construction provided.	B
There should be some indication of the physical presence or appearance of the completed development within the receiving environment.	A map is provided showing the proposed cage array, and photographs of similar sites are provided.	B/C
The nature and quantities of raw materials needed both during construction and operational phases should be described. Where appropriate, the nature of the production processes.	Construction phase not referred to in chapter, despite referencing SEPA's EIA guidelines in Annex 1, which specifically mention inclusion of this aspect. However good description of production processes during operational phase	C
OVERALL SCORE		**B**

Site description: The onsite requirements of the development and the duration of each use.		***Score***
Objectives	**Comment**	
Cage surface area taken up by the development should be defined and clearly shown on a map.	Cage surface area described and shown on map.	A
The uses to which the development will be put should be described and the different areas demarcated.	Cage areas demarcated	A
The estimated duration of the construction phase, operational phase and if appropriate the decommissioning phase should be given.	No information provided on any of these time scales	E
The numbers of workers and /or visitors entering the development site during construction and operation should be estimated. Their access to the site and means of transport should be given.	No information provided for construction phase. Information provided in terms of job creation and reference made to impacts to sea birds from increased personnel transport.	C/D
OVERALL SCORE		**C**

Residuals: the types and quantities of residual and/or waste matter and energy should be estimated, the expected rate of production given, and the proposed routes to the environment described.		***Score***
Objectives	**Comment**	
The types and quantities of waste matter, energy and residual materials and at which rates these will be produced, should be estimated.	Comprehensive chapter on waste. The types and quantities of waste matter, energy and residual materials and the rate at which these will be produced is estimated based on mass balance and feed conversion ratio. Insufficient data identified for cod. The methods used to make these estimations are clearly described, and the proposed methods of treatment for the waste and residual materials are identified.	A
The ways in which is it proposed to handle and/or treat these wastes should be indicated, together with the routes by which they will eventually be disposed of to the environment.	Basic but concise description of general waste handling, including ensiling general litter handling. Comprehensive description of the wastes arising from particulate and dissolved wastes, waste loading. Quantities provided for organic nutrient and chemical inputs and AUTODEPODMOD carried out for selected chemicals. Carbon deposition plot presented for maximum biomass of 1400 tonnes and not 1500 used in application	B
The methods by which the quantities of residuals and wastes were obtained should be indicated. If there is uncertainty this should be acknowledged and ranges or consent limits given where possible.	The manner in which each waste stream will be managed (treatment, recycling or reuse and disposal) is described quantitatively wherever possible. Unknown and uncertainties highlighted. Limits provided for cod	A
OVERALL SCORE		**A/B**

Environment Description: the likely geographical extent of the affected environment should be described.		***Score***
Objectives	**Comment**	
The environment expected to be affected by the development should be delimited with the aid of a suitable scale map.	A number of indication diagrams for waste aspect i.e. solid deposition, and medicinal outputs from Autodepomod output are provided, however no other assessments for other	B/C

	aspects of ES.	
The affected environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site, for example the dispersion of pollutants, infrastructural requirements of the project, traffic etc.	'Installation of site' only briefly mentioned in impacts table. Dispersion of pollutants addressed for operational phase, basic traffic movements mentioned, landscape issues attempted, extent of impact of acoustic	C
OVERALL SCORE		**B/C**

Baseline conditions: a description of ent should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site. These may be caused by the affected environment as it is currently, and as it could be expected to develop if the project were not to proceed, should be presented.		***Score***
Objectives	**Comment**	
The important components of the affected environments should be identified and described. The methods and investigations undertaken for this purpose should be disclosed and should be appropriate to the size and complexity of the assessment task. Uncertainty should be indicated.	Baseline environment well defined for hydrography and sediment quality. No attempt to gather baseline data on other aspects e.g. birds, marine mammals, noise, cultural heritage etc.	C
Existing data sources should have been searched and, where relevant, utilised. These should include local authority records and studies carried out by, or on behalf of, conservation agencies and/or special interest groups.	Baseline data collected in field for hydrography and sediment quality only. No interrogation of additional data sources. Consultation with groups has indicated e.g. navigational routes	C
Local land use plans should be consulted and other data collected as necessary to assist in the determination of the baseline conditions i.e. the probable future state of the environment, in the absence of the project, taking into account natural fluctuations and human activities.	Reference made to Argyll and Bute local plan, strategic plan in addition to referencing the establishment of an area management agreement.	B
OVERALL SCORE		**B/C**

Identification and Evaluation of Key impacts

Definition of impacts: Potential impacts of the development on the environment should be investigated and described. Impacts should be broadly defined to cover all potential effects on the environment and should be determined to as the predicted deviation from the baseline state.		***Score***
Objectives	**Comment**	
Impacts are not confined to immediate effects. Consideration should be given to effects, which may be; positive or negative; cumulative; short or long term; permanent or temporary; direct or indirect.	Basic risk assessment provided encompassing beneficial effects and timescales.	B
The above types of impact should be investigated and described especially with regard to identifying effects on or effecting human beings; flora and fauna; sediments, water, air climate, landscape, material assets; cultural heritage and interactions between these things.	Attempt to assess impacts has been carried out well for some aspects (waste), although some impacts not discussed in text (site installation/construction). Due to lack of baseline data for some aspects (marine mammals, birds), unable to undertake full assessment.	C
Consideration should not be limited to events, which will occur under design operating conditions. Where appropriate, impacts, which might arise from non-standard operating conditions, due to accidents, should also be described.	Non-standard events not provided. Fish farm escape policy.	B
The impacts should be determined as the deviation from baseline conditions, difference between the conditions, which would obtain if the development were to proceed and those predicted to prevail as a consequence of it.	Comprehensive information provided on waste and benthic information provided for some aspects e.g. carbon accumulation in sediment. Some information not detailed e.g. predicted impacts on marine benthos	B/C
OVERALL SCORE		**B/C**

Identification of impacts: methods should be used which are capable of identifying significant impacts.		***Score***
Objectives	**Comment**	
Impacts should be identified using a systematic methodology such as a project checklist, matrices, panel of experts, extensive consultations, etc. Supplementary methods may be needed to identify secondary impacts.	Table provided with explanation of risk assessment.	B
A brief description of the impact identification methods should be given, as should the rationale for using	Risk assessment provided although vague definitions given and do not seem to follow standard methodology or define	C

them.	'significance' in line with EIA Regulations	
OVERALL SCORE		**C**

Scoping: Not all impacts should be studied in equal depth. Key impacts should be identified and the main investigation centred on these.		***Score***
Objectives	**Comment**	
There should be a genuine attempt to contact the general public and special interest groups – clubs, societies etc – to appraise them of the project and its implications.	References to consultation described throughout text and list provided in annex. No summary of responses although references made to scoping responses made throughout text.	B/C
Arrangements should be made to collect the opinions and concerns of relevant agencies, special interest groups, and the general public. Public meetings, discussion groups etc. may be arranged to facilitate this.	Reference to consultation, unclear methodology, although evident that discussion has taken place in a number of occasions.	C
Key impacts should be identified and selected for more intense investigation, scoping methods should be described and their use justified.	Not clearly indicated in ES although consultation responses have clearly been incorporated into the ES.	B/C
OVERALL SCORE		**B/C**

Prediction of impact magnitude: The likely impacts of the development environment should be described in exact terms wherever possible.		***Score***
Objectives	**Comment**	
The data used to estimate the magnitude of the main impacts should be sufficient for the task and should be described clearly. Any gaps in the data should be indicated and accounted for.	Minimum data provided in risk assessment to identify magnitude of impact. Gaps and uncertainties in data have generally been well highlighted.	C
The methods used to predict impact magnitude should be described and the appropriate to the size and importance of the projected disturbance.	No rationale provided for impact identification.	C/D
Where possible, estimates of impacts should be recorded in measurable quantities, ranges and or confidence limits as appropriate. Qualitative descriptions if necessary should be fully defined as possible (e.g. insignificant measure perceptible for more than 100 m distance).	Quantitative impact estimates for waste provided in text and defined. Other aspects range in quality of assessment. Risk assessment does not adequately define geographical extent.	B/C
Mitigation methods considered should include modification of the project and the provision of alternative facilities as well as pollution control.	Mitigation methods include pollution control, text described the redesign to accommodate commercial fishing and navigational interests	B
Is should be made clear to what extent the mitigation methods will be effective. If effectiveness is uncertain or depends on assumptions about operating processes, climatic conditions etc, data should be introduced to justify the acceptance of assumptions.	Extent of effectiveness of mitigation methods not clearly indicated although assumptions are highlighted regarding impacts. Effectiveness expanded in evaluation of significance	B/C
OVERALL SCORE		**C**

Assessment of Impact Significance: the expected significance that the project will have for society should be estimated. The sources of quality standards, together with the rationale, assumptions and value judgements used in assessing significance, should be fully described.		***Score***
Objectives	**Comment**	
The significance to the affected community and to society in general should be described and clearly distinguished from impact magnitude. Where mitigating measures are proposed, the significance of any impact remaining after mitigation should also be described.	Socioeconomic and community impacts addressed in evaluation of impacts and corresponding significance based on risk assessment provided. Not clearly distinguished from impact magnitude. Residual significance briefly evaluated.	**B/C**
The significance of an impact should be assessed, taking into account appropriate national and international quality standards where available. Account should also be taken of the magnitude, location and duration of the impact in conjunction with the national and local societal values.	EQS's for various waste impacts discussed in text, local societal issues considered, and wider picture discussed, although actual significance not identified.	**C**
The choice of standards, assumptions and value systems used to assess significance should be justified and any contrary opinions should be summarised.	Significance not assessed using specific standards, even when quantitative and modelled data was available, this was not included in the assessment.	**C/D**
OVERALL SCORE		**C**

Alternatives and Mitigation

Alternatives: feasible alternatives to the proposed project should have been considered. These should be outlined in the Statement, the environmental implications of each presented, and the reasons for their rejection briefly discussed, particularly where the project is likely to have significant adverse environmental effects.		***Score***
Objectives	**Comment**	
Alternative sites should have been considered where these re practicable and available to the developer. The main environmental advantages and disadvantages of these should be discussed and the reasons for final choice given.	Reference made to alternative site search, only one alternative site mentioned, discounted based on results of consultation.	C
Where available, alternative processes, designs and operating conditions should have been considered at an early stage of the project planning and the environmental implications of these investigated and reported where the proposed project is likely to have significant adverse environmental impacts.	Discussion of medicines, deterrents etc.	B/C
If unexpectedly severe adverse environmental impacts are identified during the course of the investigation, which are difficult to mitigate, alternatives rejected earlier in the planning phases should be reappraised.	N/A	
OVERALL SCORE		**C**

Scope and effectiveness of mitigation measures: all significant adverse impacts should be considered for mitigation. Evidence should be presented to show that proposed mitigation measures will be effective when implemented.		***Score***
Objectives	**Comment**	
The mitigation of all significant adverse impacts should be considered and where practicable, specific mitigation measures should be put forward. Any residual or unmitigated impacts should be indicated and justification offered as to why these impacts should not be mitigated.	Specific mitigation put forward, a number of impacts assessed as 'moderate' with no justification as to why not mitigated further.	C
Mitigation methods considered should include modification of of the project, compensation and the provision of alternative facilities as well as pollution control.	Selection and modification of the project in line with consultation responses.	C
It should be made clear to what extent the mitigation methods would be effective when implemented. Where the effectiveness is uncertain or depends on assumptions about operating procedures, climatic conditions etc. data should be introduced to justify the acceptance of these assumptions.	General comments regarding effectiveness of mitigation when implemented. Assumptions and uncertainties generally described.	B/C
OVERALL SCORE		**C**

Commitment to mitigation: the developer should be committed to carrying out the mitigation measures and should present details plans of how he proposes to do so.		***Score***
Objectives	**Comment**	
Clear details of how the mitigation measures will be implemented and functioning time span for which they are necessary should be given.	Details of implementation of mitigation described in table and dates and time spans for some aspects referred to in text.	B/C
When uncertainty over impact magnitude and/or effectiveness of mitigation exists, monitoring programmes should programmes should be proposed to enable subsequent mitigation measures as necessary.	Generally compliant e.g. Monitoring referenced in text for various parameters including fish health, sea lice, sediment and water quality. Although uncertainties of effectiveness of mitigation for some aspects e.g. impacts on wildlife, have not been addressed.	B/C
OVERALL SCORE		**B/C**

Communication of Results

Layout: the layout of the statement should enable the reader to find data easily and quickly. External data sources should be acknowledged		***Score***
Objectives	**Comment**	
There should be an introduction briefly describing the project, the aims of the environmental assessment and how those aims are to be achieved.	Introduction includes the developer the legislative overview and the scope of the ES. Purpose of the ES briefly discussed.	A/B

Information should be logically arranged in sections or chapters and the layout of important data should be signalled in a table of contents or an index.	Information generally well structured and easy to cross reference, although consultations were placed in middle of ES and the matrix of potential impacts located prior to impact assessment.	B
Unless chapters themselves are very short, there should be a chapter outlining the main findings of each phase of the investigation.	N/A	N/A
When data, conclusions, or quality standards, from external sources are introduced, the original source should be acknowledged at that point in the text. A full bibliography should also be included either with the acknowledgement, with a list of references.	Full bibliography included, conclusions justified.	A
OVERALL SCORE		**A/B**

Presentation: care should be taken in the presentation of information to make sure that it is accessible to the non-specialist.		***Score***
Objectives	**Comment**	
Information should be presented so as to be comprehensible to the non-specialist. Tables, graphs and other devices should be used as appropriate. Unnecessary or obscure technical language should be avoided.	Presentation excellent with reasonable structure, consistent formatting and avoidance of technical language.	B
Technical terms, acronyms and initials should be defined, either when first introduced into the text or in a glossary.	Technical terms defined.	A/B
The statement should be presented as an integral whole. Data presented in appendices should be fully discussed in the main body of the text.	Appendices discussed in report.	A
OVERALL SCORE		**B**

Emphasis: Information should be presented without bias and receive the emphasis appropriate to its importance in the context of the ES.		***Score***
Objectives	**Comment**	
Prominence and emphasis should be given to potentially severe adverse impacts. The statement should avoid according excessive space to impacts, which have been well investigated or are beneficial.	Prominence given to impacts identified from scoping/consultation and addressed accordingly.	A
The statement should be unbiased; it should not lobby for any particular point of view. Adverse impacts should not be disguised by euphemisms or platitudes.	Statement appears unbiased and provides details of data gaps and uncertainties throughout text. Conclusions justified.	A
OVERALL SCORE		**A**

Non-technical summary: There should be a non-technical summary outlining the main conclusions and how they were reached.		***Score***
Objectives	**Comment**	
There should be a non-technical summary of the main findings of the study. Technical terms, lists of data and detailed explanations of scientific reasoning should be avoided.	Comprehensive NTS provided, although would benefit from omission of detailed data for a reduction in length.	B
The summary should be comprehensive, containing at least a brief description of the project and the environment, an account of the main mitigation measures to be undertaken by the developer and a description of any remaining or residual impacts. A brief explanation of the methods by which these data were obtained and in indication of the confidence, which can be placed in them, should also be included.	Generally compliant, minor omissions.	B
OVERALL SCORE		**A/B**

REVIEW 3

General Summary

This review considers an Environmental Statement for one new salmon farm submitted to the Shetland Isles Council by a consultant. This ES was highly flawed in numerous aspects. The ES was difficult to systematically assess due to repetition of data, poor presentation and the illogical structure of information.

Description of the Development, Local Environment and Baseline Conditions
A very basic description of the development was provided although this met minimal requirements and presentation of data was poor. The site occupies an area where a number of other fish farms were located, however due to lack of scale on figure, the reader is unable to determine distances in line with guidance.

The baseline assessment includes a hydrographic survey, which was briefly discussed, and full text referenced as an Appendix, however the discussion provided in the text does not adequately explain the results. Waste pathways were considered in this section, and cumulative vector plots discussed although these were not referenced. Seabed survey consisted of a photographic survey of the benthos of sand, and basic marine life from photographs. The quality and level of taxonomic resolution of these assessments was very poor and insufficient for subsequent assessment. On occasions where field surveys were not carried out and baseline information was collated from other sources, these were not always referenced accurately.

SCORE - C

Identification and Evaluation of Key Impacts
Due to the lack of systematic methodology and quality of the baseline data, identification of, and evaluation of key impacts was poor. Routine speculation of impacts was common, as were unjustified and unsubstantiated statements.

SCORE - D

Alternatives and Mitigation of Impacts
A mitigation section is provided although assessment of mitigation is provided throughout the text, leading to difficulties in evaluation by the reader. The content of the mitigation was reasonable, covering issues such as landscape and amenity, however these were not exhaustive.

SCORE - D

Communication of Results
Although the ES generally avoided technical jargon and was relatively straightforward to comprehend specific units of text, assessment of the environmental impact of the development was difficult and time consuming due to the poor structure and presentation of content of the ES. Several chapters are not dealt with as distinct chapters or sub-sections and so there are difficulties in locating relevant data quickly and easily. In addition, some baseline information is included in other chapters. Information is not logically arranged into baseline, assessment and mitigation sections. Little effort had been paid to presentational aspects, leaving figures without scales and graphs without labelling.

SCORE – C/D

TOTAL SCORE FOR REVIEW 3 - D
LEGAL COMPLIANCE - C

REVIEW 3
Systematic Review

Description of the development, the local environment, and the baseline conditions.		***Score***
Objective	**Comments**	
Explanation of purpose and objectives of the development.	Aims and approach of ES set out, with an attempt to set out methodology of EIA provided.	B
The design and size or scale of the development should be described. Diagrams, plans or maps will usually be necessary for this purpose.	Design and scale of development described. Maps provided but of moderate - poor quality.	A/B
There should be some indication of the physical presence or appearance of the completed development within the receiving environment.	No indication of presence in receiving environment. Although physical description provided.	B/C
The nature and quantities of raw materials needed both during construction and operational phases should be described. Where appropriate, the nature of the production processes.	Productions plan provided. No assessment of operation and construction phases.	C
OVERALL SCORE		**B**

Site description: The onsite land /sea requirements of the development and the duration of each use		***Score***
Objective	**Comments**	
The area taken up by the development should be defined and clearly shown on a map.	General area indicated, land take described and general area indicated on unscaled map.	B/C
The uses to which this area will be put should be described and the different areas demarcated	Feeding barge and cages illustrated.	B
The estimated duration of the construction phase, operational phase and if appropriate the decommissioning phase should be given.	No attempt to provide timescales for any phase.	F
The numbers of workers and /or visitors entering the development site during construction and operation should be estimated. Their access to the site and means of transport should be given.	No attempt to provide indication of numbers during construction /operation	F
OVERALL SCORE		**D/E**

Residuals: the types and quantities of residual and/or waste matter and energy should be estimated, the expected rate of production given, and the proposed routes to the environment described.		***Score***
Objective	**Comments**	
The types and quantities of waste matter, energy and residual materials and at which rates these will be produced, should be estimated.	Dissolved nutrients plus organic waste considered.	B/C
The ways in which is it proposed to handle and/or treat these wastes should be indicated, together with the routes by which they will eventually be disposed of to the environment.	Routes of disposal indicated for some inputs.	C
The methods by which the quantities of residuals and wastes were obtained should be indicated. If there is uncertainty this should be acknowledged and ranges or consent limits given where possible.	Methods not properly referenced and often vague, no illustration of nutrient budget and justification of conclusion.	D/E
OVERALL SCORE		**C/D**

Environment Description: the likely geographical extent of the affected environment should be described.		***Score***
Objective	**Comments**	
The environment expected to be affected by the development should be delimited with the aid of a suitable scale map.	Not comprehensive, Provided for total and organic carbon. Solid deposition illustrated in graph with no labels on axes or explanation.	C/D
The significant environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site, for example the dispersion of pollutants, infrastructural requirements of the project, traffic etc.	No construction impacts discussed. Footprint of organic deposition provided.	C/D
OVERALL SCORE		**C/D**

Baseline conditions: a description of the affected environment as it is currently and as it could be expected to develop if the project were not to proceed, should be presented.		***Score***
Objective	**Comments**	
The important components of the affected environments should be identified and described. The methods and investigations undertaken for this purpose should be disclosed and should be appropriate to the size and complexity of the assessment task. Uncertainty should be indicated.	Effort to assess components - cultural heritage, hydrography, fisheries etc. Not fully comprehensive.	C/D
Existing data sources should have been searched and, where relevant,	RSBP and SNH data mentioned, no	C

utilised. These should include local authority records and studies carried out by, or on behalf of, conservation agencies and/or special interest groups.	other sources, and details not referenced.	
Local land use plans should be consulted and other data collected as necessary to assist in the determination of the baseline conditions i.e. the probable future state of the environment, in the absence of the project, taking into account natural fluctuations and human activities.	Land use and reference to planning policy briefly discussed.	C
OVERALL SCORE		**C**

Identification and Evaluation of Key impacts

Definition of impacts: Potential impacts of the development on the environment should be investigated and described. Impacts should be broadly defined to cover all potential effects on the environment and should be determined to as the predicted deviation from the baseline state.		***Score***
Objective	**Comments**	
Impacts are not confined to immediate effects. Consideration should be given to effects, which may be; positive or negative; cumulative; short or long term; permanent or temporary; direct or indirect.	Attempts to identify impacts are confined to a basic review of operational phase, not comprehensive, and no further description.	C
The above types of impact should be investigated and described especially with regard to identifying effects on or effecting human beings; flora and fauna; sediment, water, air climate, landscape, material assets; cultural heritage and interactions between these things.	Impacts not all investigated thoroughly – for example impact on marine flora and fauna poor, essentially limited to description of terrestrial environment and very basic description of fauna on shoreline.	D/E
Consideration should not be limited to events which will occur under design operating conditions. Where appropriate, impacts which might arise from non-standard operating conditions, due to accidents, should also be described.	Policy on fish escape provided.	C
The impacts should be determined as the deviation from baseline conditions, difference between the conditions, which would obtain if the development were to proceed and those predicted to prevail as a consequence of it.	Impacts described quantitatively and statements unjustified.	D/E
OVERALL SCORE		**C/D**

Identification of impacts: methods should be used which are capable of identifying significant impacts.		***Score***
Objective	**Comments**	
Impacts should be identified using a systematic methodology such as a project checklist, matrices, panel of experts, extensive consultations, etc. Supplementary methods may be needed to identify secondary impacts.	No systematic methodology provided. General discussion provided but very poor.	E
A brief description of the impact identification methods should be given, as should the rationale for using them.	No impact identification method	E
OVERALL SCORE		**E**

Scoping: Not all impacts should be studied in equal depth. Key impacts should be identified and the main investigation centred on these.		***Score***
Objective	**Comments**	
There should be a genuine attempt to contact the general public and special interest groups – clubs, societies etc – to appraise them of the project and its implications.	Appendices provide evidence of consultation, no methodology provided. Some references to specific consultees provided, generally little information.	C
Arrangements should be made to collect the opinions and concerns of relevant agencies, special interest groups, and the general public. Public meetings, discussion groups etc. may be arranged to facilitate this.	Evidence of consultation by letters provided in appendix.	C
Key impacts should be identified and selected for more intense investigation, scoping methods should be described and their use justified.	No clear methodology for identifying key impacts from scoping responses, however, clear that some advice taken from consultation responses from statutory consultees.	C
OVERALL SCORE		**C**

Prediction of impact magnitude: The likely impacts of the development environment should be described in exact terms wherever possible.		***Score***
Objective	**Comments**	
The data used to estimate the magnitude of the main impacts should be sufficient for the task and should be described clearly. Any gaps in the data should be indicated and accounted for.	Gaps or uncertainties in data generally unaccounted for although some basic attempt to estimate magnitude without	C/D

	threshold values and variable baseline data.	
The methods used to predict impact magnitude should be described and the appropriate to the size and importance of the projected disturbance.	No methods stated to predict magnitude.	F
Where possible, estimates of impacts should be recorded in measurable quantities, ranges and or confidence limits as appropriate. Qualitative descriptions if necessary should be fully defined as possible (e.g. insignificant measure perceptible for more than 100 m distance).	Quantitative impact identification for some aspects, although of unknown quality given although reasonable section on hydrography based on SEPA guidance.	C/D
Mitigation methods considered should include modification of the project and the provision of alternative facilities as well as pollution control.	Mitigation measures do not seem to include design modification although some measures are clearly preferable (e.g. tensioned net systems). Provision of alternative facilities is not discussed.	D
Is should be made clear to what extent the mitigation methods will be effective. If effectiveness is uncertain or depends on assumptions about operating processes, climatic conditions etc, data should be introduced to justify the acceptance of assumptions.	Description of effectiveness of mitigation measures not comprehensive although some indication of extent e.g. screening options limited.	C
OVERALL SCORE		**D**

Assessment of Impact Significance: the expected significance that the project will have for society should be estimated. The sources of quality standards, together with the rationale, assumptions and value judgements used in assessing significance, should be fully described.		***Score***
Objectives	**Comment**	
The significance to the affected community and to society in general should be described and clearly distinguished from impact magnitude. Where mitigating measures are proposed, the significance of any impact remaining after mitigation should also be described.	Significance not indicated in terms of the community, although attempt made to assess landscape/amenity employment effects. Fishing interest assessment restricted to letter of consultation and presence of creels during site survey	D
The significance of an impact should be assessed, taking into account appropriate national and international quality standards where available. Account should also be taken of the magnitude, location and duration of the impact in conjunction with the national and local societal values.	Significance of impacts not assessed fully, no reference to any standards and little assessment of magnitude location and duration of impact.	D/E
The choice of standards, assumptions and value systems used to assess significance should be justified and any contrary opinions should be summarised.	No standards used.	D
OVERALL SCORE		**D**

Alternatives and Mitigation

Alternatives: feasible alternatives to the proposed project should have been considered. These should be outlined in the Statement, the environmental implications of each presented, and the reasons for their rejection briefly discussed, particularly where the project is likely to have significant adverse environmental effects.		***Score***
Objectives	**Comment**	
Alternative sites should have been considered where these are practicable and available to the developer. The main environmental advantages and disadvantages of these should be discussed and the reasons for final choice given.	No alternative sites considered.	F
Where available alternative processes, designs and operating conditions should have been considered at an early stage of the project planning and the environmental implications of these investigated and reported where the proposed project is likely to have significant adverse environmental impacts.	Alternative biomass tonnage proposed on basis of scoping response from SEPA. Alternative mitigation i.e. marine mammal deterrents were discussed.	C
If unexpectedly severe adverse environmental impacts are identified during the course of the investigation, which are difficult to mitigate, alternatives rejected earlier in the planning phases should be reappraised.	N/A	
OVERALL SCORE		**D/E**

Scope and effectiveness of mitigation measures: all significant adverse impacts should be considered for mitigation. Evidence should be presented to show that proposed mitigation measures will be effective when implemented.		***Score***
Objectives	**Comment**	
The mitigation of all significant adverse impacts should be considered and where practicable, specific mitigation measures should be put forward. Any residual or unmitigated impacts should be indicated and justification offered as to why these impacts should not be mitigated.	Specific mitigation put forward for some effects, however due to poor quality of some baseline data, impacts poorly assessed. ES does not clearly indicate unmitigated impacts in mitigation; in text these are poorly justified or referenced e.g. scientific evidence.	D

Mitigation methods considered should include modification of the project, compensation and the provision of alternative facilities as well as pollution control.	None addressed, although pollution control considered	C/D
It should be made clear to what extent the mitigation methods would be effective when implemented. Where the effectiveness is uncertain or depends on assumptions about operating procedures, climatic conditions etc. data should be introduced to justify the acceptance of these assumptions.	No data introduced to justify acceptance of extent of mitigation methods.	E
OVERALL SCORE		**D**

Commitment to mitigation: the developer should be committed to carrying out the mitigation measures and should present details plans of how he proposes to do so.		***Score***
Objective	**Comments**	
Clear details of how the mitigation measures will be implemented and functioning time span for which they are necessary should be given.	Basic detail on implementation of mitigation measures. No timespans.	C/D
When uncertainty over impact magnitude and/or effectiveness of mitigation exists, monitoring programmes should programmes should be proposed to enable subsequent mitigation measures as necessary.	Uncertainty highlighted on occasion, monitoring mentioned although no further details provided.	C/D
OVERALL SCORE		**C/D**

Communication of Results

Layout: the layout of the statement should enable the reader to find data easily and quickly. External data sources should be acknowledged		***Score***
Objective	**Comments**	
There should be an introduction briefly describing the project, the aims of the environmental assessment and how those aims are to be achieved.	No clearly set out introduction. Assessment protocol set out then details of proposed development, slightly confused with NTS.	B/C
Information should be logically arranged in sections or chapters and the layout of important data should be signalled in a table of contents or an index.	Information illogically structured, repetition, lack of distinct sections defining impacts and mitigation, contents provided.	C/D
Unless chapters themselves are very short, there should be a chapter outlining the main findings of each phase of the investigation.	N/A	
When data, conclusions, or quality standards, from external sources are introduced, the original source should be acknowledged at that point in the text. A full bibliography should also be included either with the acknowledgement, with a list of references.	Conclusions rarely referenced, when they are, full references not provided.	D/E
OVERALL SCORE		**D**

Presentation: care should be taken in the presentation of information to make sure that it is accessible to the non-specialist.		***Score***
Objective	**Comments**	
Information should be presented so as to be comprehensible to the non-specialist. Tables, graphs and other devices should be used as appropriate. Unnecessary or obscure technical language should be avoided.	Poor quality of figures, formatting not consistent, some figures not labelled, structure illogical e.g. natural heritage designation figure presented in NTS. Technical language generally avoided but some terms not explained fully	D
Technical terms, acronyms and initials should be defined, either when first introduced into the text or in a glossary.	Generally compliant.	B
The statement should be presented as an integral whole. Data presented in appendices should be fully discussed in the main body of the text.	Data in appendices at referred to in text, not structured coherently and much data redundant e.g. copies of each scoping letter sent to consultees.	B
OVERALL SCORE		**C**

Emphasis: Information should be presented without bias and receive the emphasis appropriate to its importance in the context of the ES.		***Score***
Objective	**Comments**	
Prominence and emphasis should be given to potentially severe adverse impacts. The statement should avoid according excessive space to impacts, which have been well investigated or are	Emphasis on hydrographic impact although due to lack of assessment unsure of severity of impact. Difficult to assess on this basis, in	B

beneficial.	general seems to comply.	
The statement should be unbiased; it should not lobby for any particular point of view. Adverse impacts should not be disguised by euphemisms or platitudes.	Where insufficient baseline data available, statement state that there is no impact with no justification. Despite this statement appears generally unbiased.	C
OVERALL SCORE		**B/C**

Non-technical summary: There should be a non-technical summary outlining the main conclusions and how they were reached.		Score
There should be a non-technical summary of the main findings of the study. Technical terms, lists of data and detailed explanations of scientific reasoning should be avoided.	NTS included without overly technical descriptions. Figures introduced which are referred to throughout text,	C
The summary should be comprehensive, containing at least a brief description of the project and the environment, an account of the main mitigation measures to be undertaken by the developer and a description of any remaining or residual impacts. A brief explanation of the methods by which these data were obtained and in indication of the confidence, which can be placed in them, should also be included.	Not comprehensive. No description of the baseline environment or methods used during EIA process. Summary restricted to production, equipment and management.	C/D
OVERALL SCORE		**C**

REVIEW 4
General Summary

The application was submitted to Orkney Island Council by a consultant. This ES considers the expansion of an existing sea cage development with three new sites. The company is certified organic and therefore the ES does not consider chemotherapeutants. In general this was a thorough good ES, meeting all the requirements of the Regulations and clearly demonstrating the impacts on the environment with unbiased and justifiable data.

Description of the Development, Local Environment and Baseline Conditions
A comprehensive description of the existing baseline environment is provided addressing physical, biological and human characteristics. The consultant has not provided field data with reference to several potential impacts, such as birds, marine mammals etc however, however research and reference to existing data, local knowledge sources have yielded extensive site specific information relevant to the site locations. Best practice guidelines are referenced throughout, including the Locational Guidelines published by the Scottish Executive and the site location within the planning context.

SCORE - B

Identification and Evaluation of Key Impacts
In contrast to other ESs reviewed in this exercise, this assessment considers the impact of construction. Cumulative impacts are also considered in detail for most technical assessments. A detailed and systematic assessment methodology is fully compliant with the requirements of the regulations, providing a basis to assess potential impacts. The methodology also includes the potential impacts on social and cultural aspects in addition to physical impacts on the environment alone. The ES may benefit from the inclusion of a quantitative estimation of impact for certain aspects of the assessment.

SCORE – A/B

Alternatives and Mitigation of Impacts
Site selection was the result of a two-tier consideration of a number of sites, the selection and subsequent rejection of these sites was made clear in a systematic process. Similarly the ES provides a BPEO, which includes a considered assessment of alternatives. Best Available Techniques (BAT) as a method of providing appropriate mitigation.

SCORE - B

Communication of Results
The ES is well presented and structured, with avoidance of overly technical language and accessible to a wider audience. Detailed methodologies provided as appendices. Minor criticisms of structure include:

- Consultation/Scoping placed in a later section, whereas ideally this section should be placed before the baseline description to justify the content; and
- Assessment of discharge quantification precedes the baseline assessment.

SCORE A/B

TOTAL SCORE FOR REVIEW 4 – B
LEGAL COMPLIANCE – A/B

REVIEW 4
Systematic Assessment

Description of the development, the local environment, and the baseline conditions.		***Score***
Objectives	**Comment**	
Explanation of purpose and objectives of the development.	Description of development, developers and scope of ES described.	A
The design and size or scale of the development should be described. Diagrams, plans or maps will usually be necessary for this purpose.	Scaled drawings indicating location. Development description includes description of scale of development and vertical transect of cages provided.	A
There should be some indication of the physical presence or appearance of the completed development within the receiving environment.	Photomontages with sea cage arrangements provided.	A
The nature and quantities of raw materials needed both during construction and operational phases should be described. Where appropriate, the nature of the production processes.	Detailed information provided on production process. Little information provided on site installation process.	C
OVERALL SCORE		**A/B**

Site description: The onsite land /sea requirements of the development and the duration of each use		***Score***
Objectives	**Comment**	
The area taken up by the development should be defined and clearly shown on a map.	Seabed and cage area defined and blocks shown on map.	
The uses to which this area will be put should be described and the different areas demarcated	No demarcation of areas but vertical transect provided. Shore facilities unconfirmed.	B
The estimated duration of the construction phase, operational phase and if appropriate the decommissioning phase should be given.	No overall timescales provided although production cycles provided to 2010.	C
The numbers of workers and /or visitors entering the development site during construction and operation should be estimated. Their access to the site and means of transport should be given.	Workers estimated for operation, no estimation for construction.	C
OVERALL SCORE		**B/C**

Residuals: the types and quantities of residual and/or waste matter and energy should be estimated, the expected rate of production given, and the proposed routes to the environment described.		Score
Objectives	**Comment**	
The types and quantities of waste matter, energy and residual materials and at which rates these will be produced, should be estimated.	Comprehensive assessment of waste discharges, referenced appropriately. Also considers packaging waste. No chemical use on site but EXCIS held for emergencies.	A
The ways in which is it proposed to handle and/or treat these wastes should be indicated, together with the routes by which they will eventually be disposed of to the environment.	Reasonable description of pathway of waste disposal. Handling and storage of waste considered briefly in impact assessment.	B/C
The methods by which the quantities of residuals and wastes were obtained should be indicated. If there is uncertainty this should be acknowledged and ranges or consent limits given where possible.	Footprint of faecal and waste feed based on DEPOMOD model, with full methodology provided and brief summary of validation in Appendix. Unclear method of calculation of biofouling. Other wastes not considered in detail.	B
OVERALL SCORE		**B**

Environment Description: the likely geographical extent of the affected environment should be described.		***Score***
Objectives	**Comment**	
The environment expected to be affected by the development should be delimited with the aid of a suitable scale map.	Relevant issues considered and maps provided e.g. footprints of organic deposition, basic landscape visual envelope.	B
The significant environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate area, for example the dispersion of pollutants, infrastructural requirements of the project, traffic etc.	Assessment includes consideration out with immediate area.	A/B
OVERALL SCORE		**A/B**

Baseline conditions: a description of the environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site. These may be caused by the affected environment as it is currently, and as it could be expected to develop if the project were not to proceed, should be presented.		***Score***
Objectives	**Comment**	
The important components of the affected environments should be identified and described. The methods and investigations undertaken for this purpose should be disclosed and should be appropriate to the size and complexity of the assessment task. Uncertainty should be indicated.	Comprehensive baseline assessment, with close reference to scoping responses. Methodologies provided as appendices when appropriate. Survey effort appropriate to task. Uncertainty occasionally referenced.	A/B
Existing data sources should have been searched and, where relevant, utilised. These should include local authority records and studies carried out by, or on behalf of, conservation agencies and/or special interest groups.	Existing data generally referenced e.g. plankton environment, fish, birds, marine mammals etc.	A
Local land use plans should be consulted and other data collected as necessary to assist in the determination of the baseline conditions i.e. the probable future state of the environment, in the absence of the project, taking into account natural fluctuations and human activities.	Brief summary of land use plans with reference to future development.	B
OVERALL SCORE		**A/B**

Identification and evaluation of Key impacts

Definition of impacts: Potential impacts of the development on the environment should be investigated and described. Impacts should be broadly defined to cover all potential effects on the environment and should be determined to as the predicted deviation from the baseline state.		***Score***
Objectives	**Comment**	
Impacts are not confined to immediate effects. Consideration should be given to effects which may be; positive or negative; cumulative; short or long term; permanent or temporary; direct or indirect.	Definition of consequences includes term of effect and includes beneficial impacts	B
The above types of impact should be investigated and described especially with regard to identifying effects on or effecting human beings; flora and fauna; water, air climate, landscape, material assets; cultural heritage and interactions between these things.	Impacts comprehensively assessed, taking into account environmental, policy and 'stakeholder' factors. Carried out for all sites.	A/B
Consideration should not be limited to events which will occur under design operating conditions. Where appropriate, impacts which might arise from non-standard operating conditions, due to accidents, should also be described.	Accidental effects considered for a range of scenarios, including construction.	A
The impacts should be determined as the deviation from baseline conditions, difference between the conditions, which would obtain if the development were to proceed and those predicted to prevail as a consequence of it.	Deviation from baseline conditions considered however detailed assessment of development not expanded.	B
OVERALL SCORE		**A/B**

Identification of impacts: methods should be used which are capable of identifying significant impacts.		***Score***
Objectives	**Comment**	
Impacts should be identified using a systematic methodology such as a project checklist, matrices, panel of experts, extensive consultations, etc. Supplementary methods may be needed to identify secondary impacts.	Systematic methodology in table format with reference to BAT. All sites considered together with notes indicating.	B
A brief description of the impact identification methods should be given as should the rationale for using them.	Impact identification methods provided with associated justification for methods.	A
OVERALL SCORE		**A**

Scoping: Not all impacts should be studied in equal depth. Key impacts should be identified and the main investigation centred on these.		***Score***
Objectives	**Comment**	
There should be a genuine attempt to contact the general public and special interest groups – clubs, societies etc – to appraise them of the project and its implications.	Scoping process comprehensive including statutory consultees, local groups and businesses. Meetings and telephone conversations held with a number of groups.	A
Arrangements should be made to collect the opinions and	Comprehensive scoping carried out followed up with	B

concerns of relevant agencies, special interest groups, and the general public. Public meetings, discussion groups etc. may be arranged to facilitate this.	meeting with a number of consultees. No meetings or discussion groups.	
Key impacts should be identified and selected for more intense investigation, scoping methods should be described and their use justified.	Key impacts identified by raising responses and actions to each issue raised by consultees.	A
OVERALL SCORE		**A/B**

Prediction of impact magnitude: The likely impacts of the development environment should be described in exact terms wherever possible.		Score
Objectives	**Comment**	
The data used to estimate the magnitude of the main impacts should be sufficient for the task and should be described clearly. Any gaps in the data should be indicated and accounted for.	Author has developed methodology based on a number of levels of impact. Environmental consequences describe definition of magnitude. Data gaps clearly summarised.	A
The methods used to predict impact magnitude should be described and the appropriate to the size and importance of the projected disturbance.	Methods used appropriate. Although some readers may find system complex.	A/B
Where possible, estimates of impacts should be recorded in measurable quantities, ranges and or confidence limits as appropriate. Qualitative descriptions if necessary should be fully defined as possible (e.g. insignificant measure perceptible for more than 100 m distance).	Estimates of impacts quantities provided for geographic extent of impact. Good qualitative assessment but quantitative assessment lacking even when data present.	B/C
Mitigation methods considered should include modification of the project and the provision of alternative facilities as well as pollution control.	Alternative sites considered on two decision levels. Best Available Technique investigated.	A
Is should be made clear to what extent the mitigation methods will be effective. If effectiveness is uncertain or depends on assumptions about operating processes, climatic conditions etc, data should be introduced to justify the acceptance of assumptions.	A risk assessment of accidental events considered.	A
OVERALL SCORE		**A/B**

Assessment of Impact Significance: the expected significance that the project will have for society should be estimated. The sources of quality standards, together with the rationale, assumptions and value judgements used in assessing significance, should be fully described.		***Score***
Objectives	**Comment**	
The significance to the affected community and to society in general should be described and clearly distinguished from impact magnitude. Where mitigating measures are proposed, the significance of any impact remaining after mitigation should also be described.	Assessment has considered the 'stakeholder' impact, clearly distinguishing. Residual impact classified as BPEO and described for each identified impact.	**A/B**
The significance is an impact should be assessed, taking into account appropriate national and international quality standards where available. Account should also be taken of the magnitude, location and duration of the impact in conjunction with the national and local societal values.	Significance considered for social, policy and environmental factors, in addition to overall rating.	**B**
The choice of standards, assumptions and value systems used to assess significance should be justified and any contrary opinions should be summarised.	ES may benefit from site specific quantitative standards to assess significance of impact. Tendency to use qualitative assessments, e.g 'sites good distance apart', 'velvet crab located further north'.	**C**
OVERALL SCORE		**B**

Alternatives and Mitigation

Alternatives: feasible alternatives to the proposed project should have been considered. These should be outlined in the Statement, the environmental implications of each presented, and the reasons for their rejection briefly discussed, particularly where the project is likely to have significant adverse environmental effects.		***Score***
Objectives	**Comment**	
Alternative sites should have been considered where these re practicable and available to the developer. The main environmental advantages and disadvantages of these should be discussed and the reasons for final choice given.	Good assessment of alternative sites detailing first and second level decisions with corresponding methodology for assessment. Best available technology considered.	A
Where available alternative processes, designs and operating conditions should have been considered at an early stage of the project planning and the environmental implications of these investigated and reported where the proposed project is likely to have significant adverse environmental impacts.	Alternatives considered e.g. predator management. Investigation of implications following BPEO assessment.	A/B
If unexpectedly severe adverse environmental impacts are	N/A	N/A

identified during the course of the investigation, which are difficult to mitigate, alternatives rejected earlier in the planning phases should be reappraised.		
OVERALL SCORE		**A**

Scope and effectiveness of mitigation measures: all significant adverse impacts should be considered for mitigation. Evidence should be presented to show that proposed mitigation measures will be effective when implemented.		***Score***
Objectives	**Comment**	
The mitigation of all significant adverse impacts should be considered and where practicable, specific mitigation measures should be put forward. Any residual or unmitigated impacts should be indicated and justification offered as to why these impacts should not be mitigated.	Residual mitigation summarised for each site, and justified.	A/B
Mitigation methods considered should include modification of the project, compensation and the provision of alternative facilities as well as pollution control.	Provision made for some aspects of project modification of project as existing sites in vicinity, 'tried and tested' methods e.g. pollution control identified.	C
It should be made clear to what extent the mitigation methods will be effective when implemented. Where the effectiveness is uncertain or depends on assumptions about operating procedures, climatic conditions etc. data should be introduced to justify the acceptance of these assumptions.	Extent of mitigation discussed where appropriate e.g . predator control. Some gaps in assessment e.g. sea cage construction but section on accidental events.	B
OVERALL SCORE		**B**

Commitment to mitigation: the developer should be committed to carrying out the mitigation measures and should present details plans of how he proposes to do so.		***Score***
Objectives	**Comment**	
Clear details of how the mitigation measures will be implemented and functioning time span for which they are necessary should be given.	Implementation clarified, with general time scales where appropriate.	B
When uncertainty over impact magnitude and/or effectiveness of mitigation exists, monitoring programmes should programmes should be proposed to enable subsequent mitigation measures as necessary.	Monitoring programmes mentioned for some aspects such as post construction survey, but generally unknown and limited detail.	C
OVERALL SCORE		**B/C**

Communication of Results

Layout: the layout of the statement should enable the reader to find data easily and quickly. External data sources should be acknowledged		***Score***
Objectives	**Comment**	
There should be an introduction briefly describing the project, the aims of the environmental assessment and how those aims are to be achieved.	Introduction includes the developer the legislative overview and the scope of the ES. Purpose of the ES briefly discussed.	A/B
Information should be logically arranged in sections or chapters and the layout of important data should be signalled in a table of contents or an index.	Information generally well structured, easy to cross reference although e.g. consultations place in middle of ES and matrix of potential impacts located prior to impact assessment.	B
Unless chapters themselves are very short, there should be a chapter outlining the main findings of each phase of the investigation.	N/A	N/A
When data, conclusions, or quality standards, from external sources are introduced, the original source should be acknowledged at that point in the text. A full bibliography should also be included either with the acknowledgement, with a list of references.	Full bibliography included, conclusions justified.	A
OVERALL SCORE		**A/B**

Presentation: care should be taken in the presentation of information to make sure that it is accessible to the non-specialist.		***Score***
Objectives	**Comment**	
Information should be presented so as to be comprehensible to the non-specialist. Tables, graphs and other devices should be used as appropriate. Unnecessary or obscure technical language should be avoided.	Presentation excellent with reasonable structure, consistent formatting and avoidance of technical language.	B
Technical terms, acronyms and initials should be defined, either when first introduced into the text or in a glossary.	Technical terms defined.	A/B

The statement should be presented as an integral whole. Data presented in appendices should be fully discussed in the main body of the text.	Appendices discussed in report.	A
OVERALL SCORE		**B**

Emphasis: Information should be presented without bias and receive the emphasis appropriate to its importance in the context of the ES.		***Score***
Objectives	**Comment**	
Prominence and emphasis should be given to potentially severe adverse impacts. The statement should avoid according excessive space to impacts, which have been well investigated or are beneficial.	Prominence given to impacts identified from scoping/consultation and addressed accordingly.	A
The statement should be unbiased; it should not lobby for any particular point of view. Adverse impacts should not be disguised by euphemisms or platitudes.	Statement appears unbiased and provides details of data gaps and uncertainties throughout text. Conclusions justified.	A
OVERALL SCORE		**A**

Non-technical summary: There should be a non-technical summary outlining the main conclusions and how they were reached.		***Score***
Objectives	**Comment**	
There should be a non-technical summary of the main findings of the study. Technical terms, lists of data and detailed explanations of scientific reasoning should be avoided.	Comprehensive NTS provided, although would benefit from omission of detailed data for a reduction in length.	B
The summary should be comprehensive, containing at least a brief description of the project and the environment, an account of the main mitigation measures to be undertaken by the developer and a description of any remaining or residual impacts. A brief explanation of the methods by which these data were obtained and in indication of the confidence, which can be placed in them, should also be included.	Generally compliant, minor omissions.	B
OVERALL SCORE		**A/B**

REVIEW 5
General Summary

This review considers an Environmental Statement for one new salmon farm submitted to the Highland Council by a private consultant. This ES is an easily interpreted document, which appears to deal with the major environmental impacts. The document is well presented, the provision of baseline data for a number of parameters is excellent, and the corresponding text is concise resulting in a compact, readable document. The ES meets the minimum legal requirements in terms of Part II of the Environmental Impact Assessment (Fish Farming in Marine Waters) 1999. However, a number of important omissions compromise the general quality of the ES.

Description of the Development, Local Environment and Baseline Conditions
The site description is fairly comprehensive, with detailed drawings provided in a technical appendix. A good description of the baseline conditions is also provided for the general site, in addition to an chapter on flushing, nutrient discharges, hydrographic data, benthic data, marine mammals and birds. Several site-specific surveys have been carried out, provided as appendices and accurately referenced in the body of the ES. The regulatory framework based on Scottish Executive Locational Guidelines was referenced in addition to brief references to planning policy. A major omission in this section was lack of consideration of the construction and decommissioning phases. Other minor omissions included defining the timescales of operation and the potential to consider the planning documents to indicate future uses of the site. Baseline amenity qualities (landscape, litter and noise) are also not included in the description of the local environment.

SCORE – B/C

Identification and Evaluation of Key Impacts
Important impacts are described, although no justification is provided for focusing on these aspects (i.e. link to scoping responses). Ideally, scoping responses should be cited to justify the content of the impact identification. The EIA Regulations also require systematic identification of significant effects. In this ES, no attempt to methodically assess the sensitivity of receptors or the magnitude of change or impact is provided, although discussion is provided and the document does highlight uncertainty.

The ES identifies that the main impact of the proposed development will be on the surrounding landscape, although the baseline assessment provided on this aspect was minimal, although guidance has been referenced.

Evaluation of the impact is not carried out in line with the SNH guidance referenced, and much of the evaluation is irrelevant. The text attempts to define the extent of effects on the environment for some aspects, (e.g. speculated from current speeds, landscape) but this is not indicated on drawings. Litter arising from waste arising from fish farms is identified as an impact in the amenity chapter in addition to mammals/birds section, however no attempt to identify waste streams other than is provided. Although detailed surveys have been carried out, no assessment of the environment without the development has been considered, this includes the positive benefits (e.g. socioeconomic) arising from the development in addition to negative ones. As described above, detailed surveys have been commissioned and the main findings have been summarised in the report however, it makes no attempt to evaluate the impacts arising from the construction/decommissioning phase. In general, this section is not comprehensive and the reader is left unclear of the importance and significance of the impacts.

SCORE – C/D

Alternatives and Mitigation of Impacts

A description of other candidate sites is provided with associated rationale for rejection.

SCORE - C

Communication of Results

In general, this ES was short, concise and well written, providing good quality information for statutory consultees (hydrography, benthic) to inform their decisions. Sections are generally well presented, although there was some confusion in identifying the location of some information located between introduction and baseline description. Although, baseline information, impact identification and mitigation are described throughout the chapter.

The structure at times was lacking. Within the identification of key impacts, extensive investigation of mitigation measures were also provided, resulting in repetition. The ES would have significantly benefited by a more systematic approach such as table identifying the sensitivity of each of the receptors, provision of an indication of magnitude and impact identification.

The text was written without bias, uncertainties were highlighted and limitations were made clear. However on occasion, statements such as are not justified or substantiated e.g. '*feral mink represent a more potent threat*'. Consultation was carried out, but the process of how consultation has informed the ES was not made clear, and no information provided as to methodology, responses or extent of individuals consulted.

SCORE – B

TOTAL SCORE FOR REVIEW 5 – C
LEGAL COMPLIANCE – B/C

REVIEW 5
Systematic Assessment

Description of the Development, Local Environment and Baseline Conditions

Description of the development, the local environment, and the baseline conditions.		***Score***
Objective	**Comments**	
Explanation of purpose and objectives of the development.	Alternative sites considered although specific rationale not presented.	B
The design and size or scale of the development should be described. Diagrams, plans or maps will usually be necessary for this purpose.	Diagrams showing existing site and scale of site in chapter. Good description of development. Detailed drawings in Annex. Not to scale.	B
There should be some indication of the physical presence or appearance of the completed development within the receiving environment.	No photos or indications although photography of site provided in Annex, not referenced in introduction.	C
The nature and quantities of raw materials needed both during construction and operational phases should be described. Where appropriate, the nature of the production processes.	No delineation of construction and operation phases. Production and processes described in detail.	B/ C
OVERALL SCORE		**B/C**

Site description: The onsite land /sea requirements of the development and the duration of each use		***Score***
Objective	**Comments**	
The area taken up by the development should be defined and clearly shown on a map.	Cages described and provided on map, staff accommodation details provided in annex not in chapter.	B
The uses to which this area will be put should be described and the different areas demarcated.	This level of detail is described and cage blocks generally defined.	B
The estimated duration of the construction phase, operational phase and if appropriate the decommissioning phase should be given.	No timescales of any phases of lifetime of development provided.	E
The numbers of workers and /or visitors entering the development site during construction and operation should be estimated. Their access to the site and means of transport should be given.	Detailed information on staff movements during operational phase. No attempt to look at construction phase.	C
OVERALL SCORE		**C**

Residuals: the types and quantities of residual and/or waste matter and energy should be estimated, the expected rate of production given, and the proposed routes to the environment described.		Score
Objective	**Comments**	
The types and quantities of waste matter, energy and residual materials and at which rates these will be produced, should be estimated.	Comprehensive budget flow of solid waste, and dissolved nutrients provided. Medicines considered. No other wastes considered.	B
The ways in which is it proposed to handle and/or treat these wastes should be indicated, together with the routes by which they will eventually be disposed of to the environment.	Disposal /dispersal to the environment covered. Management strategy	B
The methods by which the quantities of residuals and wastes were obtained should be indicated. If there is uncertainty this should be acknowledged and ranges or consent limits given where possible.	Method based on Black 2001 for solid waste, no other methodology provided.	B
OVERALL SCORE		**B**

Environment Description: the likely geographical extent of the affected environment should be described.		***Score***
Objective	**Comments**	
The environment expected to be affected by the development should be delimited with the aid of a suitable scale map.	No delimitation for any predicted effects identified on maps, however broadly described in text.	C
The significant environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site. These may be caused by, for example, the dispersion of pollutants, infrastructural requirements of the project, traffic etc.	Affected environment broadly described, construction not mentioned.	C
OVERALL SCORE		**C**

Baseline conditions: a description of the environment should be defined broadly enough to include any potentially significant effects occurring away from the immediate construction site. These may be caused by the affected environment as it is currently, and as it could be expected to develop if the project were not to proceed, should be presented.		**Score**
Objective	**Comments**	
The important components of the affected environments should be identified and described. The methods and investigations undertaken for this purpose should be disclosed and should be appropriate to the size and complexity of the assessment task. Uncertainty should be indicated.	Detailed surveys carried out for components of environment, provided as annexes and summarised in report. Considers landscape in amenity, recognises that this has not been a factor, possibly appropriate to size and complexity of task.	A/B
Existing data sources should have been searched and, where relevant, utilised. These should include local authority records and studies carried out by, or on behalf of, conservation agencies and/or special interest groups.	RSPB data interrogated for bird study.	B
Local land use plans should be consulted and other data collected as necessary to assist in the determination of the baseline conditions i.e. the probable future state of the environment, in the absence of the project, taking into account natural fluctuations and human activities.	Structure plan referred to and baseline landscape data collected. No assessment of development without project proceeding.	B/C
OVERALL SCORE		**B**

Identification and Evaluation of Key Impacts

Definition of impacts: Potential impacts of the development on the environment should be investigated and described. Impacts should be broadly defined to cover all potential effects on the environment and should be determined to as the predicted deviation from the baseline state.		Score
Objective	**Comments**	
Impacts are not confined to immediate effects. Consideration should be given to effects which may be; positive or negative; cumulative; short or long term; permanent or temporary; direct or indirect.	Impact assessment briefly describes effects. Effects not identified as short/long term, permanent or temporary direct etc.	C/D
The above types of impact should be investigated and described especially with regard to identifying effects on or effecting human beings; flora and fauna; water, air climate, landscape, material assets; cultural heritage and interactions between these things.	Impacts have been investigated for main effects. Although traffic, litter, waste etc. considered throughout text. Construction impacts not considered.	B/C
Consideration should not be limited to events, which will occur under design operating conditions. Where appropriate, impacts which might arise from non-standard operating conditions, due to accidents, should also be described.	Policy for fish escape provided.	C
The impacts should be determined as the deviation from baseline conditions, difference between the conditions, which would obtain if the development were to proceed and those predicted to prevail as a consequence of it.	Impacts generally quantitatively described as deviation from baseline environment.	B
OVERALL SCORE		**C**

Identification of impacts: methods should be used which are capable of identifying significant impacts.		***Score***
Objective	**Comments**	
Impacts should be identified using a systematic methodology such as a project checklist, matrices, panel of experts, extensive consultations, etc. Supplementary methods may be needed to identify secondary impacts.	No attempt to systematcally identify significance of impacts. Reference to consultations scattered throughout text.	D
A brief description of the impact identification methods should be given, as should the rationale for using them.	No method provided for impact identification.	E
OVERALL SCORE		**D/E**

Scoping: Not all impacts should be studied in equal depth. Key impacts should be identified and the main investigation centred on these.		**Score**
Objective	**Comments**	
There should be a genuine attempt to contact the general public and special interest groups – clubs, societies etc – to appraise them of the project and its implications.	No summary of consultation provided, reference made to several groups throughout ES indicating consultation was carried out but not known if this was during scoping/pre-application discussions etc.	C/D
Arrangements should be made to collect the opinions and concerns of relevant agencies, special interest groups, and the general public. Public	Again, evidence that some consultation was carried out in text.	D

meetings, discussion groups etc. may be arranged to facilitate this.	No details provided.	
Key impacts should be identified and selected for more intense investigation, scoping methods should be described and their use justified.	No summary of consultation responses, no key impacts identified.	E
OVERALL SCORE		**D**

Prediction of impact magnitude: The likely impacts of the development environment should be described in exact terms wherever possible.		Score
Objective	**Comments**	
The data used to estimate the magnitude of the main impacts should be sufficient for the task and should be described clearly. Any gaps in the data should be indicated and accounted for.	Uncertainties described and highlighted to reader. Data for some hydrograpics e.g, benthic etc assessments robust, Others (landscape) lacking.	B
The methods used to predict impact magnitude should be described and the appropriate to the size and importance of the projected disturbance.	Method used to predict impact based provided for a number of parameters, and impact magnitude described in text however ES does not clearly specify methodology	B
Where possible, estimates of impacts should be recorded in measurable quantities, ranges and or confidence limits as appropriate. Qualitative descriptions if necessary should be fully defined as possible (e.g. insignificant measure perceptible for more than 100 m distance).	Impacts described qualitatively but not based on threshold values. No thresholds of significance values provided.	C/D
Mitigation methods considered should include modification of the project and the provision of alternative facilities as well as pollution control.	Mitigation includes some project modification (top net marking for gannets). Pollution control not considered in detail.	C
Is should be made clear to what extent the mitigation methods will be effective. If effectiveness is uncertain or depends on assumptions about operating processes, climatic conditions etc, data should be introduced to justify the acceptance of assumptions.	The extent of the effectiveness of mitigations is discussed, but in some cases no clear conclusions are reached.	C
OVERALL SCORE		**C**

Assessment of Impact Significance: the expected significance that the project will have for society should be estimated. The sources of quality standards, together with the rationale, assumptions and value judgements used in assessing significance, should be fully described.		***Score***
Objectives	**Comment**	
The significance to the affected community and to society in general should be described and clearly distinguished from impact magnitude. Where mitigating measures are proposed, the significance of any impact remaining after mitigation should also be described.	Socio economic/employment impacts are not discussed in the 'Potential Impact and Mitigation Measures' section, although amenity (landscape and visual, litter, noise) is considered.	**C**
The significance is an impact should be assessed, taking into account appropriate national and international quality standards where available. Account should also be taken of the magnitude, location and duration of the impact in conjunction with the national and local societal values.	The significance of impacts are not clearly stated although general discussions are provided.	**C/D**
The choice of standards, assumptions and value systems used to assess significance should be justified and any contrary opinions should be summarised.	Significance not assessed using specific methodologies, although information is provided on the general importance of impacts.	**C**
OVERALL SCORE		**C**

Alternatives and Mitigation

Alternatives: feasible alternatives to the proposed project should have been considered. These should be outlined in the Statement, the environmental implications of each presented, and the reasons for their rejection briefly discussed, particularly where the project is likely to have significant adverse environmental effects.		***Score***
Objectives	**Comment**	
Alternative sites should have been considered where these are practicable and available to the developer. The main environmental advantages and disadvantages of these should be discussed and the reasons for final choice given.	Site selection methodology provided with justification for rejection.	B
Where available alternative processes, designs and operating conditions should have been considered at an early stage of the project planning and the environmental implications of these investigated and reported where the proposed project is likely to have significant adverse environmental impacts.	Alternative options provided for aspects of infrastructure.	C
If unexpectedly severe adverse environmental impacts are	Not reported	N/A

identified during the course of the investigation, which are difficult to mitigate, alternatives rejected earlier in the planning phases should be reappraised.		
OVERALL SCORE		

Scope and effectiveness of mitigation measures: all significant adverse impacts should be considered for mitigation. Evidence should be presented to show that proposed mitigation measures will be effective when implemented.		***Score***
Objectives	**Comment**	
The mitigation of all significant adverse impacts should be considered and where practicable, specific mitigation measures should be put forward. Any residual or unmitigated impacts should be indicated and justification offered as to why these impacts should not be mitigated.	Significant adverse effects not clearly indicated. General discussion of mitigation.	C
Mitigation methods considered should include modification of the project, compensation and the provision of alternative facilities as well as pollution control.	Mitigation methods do not consider project modification, or pollution control	D
It should be made clear to what extent the mitigation methods will be effective when implemented. Where the effectiveness is uncertain or depends on assumptions about operating procedures, climatic conditions etc. data should be introduced to justify the acceptance of these assumptions.	Effectiveness of mitigation discussed, but extent not always clearly indicated.	C
OVERALL SCORE		C/D

Commitment to mitigation: the developer should be committed to carrying out the mitigation measures and should present details plans of how he proposes to do so.		***Score***
Objective	**Comments**	
Clear details of how the mitigation measures will be implemented and functioning time span for which they are necessary should be given.	Details provided on implementation of mitigation measures. Timespans not provided.	C
When uncertainty over impact magnitude and/or effectiveness of mitigation exists, monitoring programmes should programmes should be proposed to enable subsequent mitigation measures as necessary.	Magnitude not clearly assessed.	C
OVERALL SCORE		C

Communication of Results

Layout: the layout of the statement should enable the reader to find data easily and quickly. External data sources should be acknowledged.		***Score***
Objective	**Comments**	
There should be an introduction briefly describing the project, the aims of the environmental assessment and how those aims are to be achieved.	Introduction describes the project but does not address EIA process.	C
Information should be logically arranged in sections or chapters and the layout of important data should be signalled in a table of contents or an index.	Contents provided. No table of figures or data provided.	B/C
Unless chapters themselves are very short, there should be a chapter outlining the main findings of each phase of the investigation.	N/A	N/A
When data, conclusions, or quality standards, from external sources are introduced, the original source should be acknowledged at that point in the text. A full bibliography should also be included either with the acknowledgement, with a list of references.	Biography provided, as are technical annexes.	A
OVERALL SCORE		**B**

Presentation: care should be taken in the presentation of information to make sure that it is accessible to the non-specialist.		***Score***
Objective	**Comments**	
Information should be presented so as to be comprehensible to the non-specialist. Tables, graphs and other devices should be used as appropriate. Unnecessary or obscure technical language should be avoided.	Good presentation, technical data summarised and presented as annexes. Clear easy to read, although chapter structure can be difficult to locate specific information regarding waste, traffic, noise etc.	B
Technical terms, acronyms and initials should be defined, either when first introduced into the text or in a glossary.	Acronyms defined.	A

The statement should be presented as an integral whole. Data presented in appendices should be fully discussed in the main body of the text.	Technical Annexes succinctly summarised in report, although not always fully discussed.	A/B
OVERALL SCORE		**A/B**

Emphasis: Information should be presented without bias and receive the emphasis appropriate to its importance in the context of the ES.		***Score***
Objective	**Comments**	
Prominence and emphasis should be given to potentially severe adverse impacts. The statement should avoid according excessive space to impacts, which have been well investigated or are beneficial.	Landscape identified as greatest impact although not fully assessed, basic photographic evidence considered. Good summary of more detailed reports included in annex.	B/C
The statement should be unbiased; it should not lobby for any particular point of view. Adverse impacts should not be disguised by euphemisms or platitudes.	ES presented as clear although some unjustified statements, unreferenced identified.	B
OVERALL SCORE		**B**

Non-technical summary: There should be a non-technical summary outlining the main conclusions and how they were reached.		Score
Objective	**Comments**	
There should be a non-technical summary of the main findings of the study. Technical terms, lists of data and detailed explanations of scientific reasoning should be avoided.	NTS provided summarising findings of report communicated in concise, clear language.	A
The summary should be comprehensive, containing at least a brief description of the project and the environment, an account of the main mitigation measures to be undertaken by the developer and a description of any remaining or residual impacts. A brief explanation of the methods by which these data were obtained and in indication of the confidence, which can be placed in them, should also be included.	NTS does not summarise methodology, identifies uncertainty in assessment.	B /C
OVERALL SCORE		**B**

ANNEX 3
DETAILED REVIEW OF SCOPING REPORTS

SCOPING REPORT ASSESSMENT 1

This proposal covers an application to modify an existing seabed lease. The application is for an increase in cage number and area, but with no associated increase in maximum biomass. This scoping report is similar in format to an ES.

The content of the report is well presented, with a summary indicating the key effects of the proposals. Certain aspects are in clear tabular format, including a useful summary of the basic operation and statistics. The supplementary information includes scaled maps; plans, existing site configurations and alternative cage configurations are presented. In general, the report is comprehensive, drawing on extensive existing baseline information, providing details of the effects of the proposed modification on a number of issues:

- Economic
- Effect on Fishermen and Navigation
- Effect on Benthos
- Visual Impact
- Effect on Wildlife
- Sea Lice Control
- Escapes

In addition, supplementary details regarding management, husbandry and disease control are provided including aspects such as equipment and marine lighting, servicing, removal and disposal of mortalities. In the summary the scoping report clearly sets out the main issues, including positive benefits to fish health. The site is located in close proximity to an mSAC with the common seal as the qualifying interest and baseline data is provided on seal counts.
.
This document is succinct, precise and provides evidence of consultation with a number of consultees, and quality data is provided for a number of issues and some quantitative date has been submitted regarding seal counts. Clearly the impacts from each of these modifications are likely not to change from the baseline or existing sites and an ES has been defined. The information provided appears to be appropriate to the scale of the modification. The summary below provides a summary of the review against the legislative requirements of a scoping request.

Review Criteria	**Comments**
Plan showing location, extent and size of the development.	1 25 000 map showing CEC lease area and chart extract
A brief outline of the proposed annual scale of production in tonnes (dead weight),	Brief details of production provided, no proposed changes to biomass are proposed.
Indication of the biomass capacity of the development.	Provided, no increase of the biomass of fish held on site
The equipment to be installed on site.	Existing site. Details of existing arrangements provided and details of proposed changes to increase equipment and presentation of alternatives.
The possible effects of the development on site.	Effects of the development on the site summarised with respect to economic impacts, effect on fishermen and navigation, effect on benthos, visual impact, effect on wildlife, sea lice control and escapes.

The possible effects of the development on the environment.	Effects of the development on the site summarised with respect to economic impacts, effect on fishermen and navigation, effect on benthos, visual impact, effect on wildlife, sea lice control and escapes.
A statement of the proposed servicing methods and of any intended associated development.	Description of existing development provided and a statement provided on management, husbandry and disease control.
The cumulative effects with other developments	Details provided regarding other sites belonging to the same company, with accompanying details however no other sites are detailed. Reader must make assumption that these are the only sites in the vicinity. Cumulative effects not considered in great detail, however this is likely to be appropriate to the scale of the proposed modification.
The use of natural resources	Not considered in detail.
The production of waste	Production of waste is not considered in detail, as the proposals will not affect the existing biomass. Recent benthic surveys indicate a reasonably healthy benthos with none of the levels breaching SEPA sediment quality criteria.
Pollution and nuisances.	Little additional information was provided with respect to additional forms of pollution.
The risk of accidents, having regard in particular to substances or technologies used.	Details on escape prevention provided in addition to details of EMS and external verification.

SCOPING REPORT ASSESSMENT 2

This proposal consists of a change to the permitted cage specification, resulting in an overall reduction of surface area by 6%, a more robust cage design and movement of the cage group into slightly deeper water. No change in biomass was proposed. The scoping report provided in the form of 'supplementary information' to accompany an application for the proposed modifications to the Crown Estate. The report contains brief descriptions of various aspects:

- The Farming Cycle;
- SEPA Consents;
- Servicing;
- Ancillary Equipment;
- Feeding and Lighting;
- Hydrography and Benthic Surveys;
- Control of Sea Lice;
- Removal and Disposal of Mortalities;
- Net Maintenance and Antifoulants;
- Predator Control;
- Prevention of Escapes;
- Harvesting;
- Fish Health and Minimisation of Risk of Disease Transmission;
- Minimised Risk through Application of the JWG on ISA;
- SSF Management Activities which Reduce Stress and Risk of Disease;
- EMS and External Verification;
- Inter-Company Management Agreements; and
- Area Management Agreements.

In general, the format report is in a similar structure to an Executive Summary of an Environmental Statement. This site clearly does not merit a full ES request and the submitted information appears to meet the requirements for all statutory consultees. The report does mention a potential conflict with a ferry route and in reviewing the responses, however the report does not report on, or exclude impact on existing scallop fisheries interests. Neither does the report address issues such landscape, an important issue for the general public. Consequently, the statutory consultee responses indicate that objections were raised regarding this aspect.

Review Criteria	**Comments**
Plan showing location, extent and size of the development.	Scaled plans provided but not referred to in text.
A brief outline of the proposed annual scale of production in tonnes (dead weight),	No annual production figures provided in report
Indication of the biomass capacity of the development.	Biomass tonnage provided
The equipment to be installed on site.	Details of new cage specifications and ancillary development.
The possible effects of the development on site.	No
The possible effects of the development on the environment.	No information provided regarding existing or non existing designations which may be influenced by the development
A statement of the proposed servicing methods and of any intended associated development.	Brief details provided on servicing, ancillary equipment and management techniques.
The cumulative effects with other developments	No information provided regarding the cumulation with other developments.
The use of natural resources	No information provided on the use of natural resources
The production of waste	Waste production detailed qualitatively e.g. ensiling

Pollution and nuisances; and	Pollution dealt with throughout text, but
The risk of accidents, having regard in particular to substances or technologies used.	The report details a number of accreditations for risk etc.