

Aquaculture Planning Guidance Stiùireadh Dealbhaidh Tuathanachais-uisge

Autumn 2016



Foreword

The purpose of this document is to provide planning guidance and information for the aquaculture industry, statutory consultees and third parties to support environmentally, economically and socially sustainable aquaculture development in Highland.

- The aim of this Aquaculture Planning Guidance is to guide development to those locations that are considered to have more opportunity with fewer constraints to development; or to where those constraints can be mitigated through, for example, sensitive equipment design or working practises. The guidance will also assist in the streamlining of the process of preparing, submitting and determining aquaculture planning applications.
- The guidance is also designed to help improve the quality of planning applications submitted for aquaculture development by ensuring that all relevant information is provided by developers at the outset and that the Council can have clear policy guidance for planning decisions.

Status

This is planning guidance for aquaculture sets out the proposed spatial strategy and development criteria against which future fish farming development proposals in Highland would be assessed. It reflects policy advice provided in the Highland-wide Local Development Plan and Scottish Planning Policy.

Planning Guidance

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Purpose

1.1 This non statutory Aquaculture Planning Guidance provides guidance to support the *Aquaculture* policy of the Highland wide Local Development Plan (HwLDP). It aims to support sustainable development of marine and freshwater aquaculture within appropriate sites around Highland. It provides a spatial strategy and a suite of development criteria against which aquaculture planning applications will be assessed, in agreement with national and local policy guidance and legislation. This Aquaculture Planning Guidance must be read in conjunction with the Highland wide Local Development Plan and any related policy guidance.

1.2 The Highland wide Local Development Plan supports the sustainable development of finfish and shellfish farming subject to there being no significant adverse effect, directly, indirectly or cumulatively on the natural, built and cultural heritage and existing activity (see Box 1). The Council has also produced a range of other guidance, which are relevant to the consideration of aquaculture development. In particular but not limited to, Supplementary Guidance on '*Highland Statutorily Protected Species*', '*Physical Constraints*', '*Special Landscape Areas*' and the '*Highland Historic Environment Strategy*' and the Aquaculture Framework Plans are relevant.

1.3 The Highland wide Local Development Plan (HwLDP) remains the key planning policy document for Highland; planning applications for fin fish and shellfish developments will be assessed in accordance with the policies within it. The Council has commenced a review of relevant policies in the HwLDP. For aquaculture, Policy 50 Aquaculture (see Box 1), along with Policy 28 Sustainable Design and the policies relating to biodiversity and landscapes, are generally the most relevant. This review will include the associated Aquaculture Framework Plans, integrated coastal plans and the Highland Coastal Development Strategy, which remain in force during this period. However it is recognised that some of these supporting documents, or elements within them, may be somewhat outdated. The policies that emerge through the review will include reference to and be compatible with this planning guidance. This is considered to be the most appropriate approach to ensure that developers have clear policy guidance to support the sustainable growth of the aquaculture industry.

1.4 Section 2 of this document sets out the spatial strategy that guides developers to areas of potential growth and highlights area of sensitivity. Section 3 details the development criteria that will be used to assist the assessment of fish farming development planning proposals. Background information and links to key supporting documents are provided in Section 4. Information boxes are provided throughout the document to clarify key points.

Box 1

Existing Policy 50 of the Highland wide Local Development Plan*

The Council supports the sustainable development of finfish and shellfish farming subject to there being no significant adverse effect, directly, indirectly or cumulatively on:

- the natural, built and cultural heritage, taking into consideration:
 - landscape character, scenic and visual amenity with reference to SNH commissioned report: landscape/seascape carrying capacity for aquaculture;
 - the classification and objectives set out in the river basin management plan for the Scotland river basin district and supplementary area management plans;
 - wild fish populations;
 - biological carrying capacity;
 - and cumulative benthic and water column impacts - for finfish proposals support is conditional on proposals being consistent with Marine Scotland's Locational Guidelines for the authorisation of Marine Fish Farms in Scottish Waters;
 - habitats and species, including designated sites and protected species;
- existing activity, taking into consideration:
 - commercial inshore fishing grounds;
 - existing and consented aquaculture sites;
 - established harbours and natural anchorages and navigation (including recreational);
 - the location of existing/proposed pipelines/outfalls and discharge points for treated waste water and storm water.

All proposals will be subject to detailed assessment in these terms. Where proposals are located on a suitable site they will also need to show:

- appropriate operational and site restoration arrangements (including management of noise and lighting aspects, public health and safety, and the effective control of pollution, fish farm escapes, predator interaction and disease);
- good design of cages, lines and associated facilities (please refer to Marine Aquaculture and the Landscape: The siting and design of marine aquaculture developments in the landscape SNH);
- that opportunities for shared use of jetties, piers and ancillary facilities are promoted where possible.

There is a national presumption against expansion of marine fin fish farm on north and east coasts. This does not preclude shellfish farming in these areas. More detailed policy relating to key pressure areas for aquaculture is given through the Council's Aquaculture Framework Plans and Integrated Coastal Zone Management Plans, which the Council intends to adopt as Supplementary Guidance to this Plan.

Where new fish farm provision will result in existing fish farm infrastructure becoming redundant, we will seek the removal of the redundant infrastructure as a requirement of the development.

The core principles of the Highland Council's aquaculture framework plans and coastal development plans are similar. However, coastal development plans cover all sectors and are relevant to proposals for all types of installations in coastal waters. The aquaculture framework plans will:

- guide the location and scale of aquaculture development;
- ensure that development is environmentally sustainable;
- identify both opportunities and constraints so that developers have a realistic idea of the development potential and other interests which should be taken into account;
- provide an overview for the use of the coastal waters and promote a balanced approach which can safeguard the area's core natural assets and sustain or enhance its productivity over the longer term;
- aim to guide investment, help in the evaluation of development proposals, and help to minimise conflicts of interest.

* see paras 1.2-1.3

Background

1.5 Aquaculture in Scotland is an important industry, creating and supporting employment, particularly in remote areas. Figures prepared by the Scottish Government indicate that output of the sector in 2014 was around 188,000 tonnes. Of this, salmon accounted for 95% of the output. In Highland the industry makes an important contribution to the local economy, particularly within areas on the north and west coasts where employment opportunities may otherwise be limited. Much of this activity takes place in fragile areas as defined by the Highlands and Islands Enterprise, and as supported by Policy 36 in the HwLDP. It provides around 382 FTE jobs directly from fin fish based on the North West coast, ⁽¹⁾ with many more across the supply chain. In addition, there are 49 registered shellfish farming businesses with around 74 active shellfish sites in Highland, of which about 32 are producing shellfish for human consumption ⁽²⁾. This economic investment by both fin fish and shellfish businesses in turn generates social benefits.

1.6 In terms of value and production volume, fin fish farming is the main aquaculture activity taking place in Highland, contributing to food security. Production is focused on Atlantic Salmon in the marine environment, which leads to the need for salmon smolt production in freshwater cages and land based farms. There is a small volume of trout farmed in sea cages and some rainbow trout and brown trout in the freshwater environment. Historically there has been interest in diversifying production into species such as Cod, Haddock and Halibut. There is recent, renewed interest in rearing wrasse and other species such as lumpsucker to assist in the biological control of sea lice on farmed salmon.

1 (MSS, 2016a *Scottish Fish Farm Production Survey 2015*)

2 (MSS, 2016 *Scottish Shellfish Farm Production Survey 2015*)

1 Introduction

1.7 As outlined above, shellfish farming is also important to the Highland economy. This is dominated by the rope grown culture of mussels but there are a number of sites farming scallops and an increasing interest in farming both native and Pacific oysters. Other novel species such as sea urchins have been considered by developers from time to time.

1.8 Aquaculture for the purposes of this document covers “fish farming” which is legally defined in the Town and Country Planning (Scotland) Act 1997 as ‘the breeding, rearing or keeping of fish or shellfish (which includes any kind of crustacean or mollusc). This was amended by the The Town and Country Planning (Marine Fish Farming) (Scotland) Regulations 2013 to include any kind of sea urchin. Seaweed cultivation is not covered by this Act (see Box 2).

Box 2

Seaweed Harvesting and Culture

The Scottish Government consulted on a policy statement regarding commercial seaweed cultivation as well as options for managing the sustainable growth of the seaweed wild harvesting industry. The consultation analysis is now available (see further information Section 4) and the final policy statement will be published in due course. Once more details are available, subsequent guidance can be updated.

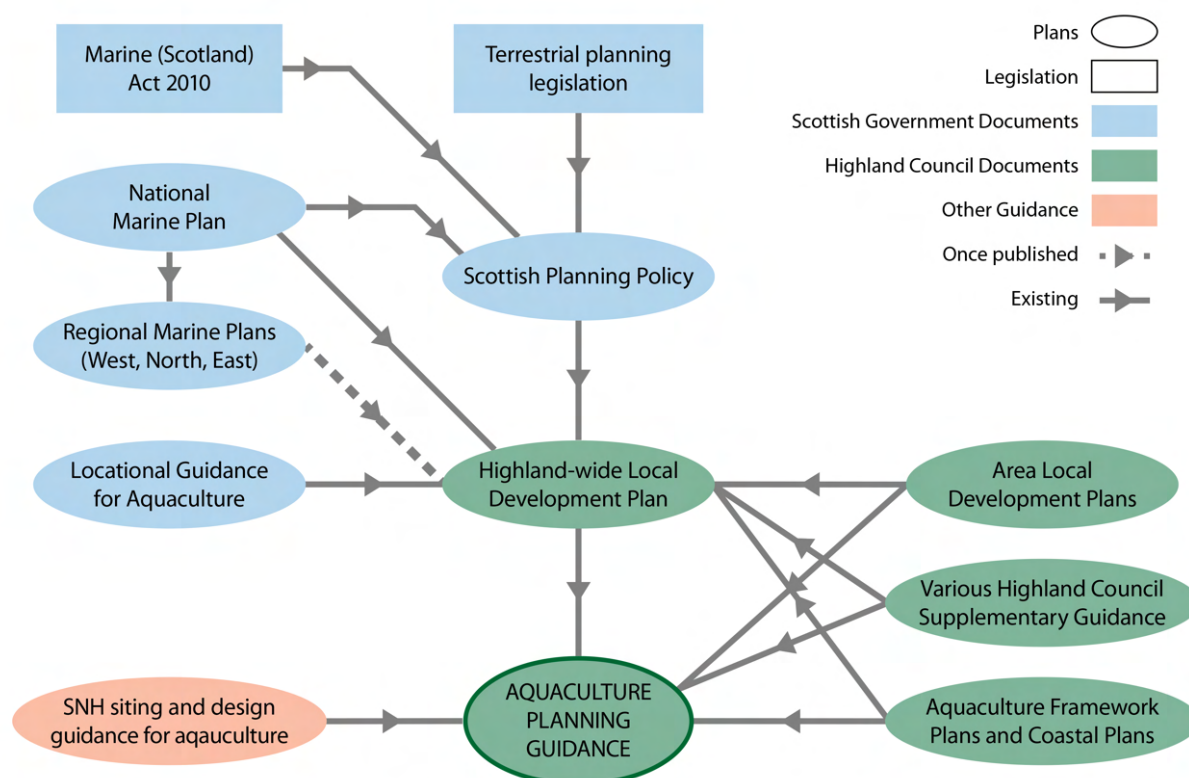
Legislation and policy guidance

1.9 When making or determining planning applications for fish farming, there are a number of legislative considerations and policy guidance documents to aid developers and planners, as discussed below.

1.10 The Town and Country Planning (Marine Fish Farming) (Scotland) Order 2007 came into force, giving local planning authorities responsibility for all aquaculture developments in marine waters in Scotland, in accordance with s26 of the Town and Country Planning (Scotland) Act 1997, taking into account any subsequent amendments. This applies to all new fish farms out to 12 nautical miles including modifications to existing ones, although the role of the planning authorities currently only extends to 3 nautical miles ⁽³⁾. Figure Figure 1 shows how this guidance sits within planning policy and legislation.

3 see Circular 1/2015

Figure 1 Schematic of where the Highland Aquaculture Planning Guidance fits with other key plans, policies and legislation.



1.11 At national level, Scottish Planning Policy (SPP) notes that ‘*aquaculture makes a significant contribution to the Scottish economy, particularly for coastal and island communities...*’ and ‘*Planning can help facilitate sustainable aquaculture whilst protecting and maintaining the ecosystem upon which it depends.*’ Industry targets, supported by Scottish Government, are to increase sustainable production of marine finfish by 50% and shellfish by 100% by 2020, based on a 2009 baseline.

1.12 To help underpin the growth targets, the government produced ‘*A Fresh Start – the Renewed Framework for Scottish Aquaculture* (2009). One of the key themes in the Framework was to address ‘*planning, consents and sites*’ so that development occurred within the ‘*right*’ sites and in the ‘*right*’ location. It states that this should be done through transparent, streamlined and proportionate regulation to minimise adverse impacts on other users of the marine and freshwater environment.

1.13 Circular 1/2007 *Planning Controls for Marine Fish Farming* provides guidance on the Acts, Regulations and Orders relevant to planning controls over marine fish farming. It is understood that this circular is being updated at the time of writing. The Aquaculture and Fisheries (Scotland) Act 2013 provides further regulatory and technical guidance, primarily in relation to fish health and containment.

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1.14 To ensure the integration of land use and marine planning, the Marine (Scotland) Act 2010 makes provision for the production of marine plans, which must integrate with land use planning. All public authorities making decisions that affect or might affect the UK marine area must therefore do so in accordance with the UK Marine Policy Statement, the Scottish National Marine Plan and any subsequent Regional Marine Plan, unless relevant considerations indicate otherwise. This applies, but is not limited to, decisions on marine licensing, consents under Section 36 of the Electricity Act 1989 (as amended) and terrestrial planning applications and enforcement.

1.15 Public bodies must have regard to the UK Marine Policy Statement and relevant Marine Plans when making decisions that are capable of affecting the UK marine area. This applies to the preparation and adoption of local development plans and to other terrestrial planning functions.

Decision making processes and application procedures

1.16 All aquaculture planning applications will be assessed on an individual case-by-case basis, based on the appropriate legislation, policy and guidance, as outlined throughout this document.

1.17 Applications for most finfish farms will require assessment under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. This involves screening, scoping and Environmental Statement stages, where appropriate. There is currently no requirement for shellfish sites to undergo EIA assessment but the planning authority has the right to request all the environmental information it requires in order to determine an application.

1.18 Regulation (EC) 853/2004 specifies the health standards for the production and placing on the market of live bivalve molluscs, tunicates, echinoderms and marine gastropods, such as mussels, oysters, scallops and razor fish. Under European Regulation (EC) 854/2004 the Food Standards Scotland, as competent authority, must undertake Sanitary Surveys relating to official controls on live bivalve molluscs intended for human consumption and identify appropriate production area boundaries for all new shellfish production areas⁽⁴⁾. The local authority environmental health department acts on behalf of Food Standards Scotland to ensure that end product standards are met for shellfish sold for human consumption.

1.19 Any proposal in, or likely to affect, a designated Natura 2000 site (see Box 3; Map 3 in the Spatial Strategy) may also have to undertake an Appropriate Assessment under the Habitats Regulations Appraisal process. The assessment is based on the conservation objectives and qualifying interests of the designated site. The Council must not authorise a development unless, by means of an Appropriate Assessment, it can ascertain that it will not adversely affect the integrity of a Natura site.

4 (FSS, 2015 <http://www.foodstandards.gov.scot/food-safety-standards/advice-business-and-industry/shellfish>)

Box 3

Natura & Ramsar Sites & Marine Protected Areas

Natura is the term given to Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These internationally important sites are designated under the EU Habitats and Birds Directives.

Ramsar sites are designated as internationally important wetlands. All Ramsar sites in Scotland are also either SPAs or SACs.

Of the 30 Marine Protected Areas (MPAs) designed in July 2014, 17 fall under the Marine (Scotland) Act 2010 in Scottish territorial waters and 13 in offshore waters under the Marine and Coastal Access Act 2009.

1.20 In addition to the Natura sites, helping to build an ecologically coherent network of sites, Nature Conservation Marine Protected Areas (MPAs) have been identified. These are for the protection of nationally important marine biodiversity and geodiversity features (see Development Criterion 3 for further information).

1.21 The Town and County Planning (General Permitted Development) (Fish Farming) (Scotland) Amendment Order 2012 allows for some minor alterations to aquaculture developments without the need for planning permission. However, developers must notify the local Planning Authority prior to undertaking any site alterations or extensions; this process is known as 'prior notification'.

1.22 Planning Circular 1/2015: *The relationship between the statutory land use planning system and marine planning and licensing* requires public bodies to have regard to the relationship between the marine and terrestrial planning systems. This requirement is reflected in the National Marine Plan. This integration will be considered in more detail in the revised Local Plans as they are updated. As most aquaculture developments have some on-shore requirements e.g. shore base, storage, depuration/grading facilities, these should be considered within the planning application submissions, where possible.

1.23 The Highland Council established a pre-application advice service to provide clear, detailed guidance on development proposals. This approach was subsequently supported by Aquaculture Policy 10 in the National Marine Plan. Since May 2015, the Council has introduced a payment scheme for this service. This process helps ensure developers are aware of the key issues that need to be considered when planning a new site or modification/alteration/extension to an existing one. It can help avoid costly delays at a later stage and ensure developers are aware of the key material planning considerations likely to affect their proposals (see Section 4).

1.24 Planning applications will be assessed for compliance with the policies of the Highland wide Local Development Plan or any subsequent local authority development plan, any relevant supporting guidance and other material considerations, including this planning guidance. Development proposals must therefore comply with all relevant policies within the HWLDP and the supporting guidance. Where compliance cannot be assured in the first instance, the attachment of planning conditions may allow proposals to proceed. The application process is outlined in

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Figure 2, Annex 1. As mentioned above, each individual application will be assessed on a case-by-case basis, including cumulative impacts, therefore the individual requirements for each application will determine which elements of the guidance are relevant.

1.25 When assessing a planning application, the Planning Authority will consult with various statutory consultees, depending on the type of application to be assessed, in accordance with the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013. Depending on the type of application being assessed, these may include:

- Scottish Ministers (done via Marine Scotland Science)
- Scottish Environment Protection Agency (SEPA)
- Scottish Natural Heritage (SNH)
- Historic Scotland and
- the relevant District Salmon Fishery Board (see Table 1).

1.26 In addition, the following may also be consulted, dependant on the type of application: Scottish Ministers via other Scottish Government departments, Ministry of Defence, Scottish Water, local harbour authority or any other organisations as may be applicable.

1.27 In accordance with legislation, applications for fish farms are also advertised, both on The Highland Council e-planning portal and in a newspaper circulating in the location of the development. This gives the local community and any other interested parties the opportunity to comment on proposals. Depending on the location, some freshwater sites and shore based development may also have 'neighbour notification' requirements, whereby residents within 20 meters of a proposed development are notified. This may also apply to access requirements for shellfish farms on the foreshore.

1.28 The development hierarchy sets scale thresholds at which development become 'Major' development. For marine fish farms, major developments are those with an equipment surface area exceeding 2.0 hectares and therefore require additional consultation (see Section 4 for further information). All applications involving major development are expected to be made the subject of the council's major pre-application process and be accompanied by a Processing Agreement. The purpose of these agreements is to set realistic and achievable time scales on when an application will be determined, providing key milestones and targets that allow the process to be progressed in more formal project managed manner. In some instances, it may also be appropriate to have a processing agreement for local (i.e. non-major) planning applications.

1.29 Any planning permission granted will be for the benefit of the particular installation equipment within the specific location and for the culture of the species applied for. Planning permission is generally granted subject to a number of conditions. When a development is not operated within the confines of this permission it may be unauthorised development and enforcement action may be taken. This is a formal process undertaken in accordance with the Town and Country Planning (Scotland) Act 1997 (as amended).

The role of other organisations

1.30 In addition to planning permission, aquaculture sites require a number of other consents and licences and advice depending on the type of aquaculture development proposed. Table 1 below outlines the main roles of each organisation. The Planning Authority will ensure that planning controls exercised do not duplicate the controls and licensing requirements of other agencies. However, as the EIA template provided by Scottish Ministers for marine fish farming, which is widely used by the finfish sector, requires information for other agencies relating to their consenting process, some overlap is likely. In some cases, some statutory consultees cannot provide comment on an application until such time as certain data have been provided.

1.31 Further information on the role of the main statutory bodies is provided in the 'Working Arrangement Requirements for Statutory Consultees' document (see Section 4). Scottish Water is listed as one of statutory consultees in the planning legislation, but it is not listed in the aforementioned document or in the planning circular on controls for marine fish farming. However, Scottish Water request it be consulted on all applications.

Table 1 Role of key organisations involved in the aquaculture planning process.

Organisation	Applies to Finfish: Y/N	Applies to Shellfish: Y/N
Statutory Consultees		
Marine Scotland (MS)		
Marine Scotland enforces provisions under the Aquaculture and Fisheries (Scotland) Act 2007 in relation to containment and parasite control of the farmed species.	Y	Y
It also implements measures that regulate the movement of live fish with a view to preventing the spread of fish/shellfish diseases and non-native species.	Y	Y
It issues a marine licence covering navigation issues and deposits in the marine environment, including discharges from well boats when used for treating fish.	Y	Y
When a commercial activity could cause disturbance to a European Protected Species, MS may issue a licence for the activity.	Y	Y
MS is the licensing authority for the control seals under the Marine (Scotland) Act 2010. It can issue licenses for the killing of seals to protect the welfare of farmed fish.	Y	N
It issues consents for an Aquaculture Production Business Authorisation.	Y	Y
Scottish Environment Protection Agency (SEPA)		

1 Introduction

Organisation	Applies to Finfish: Y/N	Applies to Shellfish: Y/N
Under the Water Environment (Controlled Activities) (Scotland) Regulations 2011, SEPA regulates activities which may pose a risk to the water environment. For finfish farming, SEPA sets limits on the types and amount of fish that be held in a cage configuration (fish biomass) and the amount of medicines (chemotheraputants) that can be administered and thus discharged into the environment from the fish cages. Known as a CAR licence, sites are assessed on the likely effects of discharges from a development on both the water column and the benthic environment. Shellfish farms are not regulated by SEPA under the CAR regulations.	Y	N
Scottish Natural Heritage (SNH)		
Scottish Natural Heritage is the statutory advisor in relation to Scotland's natural heritage. It advises on the Conservation (Natural Habitats, &c.) Regulations 1994 with regard to Natura sites (Special Areas of Conservation and Special Protection Areas), Marine Protected Areas and for European Protected Species. It also advises on other biodiversity, such as bird licensing, and landscape issues. It has produced two key documents to aid development: <i>The Siting and Design of Aquaculture in the Landscape: Visual and Landscape Considerations 2011</i> and '<i>Guidance on Landscape/Seascape capacity for Aquaculture 2008</i>'.	Y	Y
District Salmon Fisheries Boards (DSFBs)		
Where a finfish aquaculture development falls within the boundary of an area covered by a DSFB, that DSFB becomes a statutory consultee. Where developments are proposed outwith such an area Scottish Ministers fulfil the role of the DSFB through Marine Scotland.	Y	N
Ministry of Defence (MOD)		
The MOD is only consulted when there is a possibility that a marine war grave has the potential to be disturbed by a development.	Y	Y
Scottish Water		
Scottish Water requests that aquaculture development does not impact on its assets that provide clean, safe drinking water. Development should therefore ensure it is located where it will not lead to Scottish Water being required to upgrade infrastructure to comply with a shellfish designation.	Y	Y

Organisation	Applies to Finfish: Y/N	Applies to Shellfish: Y/N
Statutory Consultees: EIA applications only		
Historic Scotland		
Advise on aspects of cultural heritage of national significance. Historic Scotland has responsibility for management of the Historic Marine Protected Areas designated in 2013 to protect historically important shipwreck sites.	Y	N
Transport Scotland		
On behalf of Scottish Ministers, Transport Scotland provide advice on transport related issues.	Y	N
Other organisations with a role in aquaculture planning and consenting		
Crown Estate Commissioners		
The Crown Estate manages approximately 50% of the foreshore, the beds of most tidal rivers and almost all of the territorial seabed out to 12 nautical miles. Most aquaculture developments will therefore require the necessary permissions from them to implement any planning consent, generally in the form of a seabed lease. Naturally occurring oysters and mussels in Scottish territorial waters form part of the ancient rights currently administered by the Crown Estate Commissioners. Preparations have been made for the transfer of existing rights and titles to Marine Scotland, on behalf of the Scottish Ministers.	Y	Y
Harbour Authority		
Where a development lies within or adjacent to a harbour authority area, it may provide advice on navigational or operational issues.	Y	Y

Background

2.1 Given the complex hydrological and ecological requirements for aquaculture, it is beyond the remit of the council to assess realistic likely areas for growth, especially given the large geographic range of the Highland area. The Spatial Strategy does guide aquaculture developers to locations of least sensitivity for sustainable development and highlights areas of constraint. It aligns with the Scottish Government and The Highland Council's objectives to support sustainable development of the aquaculture industry. It identifies areas sensitive to new or further fish farming development (see Maps 1-6 below).

2.2 The areas have been identified through the consideration of a range of material planning issues that have the potential to be affected by aquaculture development. These areas take into consideration the physical character of the area. The strategy also takes into account elements of the physical dynamics of the water bodies that are assessed by Marine Scotland.

2.3 Table 2 provides the rationale for the spatial strategy and a brief overview of the accompanying maps. Due to the large geographic area of Highland, it is recognised that the level of detail that can be shown is limited. Many of the designations do not prevent development within them but proposals may require additional consideration. These maps can only provide a static snap-shot, but more detailed, regularly up-dated mapping, including fine scale aspects, can be found on the National Marine Plan interactive (NMPI) website, hosted by Marine Scotland (see Section 4).

Table 2 Background to maps 1-6

Map No./Title	Comment
1: Existing Aquaculture Sites	This map shows sites that have been granted planning permission or have been registered as "active" with the Fish Health Inspectorate. Some sites consented by Scottish Ministers under s31A (The Audit and Review process) do not have defined planning boundaries, particularly those farms covered by the 2011 Order therefore the Council will refer to the previous Crown Estate lease where appropriate/available.
2: Shellfish Water Protected Areas	These areas are designated by Scottish Government and monitored by SEPA to ensure the continued protection and improvement of Scotland's shellfish growing waters.
3: Environmental Designated Areas	Sites designated for environmental reasons are covered by a range of legislation to ensure these assets and resources are maintained.
4: Wild Land Areas and National Scenic Areas	SNH guidance states that Wild Land Areas "are identified as nationally important in Scottish Planning Policy, but are not a statutory designation."
5: Seal Haul-Out Sites	These are areas designated under The Protection of Seals (Designation of Seal Haul-Out Sites) (Scotland) Order 2014 to protect seals from harassment at their haul-out sites. It is acknowledged

Map No./Title	Comment
	that there are other areas used by seals which are not covered by the Order.
6: Presumption Against Further Marine Finfish Developments	Scottish Planning Policy (SPP) (2014) retains a presumption against further marine finfish farm developments on the north and east coasts to safeguard migratory fish species.

2.4 In addition to the maps discussed, there are a number of other key spatial considerations that must be taken into account when considering aquaculture developments. For example Marine Scotland produces locational guidelines maps. These maps classify sea lochs into category 1, 2 or 3 areas based on predictive modelling to estimate the nutrient enhancement and benthic impacts. As these maps are updated quarterly, developers should check the Marine Scotland website for the most up to date classifications and guidance. The modelling does not take other factors such as biodiversity, landscape or amenity impacts into account and does not use the classifications over large areas of the coast, which relies on other modelling.

2.5 Shellfish Harvesting Classifications are determined and reported on by the Food Standards Scotland (FSS). As these are regularly updated, developers should consult the FSS website for the latest information.

Spatial Strategy

Areas of Potential Sensitivity

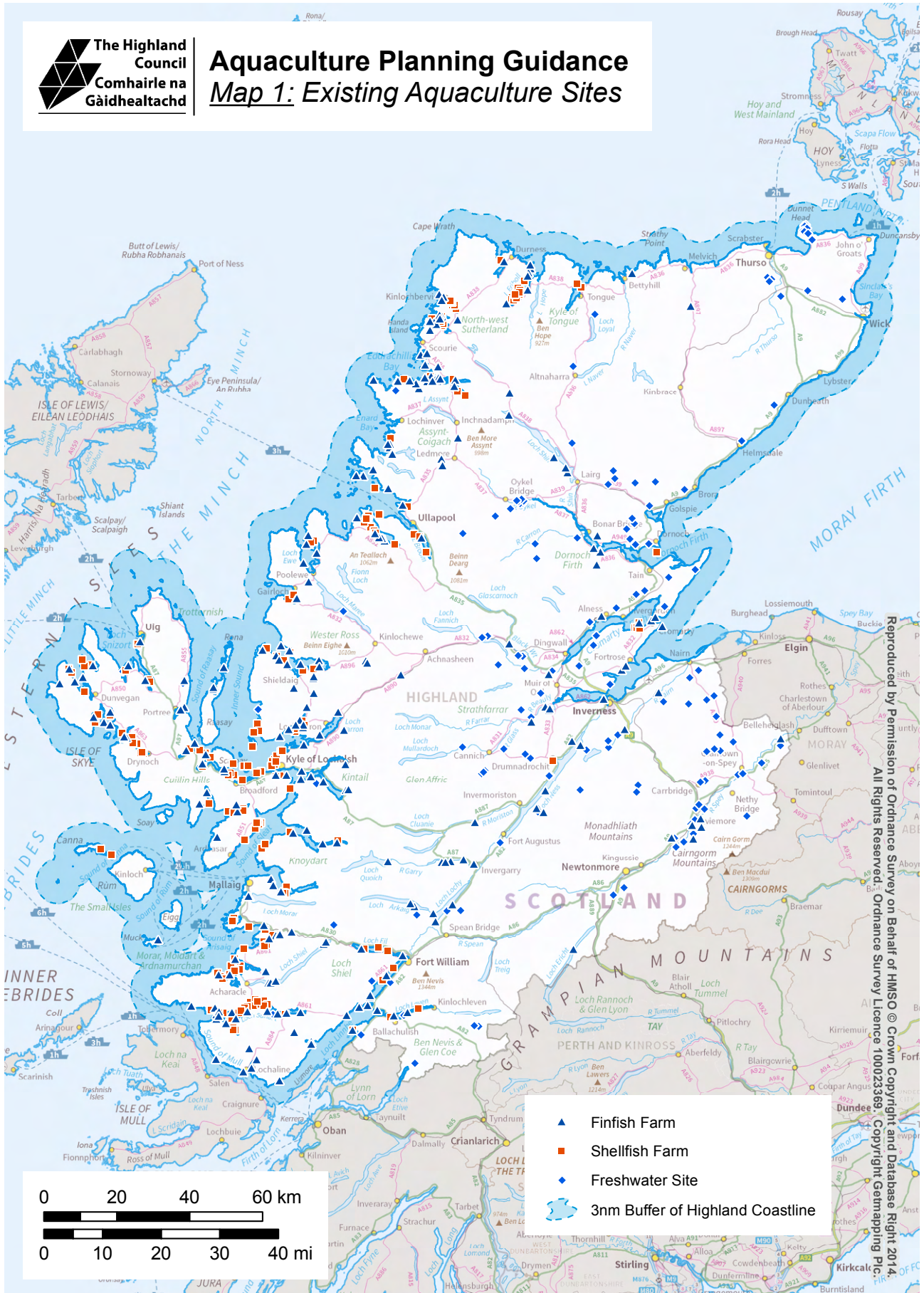
The following areas have the potential to be affected by aquaculture development and may therefore be considered as constraints to development:

- Special Protection Areas
- Special Areas of Conservation
- Ramsar sites
- Marine Protected Areas
- National Scenic Areas
- Sites of Special Scientific Interest
- Geological Conservation Review Sites
- Special Landscape Areas
- Wild Land
- Shellfish Water Protected Areas
- Seal Haul-out sites
- Scheduled Monuments
- Conservation areas
- Designated war graves
- Ancient Woodlands
- Carbon rich soils/Peat/Peatland habitats
- Ferry and shipping routes
- Admiralty Charted Anchorages
- Clyde Cruising Club Anchorages
- Harbours
- Marine cables, outfalls and pipelines

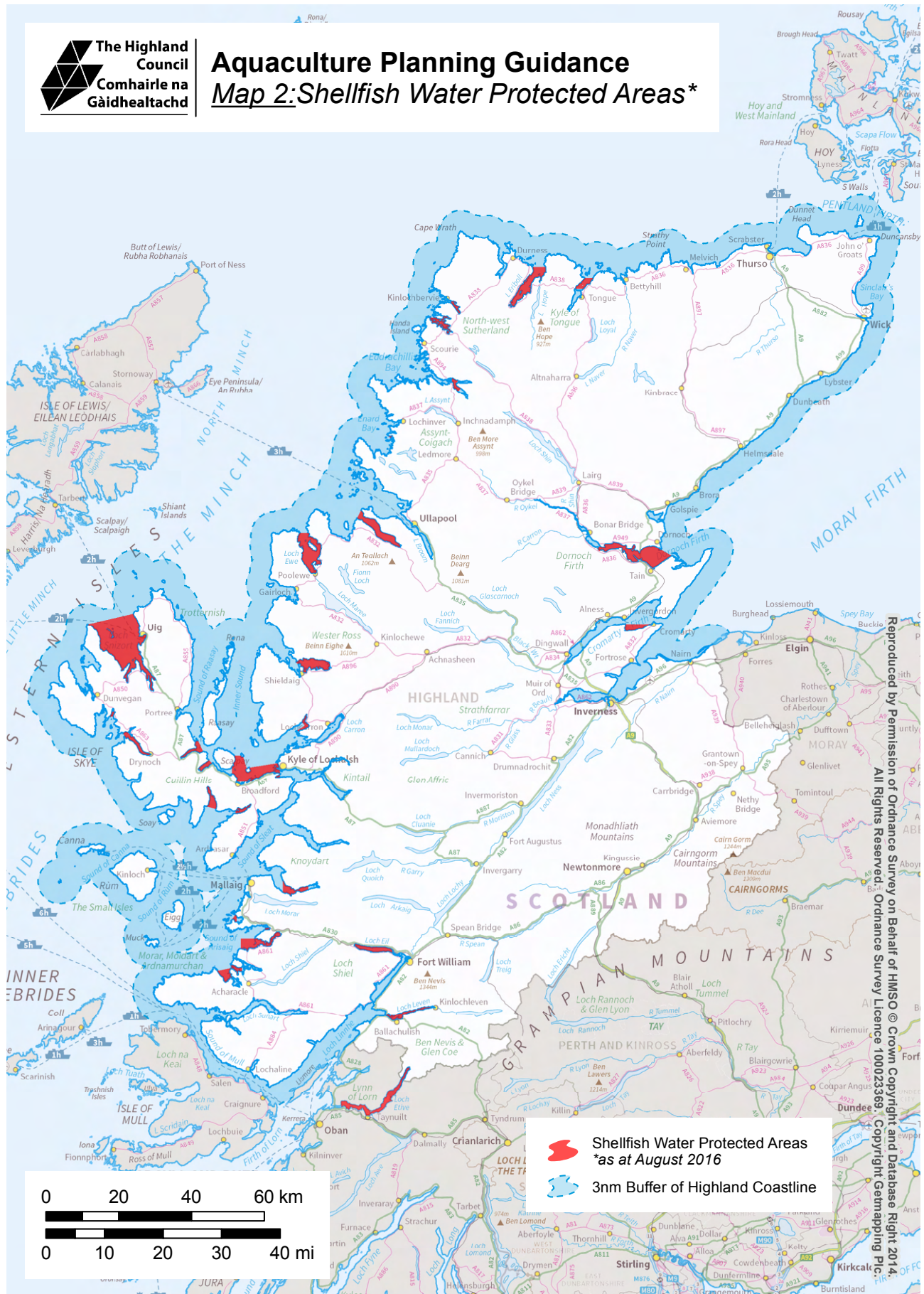
In addition, the following maps show spatial information for some of the sensitivities listed above and additional considerations. Aquaculture proposals will be required to demonstrate these potential sensitivities have been satisfactorily addressed in accordance with the Development Criteria.

Aquaculture Planning Guidance

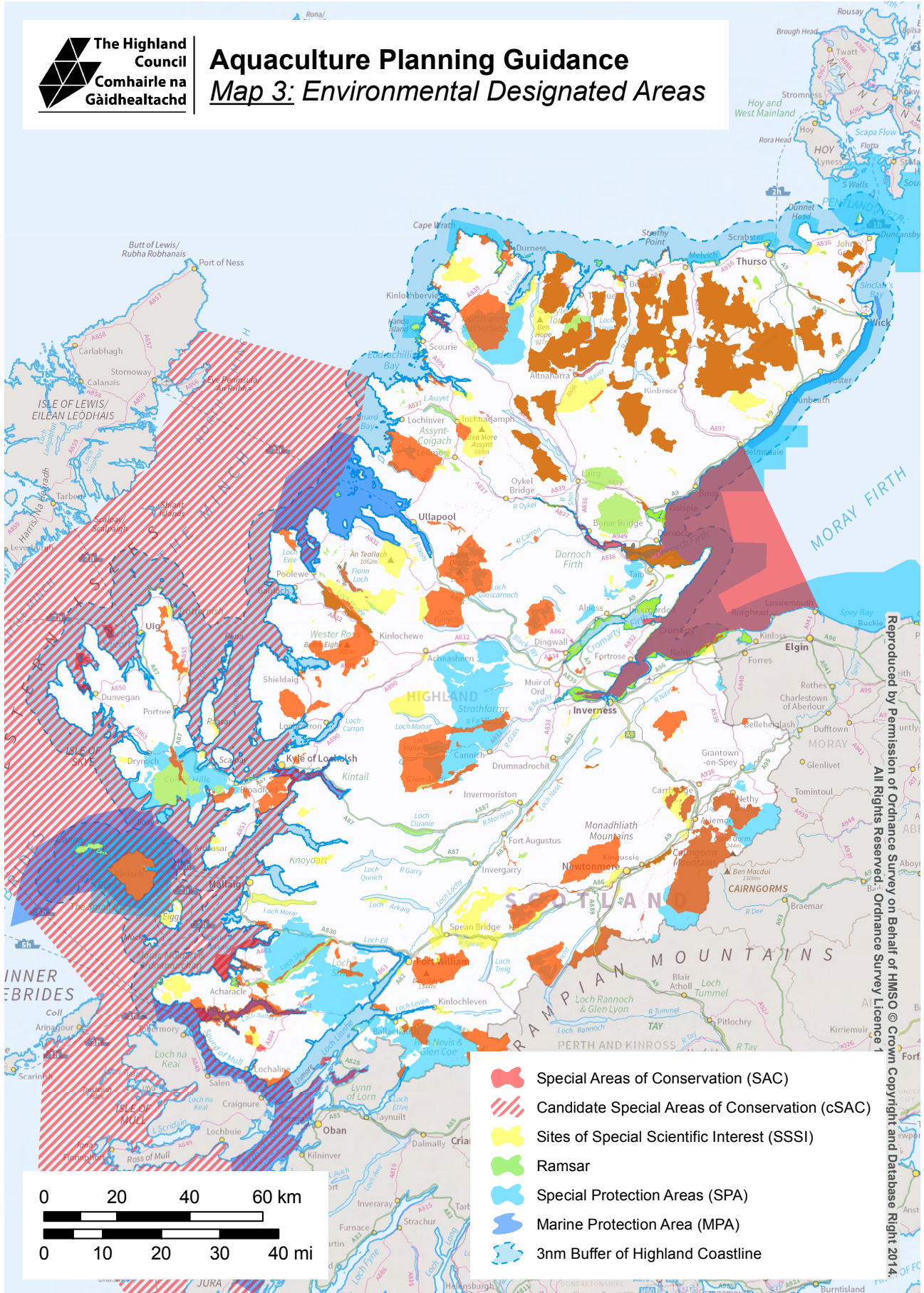
Map 1: Existing Aquaculture Sites



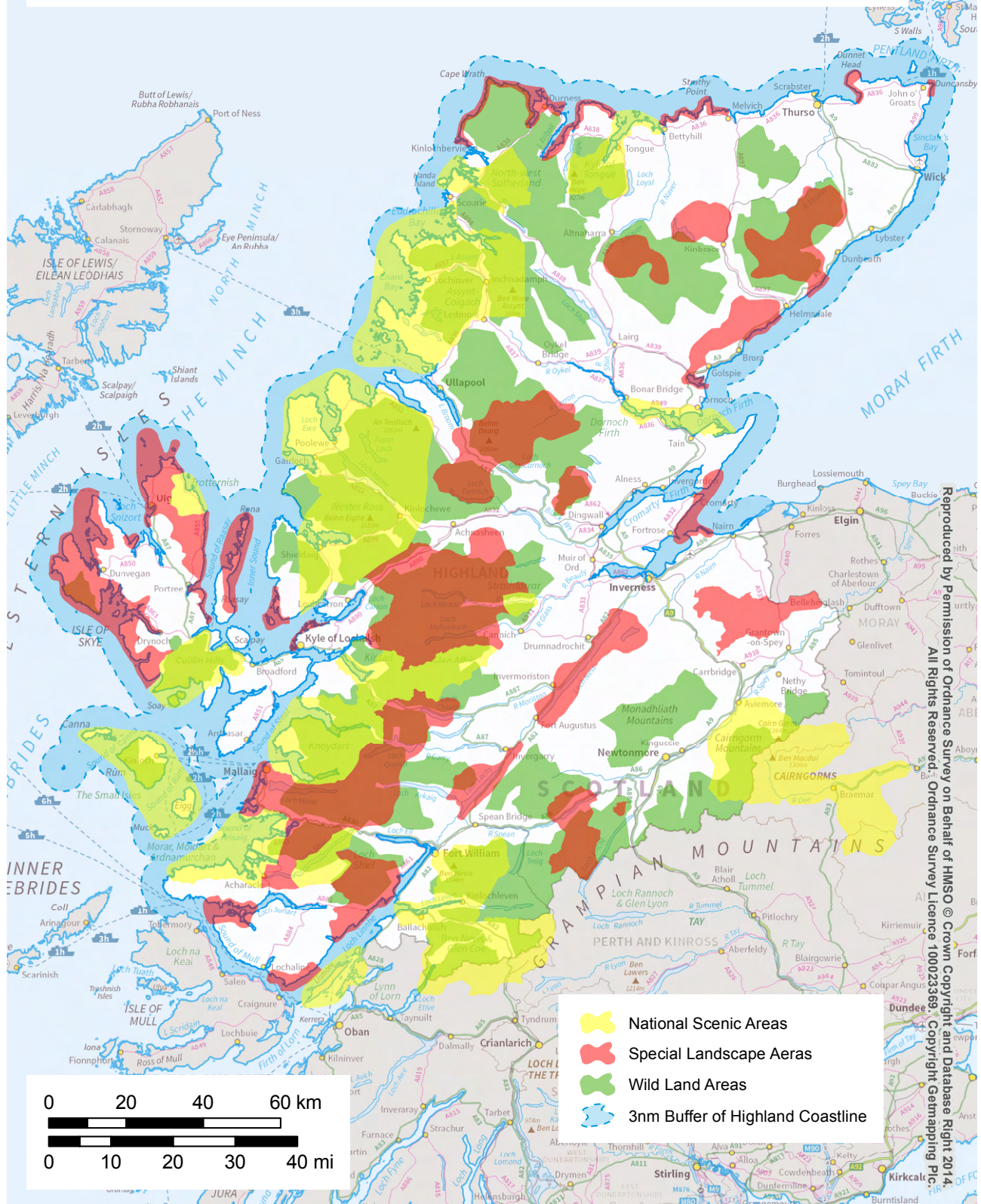
Aquaculture Planning Guidance *Map 2: Shellfish Water Protected Areas**



Aquaculture Planning Guidance Map 3: Environmental Designated Areas



Aquaculture Planning Guidance *Map 4: Wild Land Areas, Special Landscape Areas and National Scenic Areas*





Aquaculture Planning Guidance Map 5: Seal Haul-out Sites





Aquaculture Planning Guidance Map 6: Areas of Presumption Against Further Fin Fish Development



Development Plan Considerations

3.1 All proposals for aquaculture development in Highland marine and freshwater environments will be assessed against the spatial strategy and the following interlinked Development Criteria provided in this section, as listed in Table 3. Each development criterion below has supporting text that outlines the various topics covered, followed by the criteria boxes.

Table 3 Development Criteria

Number	Criterion
DC1	Landscape/Seascape
DC2	Historic Environment
DC3	Biodiversity
DC4	Water Quality
DC5	Other Marine Users
DC6	Construction, Operation and Decommissioning

Development Criterion 1: Landscape/Seascape, Siting and Design

Topics covered:

- **Landscape**
- **Seascape**
- **Siting and Design**
- **Wild Land/Unspoiled Coast**
- **Amenity**

3.2 Aquaculture installations are established features of the Highland coastline. Most of the active sites are located within sheltered sea lochs or in the lee of small islands. In some instances a relatively high concentration of developments can have a significant impact, particularly in constrained lochs and bays. Finfish development has moved from relatively compact sites made up of rafts of square cages towards plastic circular cages which are tending towards significantly larger sizes. With increasing farm size and cage infrastructure comes the need for the larger feed barges which have appeared in recent years. Such installations can dominate some landscapes, impacting the amenity value of an area. Generally, mussel sites have a much lower impact on the landscape and/or seascape compared to finfish farming due to the low-profile equipment used. Oyster sites currently tend to be located in the intertidal zone where large areas of trestles are visible for less than half of the tidal cycle.

3.3 New aquaculture development should not dominate the landscape setting or become the main feature in views. Proposals should not materially impact on the overall quality of the landscape. Material impact includes a change to the established landscape or seascape pattern that significantly affects its general understanding or enjoyment.

3.4 The Highland Council area has 15 National Scenic Areas that are designated for their outstanding scenery, representing some of Scotland's finest landscapes. All but two have a coastal and/or marine element, where seascape is also a consideration. There are 27 Special Landscape Areas, which are features of local or regional importance identified by the Council as being large scale areas of regional importance for scenic quality or as small scale areas of local scenic and recreational value (see Appendix 2 of the HwLDP). There are also numerous areas of Wild Land. Freshwater aquaculture proposals may also have landscape considerations. Out with these designed sites (see Maps 3-5), there may be greater scope for the environment to accommodate development. However, there may still be local sensitivity arising from the characteristics and visibility of a particular site, which has to be addressed in landscape terms.

3.5 The siting, layout and design of aquaculture proposals should reflect the character of the surrounding landscape. Developments should take into account the effects on visual amenity. As per the SNH guidance (Table 1 & Section 4), they should follow the dominant line of the coast and should avoid filling up a bay or its entrance. Where the siting is appropriate, the scale and design of the equipment configuration, including the materials and colour schemes used, should ensure that the proposed development will be absorbed into the landscape/seascape with minimal intrusion.

3.6 A competent Landscape and Visual Impact Assessment, either as a stand alone document or as part of an Environmental Statement (see para 1.17), is the best way for applicants to address the above issues. The assessment should consider the likely impact from significant receptor points,

including popular public viewpoints, transport routes, the core path network, visitor locations and historic sites. Guidance from the Planning Authority, including viewpoints for photomontages, on key sites and aspects to be considered, will be given at the pre-application advice stage and at the scoping stage, if relevant. The cumulative impacts with existing aquaculture and other maritime developments and activities should also be considered.

3.7 The coasts around Highland are famous world-wide for their quality landscapes, tranquil glens and intimate lochs. To help further protect the most important of these areas, a number of 'Wild Land Areas' have been identified (see Map 4) and further information is available on the SNH website. The National Planning Framework recognises wild land as a nationally important asset, and indicates Scotland's wildest landscapes merit strong protection. Wild land is also identified as nationally important in Scottish Planning Policy, but is not a statutory designation. In addition, Highland has many areas of largely unspoilt coast that are generally unsuitable for development. Aquaculture development must therefore be able to demonstrate that any significant effects on the qualities and amenity value of these areas can be avoided by appropriate location or substantially overcome by sensitive siting, design or other mitigation.

3.8 Highland currently has eleven prime beaches with excellent water quality, as recommended by the Marine Conservation Society. These beaches meet higher standards than those required under the revised Bathing Water Directive (2006/7/EC), which was enacted in Scotland by the Bathing Waters (Scotland) Regulations 2008, as monitored by SEPA. Most of these high quality beaches are located on the north and east coasts, with only one on the west coast, namely Achmelvich beach. In addition, there are many other beaches that are of significant tourism and recreational value in Highland. Potential impacts on any beach should therefore be considered by aquaculture development proposals, where appropriate.

3.9 As the west coast of Highland contains a number of relatively constrained lochs, this limits the landscape (and the biological) the carrying capacity for the number of sustainable aquaculture developments it can reasonably contain. Proposals for new aquaculture sites will therefore have to consider the proximity to existing aquaculture sites.

DC 1.1

Landscape, Seascape, Siting and Design

Proposals for aquaculture developments with the potential to have adverse effect on landscape, seascape or visual amenity should be accompanied by a Landscape and Visual Impact Assessment (LVIA). This should be produced in accordance with current best practise and guidance e.g. the Landscape Institute 'Guidelines for Landscape and Visual Impact Assessment'.

Aquaculture developments that are assessed as likely to have a significant adverse impact, including cumulative impact, on the Highland landscape, seascape or visual amenity that cannot be mitigated to the satisfaction of the Planning Authority will not be permitted.

Development proposals should also ensure that:

- the character of areas of wild land is safeguarded;
- the character of unspoiled sections of coast is safeguarded.
- The impact on 'Views over open Water' are considered where developments are close to residential properties, roads and heritage and amenity features.

Developers should seek pre-application advice from the Council and, if appropriate, Scottish Natural Heritage, to inform decisions relating to siting and design and the scope and content of any LVIA. This may be done as part of an Environmental Statement for finfish sites where appropriate, or independently for shellfish sites. Visualisations should be prepared in accordance with Highland Council '*Visualisation Standards for Wind Energy Developments*'.

Development Criterion 2: Historic Environment

Topics covered:

- **Historic Environment**
- **Historic Marine Protected Areas**

3.10 Highland's historic environment makes a valuable contribution to the distinctive character of the area, the sense of place, identity and quality of life. As well as fulfilling a vital role in showcasing the vibrancy of Highland culture, the historic environment is a key economic driver. Historic environment assets currently include designations such as Conservation Areas, Battlefields, Gardens and Designed Landscapes, over 3,000 listed buildings, 1,236 scheduled monuments and a further 52,000 historic buildings, structures and archaeological sites.

3.11 To help preserve these valuable and irreplaceable assets, the Highland Historic Environment Strategy Supplementary Guidance defines the Council's approach to the protection of the historic environment through the planning process. The guidance is supported by the Historic Environment Record (HER) that provides details and maps of all recorded historic environment assets. The HER is not, however, a definitive or comprehensive record; it is continually updated as new sites and information comes to the attention of the Council.

3.12 The Marine (Scotland) Act 2010 established a new power to designate Historic Marine Protected Areas. Under these powers, seven MPAs are currently designated, four of which are in Highland. The Highland MPAs currently covers vessels that were wrecked around 1590 to 1690. The wrecks are a key link to understanding historic ship design and use, and may additionally contain artefacts that do not survive on land and that can offer valuable insights to our understanding of the past.

3.13 The terrestrial, coastal and marine historic environment should be a consideration in any Landscape and Visual Impact Assessment and/or Environmental Impact Assessment. The assessment should include the impacts of a development on all historic environment assets, whether designated or undesignated. It should include wrecks, sites, deposits, buildings and both submerged and terrestrial archaeological landscapes, as well as their setting. Some sites, such as designated features and protected war graves, may require additional assessments on potential sedimentary or biological changes that the developments may have.

DC 2.1

Historic Environment

All aquaculture planning applications shall consider potential direct, indirect and cumulative impacts on the historic environment.

Applicants will be required to identify and undertake any mitigation measures required to avoid, reduce or minimize any adverse impacts on the historic environment to the satisfaction of the Planning Authority.

The special characteristics and qualities of Historic Marine Protected Areas shall be safeguarded.

Aquaculture development will not be permitted in locations where it would have a significant adverse effect on historic environment resources.

Development Criterion 3: Biodiversity

Topics covered:

- **Environmental Designated Areas**
- **Protected Species**
- **Appropriate Assessment**
- **Seals**
- **Wild Salmonids**
- **Sea Lice**

3.14 The term 'biodiversity' covers all living things and their habitat, along with their genetic variation. The Highland area is rich in marine habitats and species that collectively make up diverse biological communities. The east coast is dominated by sea cliffs in the far north-east and low-lying firths over much of the rest. The north and north-west coasts are mainly sea cliffs with some narrow sea lochs. The west coast is a mix of relatively narrow sea lochs and sheltered bays. Each coast offers varying opportunities for aquaculture development.

3.15 Along with all other public bodies, the Planning Authority has a duty to further the conservation of biodiversity under the Nature Conservation (Scotland) Act 2004 when exercising its functions. The Wildlife and Natural Environment (Scotland) Act 2011 requires public bodies to prepare and publish a biodiversity report on their compliance with the biodiversity duty. Whilst some marine species, such as many seabirds, have varying levels of protection under the Wildlife & Countryside Act 1981, some are so endangered they require special protection. In effect, these acts mean the planning authority must consider biodiversity out with designated habitats and species, including any onshore related impacts of aquaculture.

3.16 A key mechanism for protecting biodiversity (see Maps 3-5) is the use of designated areas for habitats and species under the Habitats and Birds Directives (see para 1.19 & Box 3). These are protected Natura 2000 areas and the associated flora and fauna represent the most valuable and vulnerable habitats and species in an international and/or national context (see Map 3). In addition, the first qualitative descriptor in the Marine Strategy Framework Directive (see Box 4) requires that biological diversity is maintained. Marine Protected Areas (see Box 5) will also play an important role in helping to safeguard marine biodiversity, whilst Sites of Special Scientific Interest (SSSIs) are also essential building block of Scotland's protected areas for nature conservation.

Box 4

Marine Strategy Framework Directive

Fundamental aims of the MSFD are to:

- ensure that priority should be given to achieving or maintaining Good Environmental Status (GES) in the EU Community's marine environment;
- to continuing its protection and preservation and;
- to prevent subsequent deterioration.

This will be done through adherence to targets, for which 'descriptors' of GES have been established; these descriptors also cover other topics such as pollution and litter, which are covered elsewhere in this document.

Box 5

Highland Nature Conservation Marine Protected Areas (MPAs)

The Scottish Marine Nature Conservation Strategy (2011) explains the approach that was taken to develop a coherent network of nature conservation Marine Protected Areas. These designated sites will protect biodiversity and geodiversity but may still allow multiple uses of low impact activities that do no damage the ecological integrity of the sites. The MPAs in Highland are shown on Map 3.

The Planning Authority must notify Scottish Ministers if it believes that there may be a significant risk of hindering the stated conservation objectives of a Nature Conservation MPA.

3.17 Species protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) legislation are generally known as European Protected Species (EPS). Of particular relevance to the marine environment, all cetacean (whale and dolphin) species, as well as other EPS present such as otter, are given protection under this legislation (see Box 3 for information on Natura sites). Other species such as grey and harbour seals also have legal protection. As these are all mobile species, particular care is required when any aquaculture development may impact on their migratory routes or key feeding or calving areas, as the animals are unlikely to be present all year round. Particular care is therefore required at the initial site selection stage. A licence is required from Marine Scotland if the animals are likely to be injured or disturbed by aquaculture activities. Other protected species may require a licence from SNH to allow activities to proceed that would otherwise be an offence.

3.18 Other species may also be protected under different legislation; guidance is available on the SNH website⁽⁵⁾. Some protected species of diving birds such as eider ducks may pose a threat to mussel sites by stripping the mussels off longlines. Detailed information on the deterrent measures or other types of mitigation proposed should be supplied with an application where such predation is likely to be an issue. The Planning Authority will be advised by Scottish Natural Heritage and Marine Scotland in relation to potential effects on protected species. SEPA will also provide information on the potential impacts on the seabed communities, also known as the benthic habitat, some of which require protection or mitigation measures.

3.19 The Marine (Scotland) Act 2010 makes specific provision for the conservation of seals. However, to protect the health and welfare of farmed fish, the Scottish Ministers may grant a licence authorising the killing or taking of seals. Should a development be likely to require a licence, this aspect should be covered as part of the predator control section of an Environmental Statement.

3.20 The degree of impact that an aquaculture development will have on biodiversity will depend on the scale and type of development. Mussel sites generally have a much lower impact on biodiversity compared to finfish farming due to the limited operational input required. Pacific oyster (*Crassostrea gigas*), a non-native species, forms the bulk of oyster species cultivated. Finfish developments have the greatest potential to have negative impacts on biodiversity due to the volumes, methods of farming and inputs required. Some elements of these aspects are governed by other agencies, as discussed in para 1.30, but are taken into account during the planning process.

DC 3.1

Designated Habitats and Species

Development or activities will not be permitted that would be likely to have an adverse effect, either individually or cumulatively, on the integrity of Natura 2000 or Ramsar sites.

Development or activities likely to have an adverse effect on the integrity of a Natura 2000 or Ramsar site, not directly connected with or necessary to the conservation management of the site, would be subject to an Appropriate Assessment in order to assess the implications for the site's conservation objectives.

In addition, aquaculture development will only be permitted where there is no significant adverse effect on:

- Protected species
- Priority Marine Features
- Sites of Special Scientific Interest.

Development and activities should consider the impacts on wider biodiversity interests both within and out with designated habitats and species and ensure these are minimised through appropriate design and mitigation.

5 <http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/which-and-how/>

3 Development Criteria

To the satisfaction of the Planning Authority, planning applications must be supported by an assessment of the likely impact and the potential mitigation measures. Species and habitat surveys may also be required to accompany the application.

Where the level of impacts on protected areas, habitats or species remain uncertain but there are scientific grounds for believing that significant adverse impacts could occur, the Precautionary Principle will apply.

3.21 Salmon and trout are key species of our Highland rivers and coastal waters. An objective of the National Marine Plan is to maintain healthy salmon (and diadromous fish) stocks. This therefore requires effective management of both marine and freshwater i.e. an integrated approach. In the freshwater environment, some rivers are designated as a Special Area of Conservation (SAC) to protect salmon in the freshwater part of its life cycle. To complement this, both salmon and trout are now designated as Priority Marine Features for the marine part of their life cycle.

Box 6

Trout (*Salmo trutta*)

The sea trout is a brown trout that migrates to the sea for a part of its life cycle, returning to freshwater burns to spawn. During its sea phase, it tends to transit close to the shore.

Sea trout is a Priority Species in the UK Biodiversity Action Plan list, the Scottish Biodiversity List and is a Priority Marine Feature.

Box 7

Priority Marine Features

Priority Marine Features (PMFs) are species and habitats which have been identified as being of conservation importance to Scotland. Most are a subset of species and habitats identified on national, UK or international lists. Where planned developments or use have the potential to impact PMFs, mitigation, including alternative locations, should be considered. Actions should be taken to enhance the status of PMFs where appropriate.

3.22 During their migrations from freshwater to the sea and their return, wild salmon and trout tend to stay relatively close to shore. In constrained sea lochs along the west Highland coast, their route can take them very close to finfish farms. Studies have shown (e.g. see Youngson *et al*, 2001; Costello, 2009; Franklin *et al*, 2012; Murray and Hall, 2014; Pert *et al*, 20014; Adams *et al*, 2015 and references therein) that this may result in:

- Higher than background levels of sea lice and potential disease impacts on wild fish from fish farms;

- Genetic dilution of wild stock from interbreeding of escaped salmon from the fish farms (including freshwater sites);
- Impacts on fresh water pearl mussels.

3.23 Sea lice occur naturally in wild fish populations. Where the sea lice encounter a fin fish farm, the population of lice can increase dramatically due to the intensive nature of finfish farming. These inflated lice numbers in turn can re-infect wild populations, including wild salmonids, compromising individual infected fish and potentially have wider population-level impacts. Sea lice management, along with escapes, remain significant challenges for the long term sustainability of the industry.⁽⁶⁾

3.24 Whilst Marine Scotland has various control measures for sea lice, these mainly relate to the farmed fish. In addition, SEPA places limits on the use of sea lice medicines. Patterns of treatment of sea lice infestations, as reported to SEPA in terms of sea lice chemical use, would suggest that the current methods of sea lice control are not always effective at all sites in terms of keeping sea lice infestations at fish farms under control⁽⁷⁾. Consideration therefore of impacts of aquaculture development on wild salmonids is a material consideration for the Local Authority at the planning stage. This is done, in consultation with statutory consultees, to ensure the Planning Authority's biodiversity duty is upheld through compliance with the relevant policies of its Development Plan. Consequently, this issue needs to be addressed by the applicant in any fin fish application to identify the likely effect on wild salmonids, on an individual and cumulative site basis and to suggest potential mitigation measures. Applications should be accompanied by a site specific Sea lice Management Plan aimed specifically at limiting infestation of wild salmonids with sea lice emanating from the fish farm. Where the Planning Authority is of the view there may be a likely significant effect on wild salmonids due to elevated levels of sea lice emanating from a fish farm development, it will secure the Sea lice Management Plan by planning condition to ensure its enforceability.

3.25 Such Sea lice Management Plans should include the following;

- A statistical methodology for calculating the average sea lice count per fish on a weekly basis,
- An upper threshold figure for average sea lice count per fish and a methodology for its calculation with reference to the infestation potential of wild salmonids in the area,
- A detailed description of measures to be used to maintain infestation levels at below the upper threshold figure and how they are to be implemented and monitored for effectiveness,
- An emergency action plan to be implemented if the threshold figure is breached.

6 (Marine Scotland, 2014)

7 (SEPA, 2015: consultation response)

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3.26 Sea lice infestation appears to be a dynamic issue ⁽⁸⁾, where new information, research results and management practises are in a state of ongoing development and improvement. For example, Marine Scotland is undertaking a project on aquaculture that includes consideration of the spatial constraints of aquaculture in relation to wild salmonids, which was due to report in March 2015. This information will be considered once it becomes available.

3.27 Fish farming businesses located within a farm management area must be party to a farm management agreement or prepare and maintain a farm management statement ⁽⁹⁾ These may be prepared in collaboration with fish farming companies, owners of significant rivers and other relevant wild salmonid interests.

DC 3.2

Wild Salmonids and Sea Lice

Aquaculture development will only be permitted where:

- there is no significant adverse impact on wild salmonid populations;
- cumulative impacts on wild salmonids have been assessed and mitigated where appropriate.

Where appropriate, mitigation measures to be followed in relation to the management of sea lice and their potential impacts on biodiversity must be contained within an environmental management plan to be submitted in support of the planning application.

8 (see MSS guidance:<http://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/Aqint>)

9 (<http://www.legislation.gov.uk/asp/2013/7/contents>)

Development Criterion 4: Water Quality

Topics covered:

- **Water Quality**
- **Benthic impacts**

3.28 Aquaculture development and activities rely on high water quality. Finfish cages have the potential to impact the water column and seabed (benthic impact) from the discharge of treatment chemicals, waste feed, feed treated with anti-seallice chemicals and fish faeces, which in turn can have biodiversity impacts (see DC3.1). Aquaculture development therefore requires a degree of tidal flushing to disperse waste materials and provide plankton for shellfish developments. Under the River Basin Management Planning (RBMP) Process, the status of freshwater, transitional and coastal water-bodies is assessed and monitored against a range of criteria. The aim is for all water-bodies to reach good ecological status within a specified timeframe.

Box 8

Good Ecological Status

The Water Framework Directive (WFD) aims to achieve 'Good Ecological Status' for all waters from Mean High Water Springs out to three nautical miles by 2015. The Directive was transposed into Scottish law by the Water Environment and Water Services (Scotland) Act 2003.

3.29 The RBMP process is managed by SEPA, which provides datasheets for all water bodies. These set out the status and identified pressures within that water-body that will adversely impact on water quality. Measures are suggested that can help mitigate, remove or reduce those pressures. In determining planning applications for aquaculture developments in both the Marine and Freshwater Environment, the Council will have regard to the RBMP status of the receiving water body and whether or not proposed development will result in increased pressures on it.

3.30 When alterations or extensions to an existing fin fish farm would increase the biomass or extend the equipment used, additional information would be required by both the Planning Authority and SEPA to ensure benthic habitats and water quality are not adversely impacted. Evidence would be required to assure SEPA that additional impacts would be within acceptable limits before it can recommend the Planning Authority to approve an application. The impacts would be assessed on an individual site basis, as well as on a cumulative basis, across the water body, and will take into consideration the spatial standards as detailed in the Scotland River Basin District (Standards) Directions 2014.

3.31 Many Highland fin fish farms make use of well boats for the treatment of fish for sealice or disease. Where these activities require discharges from the boat, a Marine Scotland licence is required (see Table 1).

3.32 SEPA guidance suggests that new shellfish development should be located within what are now known as 'shellfish water protected areas' (SWPA) (see Map 2). The boundaries of these may be updated by Scottish Ministers as required; developers should consult with them to ensure

3 Development Criteria

they have the latest information. However, for applications which propose to develop out with these areas, SEPA advises that any existing or new proposed sewerage discharges into the water body would not have to comply with SEPA's microbiological policy, which is why they generally advise that new shellfish farms should be located within SWPAs. Applicants should therefore be aware that any current or future Scottish Water and private sewerage discharges in the vicinity, and the potential for diffuse run-off from animals grazing the surrounding area, could contribute to the potential for input of coliforms into the water body which may subsequently affect the classification of shellfish grown there. Whether or not shellfish are likely to be marketable is a commercial risk. SEPA has a duty to prevent deterioration of water quality in designated SWPAs and, where necessary, aim to improve shellfish water quality status to good, as part of the River Basin Management Plan Programmes. These new regulations mean that SEPA will continue to monitor these waters against the standards for sewage related bacteria set out in the Regulations, to ensure that discharges to the water environment will not adversely impact on the SWPAs. These areas are ultimately protected to ensure good quality products that are safe for human consumption, as regulated by Food Standards Scotland.

DC 4.1

Water Quality

Proposals for new marine finfish farming development and/or extensions to existing sites will not be permitted in locations where they would have a significant adverse impact on water quality.

Where appropriate, proposals will require to be accompanied with modelling and calculations that demonstrate that the benthic and water column impacts are localised and within environmental limits.

The impacts would be assessed on an individual site basis, as well as on a cumulative basis, across the water body, and will take into consideration the spatial standards as detailed in the Scotland River Basin District (Standards) Directions 2014.

Development Criterion 5: Other marine users

Topics covered:

- **Inshore fishing**
- **Recreational users**
- **Navigation**

3.33 Development in the marine environment has increased significantly in the last few decades. This has driven the need to a more formalized approach to resource utilization in the form of marine spatial planning. Any proposal for aquaculture development in the coastal area therefore has to consider a wide range of other marine activities and resource use and vice versa (see Table 4). These activities may have an economic, environmental and social impact both in the sea and on neighbouring land.

3.34 Many Highland marine activities make significant contributions to the local economy and support fragile, remote communities. These include fishing, ports and harbours, renewable energy, recreation and leisure.

3.35 The various types of inshore fishing in particular has a long history around the Highland coast and can be one of the main competitors for space with aquaculture. Whilst acknowledging the data limitations, information from the Scotmap projects suggests this pressure may be particularly found along areas off the west coast and off north-west Skye. This project targeted Scottish registered commercial fishing vessels under 15 meters. The data were collected during face-to-face interviews with individual vessel owners and operators and relate to fishing activity for the period 2007 to 2011.

3.36 Coastal tourism supports a variety of related business such as wildlife tour boats, sailing, accommodation, cafes and restaurants^{(10) (11)}. Further detailed information about each of these sectors will be available once the various Regional Marine Plans are developed by the Regional Marine Partnerships, as proposed by Scottish Government under the Marine (Scotland) Act 2010.

10 Awakening the Giant: [www.ryascotland.org.uk/Awakening the Giant.pdf](http://www.ryascotland.org.uk/Awakening%20the%20Giant.pdf)

11 Scottish Marine Recreation & Tourism Survey 2015
<http://www.gov.scot/Topics/marine/seamanagement/national/RecandTourism>

3 Development Criteria

Table 4 Examples of other marine users and potential interactions with aquaculture development.

User/Activity	Potential Interactions ⁽¹⁾	
	Finfish	Shellfish
Creel fishing	May compete for space, leading to perceived displacement and socio-economic impacts. Potential to fish within fish farm moorings Detritus from fish farms may have localised effects. Creels may impact on navigation to fish farm sites.	May compete for space, leading to perceived displacement and socio-economic impacts.
Existing aquaculture	Use of shared infrastructure e.g. piers May compete for space. Adequate separation distances between other finfish sites are required to reduce potential for disease and infection transmission.	Use of shared infrastructure e.g. Piers. May compete for space.
Marine renewable energy developments	Negligible at present but may change as offshore wind, wave and tidal schemes develop. May be opportunities for synergistic benefits.	Negligible at present but may change as offshore wind, wave and tidal schemes develop. May be opportunities for synergistic benefits.
Marine cable routes and pipelines	Cable and pipeline routes may affect existing or new fin fish sites but effects likely to be restricted to installation stages.	Negligible at present but may change as offshore wind, wave and tidal schemes develop. May be opportunities for synergistic benefits.
Yachting/Pleasure craft	Poorly sited developments may encroach on or take over natural anchorages or impede navigation.	Poorly sited developments may encroach on or take over natural anchorages or impede navigation.
Recognised dive sites	Opportunity for shared access to piers. Acoustic Deterrent Devices (ADDs) may impacts on divers' enjoyment of a site.	Lines or trestles close to shore may impede access.

1. A detailed assessment of interacting factors would be undertaken on a case-by-case basis: this list provides examples only.

DC 5.1

Other Marine Users**

Aquaculture development will only be permitted where, in the view of the Planning Authority:

- there is no significant adverse impact on other marine users;
- existing fisheries have been considered and where appropriate, effects mitigated.

Developers should consult with the relevant harbour authority and Marine Scotland at an early stage in the planning process to consider any potential navigation and shipping issues, where appropriate. Details of such considerations should be provided in any subsequent planning application.

Developers should consult with local fisheries interests at an early stage where there is evidence of fishing activity in the area of the proposed development.

Development will not be permitted where there would be adverse effects on the amenity value of anchorages and harbours, including their approaches, where they would be compromised.

Where appropriate, opportunities for shared use of jetties, piers and harbours should be considered.

Access to the foreshore for recreational activities, recognised yacht anchorages and dive sites should not be impeded.

****Note:** given the large geographic size of Highland, it is impracticable to map the variety of existing users. However, where local information is available, the Planning Authority will aim to provide this information at the pre-application stage. The Planning Authority would expect developers to take a common sense approach to identifying other key marine users likely to be affected, or affect, their development proposals and discuss appropriate mitigation in submitted applications.

Development Criterion 6: Construction, Operational & Decommissioning Impacts

Topics covered:

- **Equipment**
- **Amenity**
- **Access**
- **Waste**
- **Light**
- **Noise**
- **Predator Control**
- **Decommissioning**

3.37 As well as impacts on biodiversity (see DC3.1), aquaculture developments have the potential to impact on neighbouring users, wider biodiversity and the landscape. The trend for finfish developments to use increasingly larger cages and feed barges and for more extensive mussel and oyster farms has led to increased visual and amenity pressures. Additional or extended aquaculture sites also increases the amount of boat traffic and other operational issues.

3.38 To help reduce such impacts, mitigation measures may be required. Developers may therefore be required to provide information on issues such as visual impact, light, noise and odour mitigation measures in support of their applications. At the earliest possible stage in the project design process, applicants should consider the following issues:

1. Equipment

Poor choice of colour or design of equipment can have a significant impact on the surrounding landscape or seascape. The height of some equipment can make it more difficult to assimilate in the landscape and seascape therefore low-profile designs are generally preferable. With the growing trend for the finfish farming equipment used to be larger, e.g. 400T feed-barges and higher top-nets, additional mitigation may be required. Whilst there may be a drive within the industry for standardized equipment, a 'one size fits all' approach is not appropriate in some areas of Highland. All aquaculture equipment should fit with Sustainable Design policy (No. 28) in the HwLDP. Equipment, other than navigational markers, should be in muted, matt colours that to blend into the surroundings. Where other colouration would be more appropriate, written permission should be obtained in advance from the Planning Authority.

2. Amenity

The amenity value of an area can be impacted by aquaculture activities that introduce new structures that are unsympathetic to the surroundings or existing pattern of use. Amenity value can be defined as natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes. Including an assessment of the amenity impacts within the application may be particularly helpful in proposals for new developments or significant amendments to existing sites.

3. Access

Particularly where developments are proposed in remote areas and road access is required, developers may be required to undertake an access assessment. Where operations require access to the intertidal zone e.g. tractors and trailers used for oyster harvesting, an assessment of the impact on other users of common access may be required. Harbours, piers, jetties and

pontoons are key access points for both aquaculture and many other marine activities, allowing opportunities for shared use, subject to appropriate bio-security measures.

4. **Waste**

Waste from aquaculture has the potential to harm wildlife, cause unsightly litter, particularly in otherwise relatively pristine areas or become an obstruction or navigation hazard.

Development proposals should include information on how waste will be dealt with and a commitment to minimize waste in all aspects of the site's operation. Storm-damaged equipment that has broken free from its moorings or abandoned equipment can also be a hazard to navigation, people and wildlife. Recovery and proper disposal of such equipment is therefore important.

5. **Light**

Above surface lighting on feed-barges and cage systems, along with underwater lighting, can cause light pollution and additional visual impact, particularly in remote sealochs where the sense of naturalness and isolation is a key tourist draw. It also has the potential to impact on the faunal communities, other than the farmed fish, present in the water ecosystem by altering a variety of biological processes. Consequently, the authority is likely to control the extent and duration of lighting through planning conditions and applicants should indicate their lighting requirements in detail in any application.

6. **Noise and Odour**

Operational noise caused by equipment such as generators, feed-blowers and harvesting boats or other mechanised equipment working outwith normal working hours have the potential to affect nearby people, particularly in closely confined loch systems or areas where there is normally little background noise. Noise assessment and potential mitigation measures should be provided where such equipment is to be used. Details of any odour mitigation measures should also be provided.

7. **Predator Control**

Some species may be attracted to the concentrations of fish or shellfish at an aquaculture sites, which can have a significant impact on the operation of the site. In order to enable the determination of site-specific risks, where appropriate, the developer will be required to provide information on the proposed predator management measures. This is likely to include the presence and abundance of species that might be at risk from any proposed anti-predator methods. In particular, the site specific impacts of Acoustic Deterrent Devices would require careful consideration on cetaceans and seals.

8. **Decommissioning**

Once a site, or any associated onshore infrastructure, is no longer required for aquaculture production it may be decommissioned. In most instances, appropriate conditions are attached to a planning consent to ensure timely removal of equipment and adequate restoration of a site.

3.39 To help mitigate some of the potential impacts discussed above, finfish and shellfish developers, should as a minimum, comply with their respective Code of Good Practice. Whilst these provide standards of practice and a framework for industry development, they do not replace or remove any of the planning requirements outlined in this planning guidance.

DC 6.1

Construction, Operation & Decommissioning

All aquaculture development proposals should ensure that any potential significant adverse effects, including cumulative impacts, due to equipment design, colour, amenity, access, lighting, noise, odour, predator control or site closure are appropriately mitigated to the satisfaction of the Planning Authority.

Where appropriate, planning applications should be supported by a predator management strategy.

With regard to all planning permissions granted pursuant to this policy, if any site is not operational for a continuous period exceeding three years, all equipment and waste must be removed from the site to the satisfaction of the Planning Authority.

Note: the council is not responsible for external websites, which are subject to change.

References

- 4.1** Adams, T.P., Proud, R. and Black, K.D. (2015) Connected networks of sea lice populations: dynamics and implications for control. *Aquaculture Environment Interactions*, **6**, 273-284.
- 4.2** Costello, M.J. (2009) How sea lice from salmon farms may cause wild salmonid declines in Europe and North America and be a threat to fishes elsewhere. *Proceedings of the Royal Society B*, **276**, 3385-3394.
- 4.3** Food Standards Scotland 2015
<http://www.foodstandards.gov.scot/food-safety-standards/advice-business-and-industry/shellfish>
- 4.4** Franklin, P., Verspoor, E. and Slaski, R. (2012) Impacts of open pen freshwater aquaculture production of wild fisheries. The Scottish Government, Edinburgh.
- 4.5** Marine Scotland (2014) MGSA Science & Research Working Group: Aquaculture Science & Research Strategy. The Scottish Government, Edinburgh.
- 4.6** Marine Scotland Science (2014a) Scottish Fish Farm Production Survey 2013
- 4.7** Marine Scotland Science (2015) Scottish Shellfish Farm Production Survey 2014
- 4.8** Murray, A.G. and Hall, M. (2014) Treatment rates for sea lice of Scottish inshore marine salmon farms depend on local (sea loch) farmed salmon biomass and oceanography. *Aquaculture Environment Interactions*, **5**, 117-125.
- 4.9** Pert *et al* (2014) Using sentinel cages to estimate infestation pressure on salmonids from sea lice in Loch Shiel, Scotland. *Aquaculture Environment Interactions*, **5**, 49-59.
- 4.10** Scottish Government (2013) Aquaculture and Fisheries (Scotland) Act 2013
<http://www.legislation.gov.uk/asp/2013/7/contents>
- 4.11** Scottish Government (2015)
<http://www.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/Aqint>
- 4.12** SEPA (2015) Consultation response
- 4.13** Youngson, Dosdat, Saroglia and Jordan (2001) Genetic interactions between marine finfish species in European aquaculture and wild conspecifics. *Journal of Applied Ichthyology*, **17**, 153-162.

The Highland Council

Application Form & Guidance

http://www.highland.gov.uk/info/1225/countryside_farming_and_wildlife/62

4 Additional Sources of Information

/fisheries_and_aquaculture

Pre-application advice

http://www.highland.gov.uk/info/180/planning_-_applications_warrants_and_certificates/187/when_to_get_planning_permission/4

Major Application guidance (for site equipment > 2.0 ha)

http://www.highland.gov.uk/info/180/planning_-_applications_warrants_and_certificates/143/planning_permission

Highland wide Local Development Plan

http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan

Supplementary Guidance

http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/213/supplementary_guidance

Special Landscape Areas

http://www.highland.gov.uk/downloads/file/2937/assessment_of_highland_special_landscape_areas

Cultural heritage sites

<http://her.highland.gov.uk/>

Highland Historic Environment Strategy

http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/213/supplementary_guidance/19

Aquaculture Framework Plans

http://www.highland.gov.uk/info/1225/countryside_farming_and_wildlife/62/fisheries_and_aquaculture/6

Highland Coastal Development Strategy

http://www.highland.gov.uk/downloads/file/1062/highland_coastal_development_strategy

Enforcement Charter

http://www.highland.gov.uk/downloads/download/203/planning_enforcement_charter

SNH

Natura sites

<http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/international-designations/natura-sites/>

Habitats Regulations Appraisal (Appropriate Assessments)

<http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/international-designations/natura-sites/habitats-regulations/>

MPA guidance

[http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protected-areas-\(mpa\)/](http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protected-areas-(mpa)/)

Site and Design guidance

<http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=113>

Landscape and Aquaculture guidance

<http://www.snh.gov.uk/protecting-scotlands-nature/looking-after-landscapes/landscape-policy-and-guidance/landscape-planning-and-development/landscape-and-aquaculture/>

Protected species

<http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/>

General Guidance

<http://www.snh.gov.uk/publications-data-and-research/snhi-information-service/>

SEPA

CAR Regulations

http://www.sepa.org.uk/water/water_regulation.aspx

Modelling data

<http://www.sepa.org.uk/water/aquaculture/modelling/>

SEPA fish farm manual

http://www.sepa.org.uk/water/aquaculture/fish_farm_manual/

Marine Development and Marine Aquaculture Planning Guidance

<http://www.sepa.org.uk/media/143325/lups-gu17-marine-development-and-marine-aquaculture-planning-guidance.pdf>

4 Additional Sources of Information

Scottish Government

Permitted Development Rights

<http://www.scotland.gov.uk/Topics/marine/Fish-Shellfish/18716/fish-farm>

Shellfish water protected areas

<http://www.scotland.gov.uk/Topics/Environment/Water/15561/shellfishwaters>

Aquaculture and Fisheries (Scotland) Act 2013

<http://www.legislation.gov.uk/asp/2013/7/enacted>

Scottish Planning Policy (SPP)

<http://www.scotland.gov.uk/Publications/2014/06/5823>

A Fresh Start – the Renewed Framework for Scottish Aquaculture (2009)

http://www.google.co.uk/url?url=http://www.scotland.gov.uk/Resource/Doc/272866/0081461.pdf&rct=j&frm=1&q=&esrc=s&sa=U&ei=xnyVU5_CJYu7PZj4gNgl&ved=0CCEQFjAB&usq=AFQjCNFR4uuFrQDUAVMbB_y0rPL6wfX_Cw

Circular 1/2007 Planning Controls for Marine Fish Farming

<http://www.scotland.gov.uk/Publications/2007/03/29102026/1>

Locational Guidelines

<http://www.scotland.gov.uk/Topics/marine/Publications/publicationslatest/farmedfish/locationalfishfarms>

Running a fish farm

<http://www.scotland.gov.uk/Topics/marine/Fish-Shellfish/18716>

Marine Protected Areas

<http://www.scotland.gov.uk/Topics/marine/marine-environment/mpanetwork>

Historic Marine Protected Areas

<http://www.historic-scotland.gov.uk/index/heritage/wrecksites/scotlands-historic-wrecks.htm>

Marine (Scotland) Act 2010

http://www.oqps.gov.uk/legislation/acts/acts2010/pdf/asp_20100005_en.pdf

Environmental Impact Assessment (EIA) Regulations

<http://www.scotland.gov.uk/Topics/archive/National-Planning-Policy/themes/>

[enviro-assessment/eia](#)

National Planning Framework

<http://www.scotland.gov.uk/Topics/Built-Environment/planning/NPF3-SPP-Review/NPF3>

Working arrangement: Requirements of statutory consultees

www.scotland.gov.uk/Resource/Doc/295194/0106302.pdf

Review of DSFBs

<http://www.scotland.gov.uk/Topics/marine/Salmon-Trout-Coarse/fishreview>

Draft Planning Circular 'Planning Scotland's Seas: The relationship between the statutory land use planning system and marine planning and licensing'

www.scotland.gov.uk/Resource/0042/00428395.pdf

Scotmap

<http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/ScotMap>

Seal haul-out sites

<http://www.scotland.gov.uk/Topics/marine/marine-environment/species/19887/20814/maps>

NMPi

<http://www.scotland.gov.uk/Topics/marine/seamanagement/nmpihome/nmpi>

Scotland's aquaculture

<http://aquaculture.scotland.gov.uk/>

The Wildlife and Natural Environment (Scotland) Act 2011

<http://www.legislation.gov.uk/asp/2011/6/contents/enacted>

Nature Conservation (Scotland) Act 2004

<http://www.legislation.gov.uk/asp/2004/6/contents>

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

<http://www.scotland.gov.uk/Publications/2007/03/29102026/7>

The Town and Country Planning (Scotland) Act 1997

<http://www.legislation.gov.uk/ukpga/1997/8/contents>

4 Additional Sources of Information

The Town and Country Planning (General Permitted Development) (Fish Farming) (Scotland) Amendment Order 2012

<http://www.legislation.gov.uk/ssi/2012/131/contents/made>

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011

<http://www.scotland.gov.uk/Publications/2011/06/01084419/0>

DSFB

Wild fisheries information

<http://www.asfb.org.uk/>

CEC

Seabed lease

<http://www.thecrownestate.co.uk/coastal/aquaculture/working-with-us/aquaculture-leases/>

SSPO

Code of Good Practice (including link to other relevant aquaculture legislation)

<http://www.thecodeofgoodpractice.co.uk/cogp/preface-to-the-2010-edition>

ASSG

Code of Good Practice

<http://assg.org.uk/#/code-of-practice/4536619829>

Miscellaneous

Minimising the impact of ducks on mussel farms.

www.gla.ac.uk/media/media_19794_en.pdf

Light pollution effects

<http://goo.gl/Eajcwt>

Marine Strategy Framework Directive

<http://www.msfd.eu/>

National Biodiversity Network

<http://www.nbn.org.uk/>

Figure 2

