Argyll and Bute Local Development Plan

SUPPLEMENTARY GUIDANCE 2
AQUACULTURE DEVELOPMENT (SG AQUA 1)

Adopted December 2016

Plana-leasachaidh Ionadail Earra-ghàidheal is Bhòid

Contents

Aquaculture Development (SG LDP AQUA 1)

1. Introduction

This Supplementary Guidance (SG) provides additional detailed to policy **LDP 5 – Supporting the Sustainable Growth of Our Economy,** which identifies Aquaculture as a key marine and coastal economic growth sector in Argyll and Bute.

Proposals for new aquaculture developments or amendments to existing marine and fresh water farming sites will be assessed against this SG, which provides detailed guidance for developers and regulators to help guide development to the most appropriate areas by taking account of other activities and environmental sensitivities and assist in decision making for individual proposals.

Aquaculture development which is relevant to this SG includes Marine fish farming, covering the farming of finfish species, shellfish species and sea urchins; Freshwater farming of mainly trout and salmon; and onshore development such as hatcheries, depuration facilities and land based salmon farms. Seaweed farming is not currently under planning control but may be in the future.

2. Context

National

In 2009 the Scottish Government in conjunction with the aquaculture industry launched 'A Fresh Start – The Renewed Framework for Scottish Aquaculture'. The Framework set out the shared vision of the Scottish Government and the industry for the future development of the sector: *"Scotland should have sustainable, growing, diverse, market-led and profitable farmed fish and shellfish industries, which promote best practice and provide significant economic and social benefits for their people, while respecting the marine and freshwater environment. The industries will contribute to the overall vision for Scotland's marine environment of "clean, healthy, safe, productive and biologically diverse seas managed to meet the long-term needs of nature and people".*

The National Marine Plan sets out objectives for Aquaculture in Scotland including; 'An aquaculture industry that is sustainable, diverse, competitive, economically viable and which contributes to food security whilst minimising environmental impact; and support for industry targets for sustainable growth in production of finfish and shellfish to 210,000 and 13,000 tonnes respectively by 2020, from a 2011/12 baseline of 159,269 and 6525 tonnes.

Scottish Planning Policy (SPP) is a statement of Scottish Government policy on land use planning and identifies aquaculture as making a significant contribution to the Scottish economy, particularly for coastal and island communities. SPP identifies that the planning system should:

- play a supporting role in the sustainable growth of the finfish and shellfish sectors to ensure the aquaculture industry is diverse, competitive and economically viable;
- guide development to coastal locations that best suit industry needs with due regard to the marine environment; and
- maintain a presumption against further marine finfish farm developments on the north and east coasts to safeguard migratory fish species.

Supplementary Guidance should take account of Marine Scotland's locational policies and should set out the issues that will be considered when assessing specific proposals.

Local

Aquaculture makes a significant contribution to the economy of Argyll and Bute and in particular to more remote and fragile areas. Aquaculture provides year round jobs which are important for coastal communities and downstream jobs are also supported in transport, processing and support services. The

salmon farming industry in Argyll and Bute is estimated to support 460 employees, contributing £10 million gross pay and leading to an estimated £47.2 million multiplied financial impact[1]. Over £50 million capital investment occurred between 2006 and 2014.

In 2014, shellfish companies operating in Argyll and Bute produce roughly 80% of Scotland's pacific oysters and 11% of Scotland's blue mussels, together valued at approximately £2.1 million value of first sale, over 20% of the Scottish total.

In line with National aspirations the local finfish and shellfish farming industry have expressed a desire for sustainable growth over the life of the LDP which may lead to the consolidation of some, the enlargement of existing sites and/or new sites being established. In addition to marine sites significant investment is being made in the necessary onshore infrastructure required to support growth and further improve sustainability of aquaculture. This includes processing plants and hatcheries to provide farmed stock but also to support innovative new environmental management such as the use of cleaner-fish in the salmon farming industry.

The current Development Plan largely takes a criteria based approach to the assessment of individual proposals with spatial information also available in the published ICZM plans. This approach has largely been successful in guiding the industry to the most appropriate locations. That said, national Planning policy expressed through the SPP, promotes the development of a spatial approach, linked to relevant policy criteria. During the development of this SG the Council has carefully explored different options for producing a spatial policy framework and has concluded that it is not currently possible to produce a robust indicative spatial strategy for Argyll and Bute, given that only a small proportion of the key criteria can be fully incorporated at this present time.

Argyll and Bute Council is however, committed to improving the spatial element of this SG policy framework through further developing the identification of areas with potential for development and areas sensitive to aquaculture development, where possible.

3. Further development of SG

This Aquaculture SG is the first iteration of a policy framework which will be further developed and updated as new information becomes available to allow a greater spatial element to an Argyll and Bute wide framework. It is proposed to consider and integrate where possible and appropriate, the following elements where further work by government agencies, the Council, and other stakeholders is planned or underway:

Description	Planning criteria	Leading organisations
Distribution of Priority Marine Features	Habitats & species of conservation interest	SNH/Marine Scotland
Further Marine Protected Areas and European Marine sites	Designated sites	SNH/Marine Scotland
Sensitivity mapping of coastal waters – interaction between finfish farming and wild salmonids	Wild migratory salmonids	RAFTS
Project looking to identify spatial opportunities & constraints for aquaculture development, in relation to National growth	Carrying capacity (finfish and shellfish)	Marine Scotland

[1] Based on 2014 figures

targets	Wild migratory salmonids	
Mapping of commercial sea fishing grounds (ScotMap project, Marine Planning work)	Other activities (commercial fishing)	Marine Scotland, Marine Planning Partnerships
Landscape/seascape sensitivity assessment for the Firth of Clyde	Guidance on sensitivity of landscape/seascape to marine & coastal development	SNH/Firth of Clyde Forum
Landscape capacity assessments for National Scenic Areas under development pressure	Landscape designations	Argyll and Bute Council/SNH
Regional Marine Planning & Regional Locational Guidance for Marine Renewables	Collation of information on other activities (recreational use)	Marine Scotland

4. How to use the Aquaculture SG

Planning permission is required for all new aquaculture developments, change of use, and alterations to existing approved sites. Permitted Development Rights for aquaculture allow some minor alterations and changes of use to be granted 'Deemed Planning Permission' by virtue of the provisions of the General Permitted Development (Scotland) Order 1992 (as amended). Applicants should refer to this guidance at an early stage in the design and development process of any aquaculture proposals to help inform the location, scale and form of the development.

It should be noted that this guidance has not attempted to identify areas of technical feasibility or areas where the industry would like to develop for different types of aquaculture as the former is not the role of the planning authority and industry has not been able to provide information on where it would like to develop. Given the constant changes in technology and equipment it is considered necessary to not restrict opportunities for development to areas of resource or interest based on current technology.

Applicants are strongly advised to undertake pre-application discussion with Argyll and Bute Council at the earliest opportunity of planning a development proposal. Pre-application advice is a free service provided by the planning service and is available to all applicants. Planning officers can advise on likely constraints and opportunities relating to a particular proposal, information requirements and give specific advice on the planning process and Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. Information on the different stages of the planning process for aquaculture is detailed in **Annex A**.

Section 5 of this guidance details the criteria based policy, against which all planning applications for aquaculture development will be assessed. Section 6 then provides additional guidance on the individual Development Criteria outlined in this policy, describing or mapping opportunities and constraints relevant to these criteria.

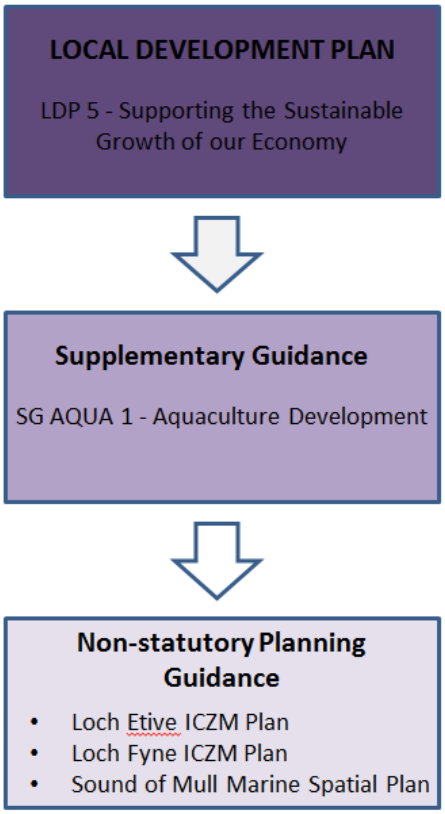
Policy SG AQUA 1 is supported by existing Integrated Coastal Zone Management Plans for specific coastal areas. These plans provide spatial guidance for aquaculture development, identifying where development would and would not be considered appropriate. Further information on these plans is provided in **Annex B.**

In addition to this guidance, any aquaculture proposal will also need to be consistent with other relevant Local Development Plan policies. Which policies apply depends on the location and its sensitivity, and could include, economic, environmental and access policies.

In terms of good practice in preparing development proposals, applicants are encouraged to consider the following:

- Adherence to the Code of Good Practice for Scottish Fin Fish Aquaculture or the Association of Scottish Shellfish Growers Code of Good Practice;
- Use of approved templates for development applications and EIA screening/scoping; and
- Community engagement and pre application (non statutory) activity - in particular for new, larger scale or potentially sensitive developments.

Planning permission is not the only consent required for an aquaculture development, with licensing and agreements required from Marine Scotland and Scottish Environment Protection Agency (SEPA) for finfish development. Further information on the responsibilities of other aquaculture regulators is identified in **Annex C**.



5. Criteria Based Policy

SG LDP AQUA 1 – Aquaculture Development

MARINE & FRESHWATER AQUACULTURE

A. Development Criteria

In determining proposals the Council will consider positive and negative effects relating to both the locational and operational characteristics of the development on the following Development Criteria:

1. Landscape/seascape and visual amenity;
2. Isolated coast and wild land;
3. Historic or archaeological sites & their settings;
4. Priority habitats/species (including wild migratory salmonids) and designated sites for nature conservation;
5. Ecological status of water bodies and biological carrying capacity;
6. Commercial and recreational activity;
7. Amenity, arising from operational effects (waste, noise, light and odour)
8. Economic Impact.

Proposals will be supported, where:

- Direct, indirect or cumulative significant adverse effects on the Development Criteria are avoided in relation to the locational characteristics of the development; and
- The applicant can demonstrate that level of risk of potential impacts on any Development Criteria, relating to the operation of the site, can be effectively minimised or mitigated by appropriate operational measures.

This support is further conditional on proposals being consistent with other Local Development Plan Policies and Supplementary Guidance, current Government guidance, the National Marine Plan and relevant Regional Marine Plans, where proposals extend onto the intertidal zone or beyond, or interact with adjacent coastal waters.

B. Consolidation and rationalisation

Future proposals to consolidate or rationalise existing development sites will be supported where proposals are consistent with PART A of this policy and have demonstrated that they have considered the following:

- any available spatial guidance on areas that are most/least suitable for development;
- potential environmental benefits, including landscape, habitats and species and wild migratory salmonids;
- potential benefits in terms of site management, including disease control and escapes;
- potential benefits to communities and commercial and recreational activities; and
- increased economic viability and socio-economic benefits.

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

LAND BASED AQUACULTURE

Onshore freshwater and marine fish farms and hatcheries will be supported where proposals are consistent with relevant LDP policies and Supplementary Guidance, in particular **SG LDP CST 1.**

Justification

For the purposes of this policy, marine aquaculture corresponds to shellfish and fin-fish farming located in coastal waters and the foreshore below Mean High Water Springs*. Fresh water aquaculture relates to fish farming (mainly fin-fish farming) in freshwater lochs and rivers, whilst onshore aquaculture relates to development on land above mean High Water Springs.

Aquaculture is seen by the Scottish Government, as well as at a European level, as a significant growth sector in the Scottish economy and the presumption is that it should be allowed to

operate unless there are considerations which would rend a particular site unsuitable for environmental reasons.

Proposals will be assessed in the light of the presumption established in favour of aquaculture in coastal waters established by Scottish Planning Policy, whilst also having regard to the criteria based analysis of environmental and other considerations set out in this SG Policy.

Further information on the Development Criteria for marine and freshwater aquaculture development and a description of opportunities and constraints is provided in Section 6 of this document.

Marine and Coastal Plans

Integrated Coastal Zone Management (ICZM) or Marine Spatial Plans adopted by the Council as non-statutory planning guidance will be a material consideration in assessing any development proposal which falls within the boundary of any such plan.

In reaching planning decisions, Argyll and Bute Council will also have regard to the National Marine Plan and subsequent Regional Marine Spatial Plans in so far as they impact within the inter-tidal zone and on the wider coastal zone.

Onshore aquaculture

The general capacity of settlements and countryside locations to successfully accommodate non-marine fish farming depends largely on the scale of the development, the size of settlements, the nature of adjoining land use and on the relative sensitivities of the countryside.

With these factors in mind, the Development Management Zones as defined in **Policy LDP DM1**, and **SG LDP CST 1** provide the spatial framework for assessing onshore aquaculture proposals. In addition, a direct operational need tied to a specific location will need to be demonstrated where proposals are outwith established settlements. Development within isolated coast (coastal area of 'Very Sensitive Countryside') will not normally be permitted, unless the development is minor in nature or necessary in the National interest and is dependent on the characteristics of the isolated coast.

Where abstraction of sea or fresh water and discharge of effluent/waste water is required to support the onshore development, proposals which have a detrimental impact on the ecological status of water bodies will be resisted.

***** *The marine area under planning control of Argyll and Bute Council for aquaculture is shown in* ***Annex D.***

6. Information on Development Criteria

This section provides detailed information on the Development Criteria listed in **Policy SG LDP AQUA 1**, against which all proposals for marine and freshwater aquaculture will be assessed. This information describes the constraints and opportunities related to each criterion and provides supporting maps where possible, indicating the location of features and interests. It is proposed to make all spatial information shown on these maps publically available on an interactive online GIS system to allow data to be viewed at different scales.

If spatial information on particular criteria is not available Argyll and Bute wide it has not been included in the supporting background maps and is instead described in the text. Where the Council has more detailed spatial information for a specific area not mapped in this guidance, this will be highlighted to the applicant at the pre-application discussion stage.

Planning applications for new aquaculture development should consider all potential direct, indirect and cumulative impacts on these criteria and where appropriate, mitigation measures should be identified which would avoid, reduce or minimise the identified adverse effects.

DC1 Landscape/seascape and visual amenity

Argyll and Bute has a diverse range of landscapes each with a different capacity to accommodate new development. The siting and design of new development should be informed by national considerations and local landscape character.

National Landscape Designations

There are seven National Scenic Areas within Argyll and Bute, all of which extend into the marine environment:

- Knapdale
- Scarba, Lunga and The Garvellachs
- Jura
- Lynn of Lorn
- Loch Na Keal
- Ben Nevis and Glencoe (Part of)
- Kyles of Bute

These NSAs encompass some of the most varied and valuable landscapes and coastscapes in Scotland and are important not only for their physical landforms and for the flora and fauna which they support, but also for the environmental assets that they represent.

Development should not undermine the special features or qualities which the designation was established to protect. Consequently there will be more constraints on aquaculture development proposals in these areas. However, this does not mean that NSA designation precludes aquaculture development, with many existing aquaculture sites located within NSAs.

Development proposals will need to be consistent with policy **LDP ENV 12 - Development Impact on National Scenic Areas (NSAs).** This policy resists any development in, or adjacent to, National Scenic Areas that would adversely affect the integrity of the area or the special qualities[2] for which it has been designated.

[2] As detailed in - The Special Qualities of the National Scenic Areas; SNH (2010)

In all cases the highest standards, in terms of location, siting, and design will be required within a National Scenic Area and developments will be expected to be consistent with **Policy LDP – Development Setting, Layout and Design.**

Local landscape designations

Argyll and Bute Council has identified Areas of Panoramic Quality which are areas of regional importance in terms of their landscape quality. Within these areas the impact on the landscape is a major consideration when new development is proposed and will need to be consistent with Policy **SG LDP ENV 11 - Development Impact on Areas of Panoramic Quality.**

Landscape character

Physical character, human activity, visual qualities and experience of place combine to create a landscape character which is distinct across a geographic area. One of the aims of locating and designing a development with care; is to ensure that the proposal does not undermine characteristics which most significantly contribute to the landscape character of an area. Where possible, new developments should relate to the key characteristics of an area. The Argyll and Firth of Clyde Landscape Character Assessment provides detailed information on landscape character in Argyll and Bute and a Landscape/Seascape Assessment of the Firth of Clyde provides a strategic assessment of the coastal landscape and seascape of the Firth of Clyde.

Opportunities for siting aquaculture development in the landscape

Coastal landscape character is made up of many elements and the table[3] below identifies the likely opportunities for siting aquaculture in the landscape in relation to generic coastal landscape characteristics.

Coastal Landscape Characteristics	Likely Opportunities
Shape and scale of coastal edge	Long, regular, straight coastlines set against the backdrop of an open sea may offer more opportunities for siting larger sized developments of simple, regularly spaced structures.
Openness and expansiveness of the coast and sea	Expansive stretches of sea along the horizon, creating a sense of big space and openness will often 'diminish' the relative size of a structure. Smaller and lower structures, including shellfish lines, are likely to fit in more easily to smaller spaces, but even then, the size and extent of the structure as a whole should aim to avoid dominating the size of the space.
Character of the hinterland	Dark vegetation, or steep landform which casts shadows across the water for a large part of the day, can create a backdrop against which a structure can be relatively difficult to see. In addition, such a backdrop is relatively 'stable', and not as subject to the variations in light which are characteristic of more open coasts. Managed conifer woodland and farmed land with well defined field patterns, both offer a 'worked' landscape context which may more readily accommodate development.
Landmarks and features	Sites which do not compete with iconic or important features either visually or in terms of setting or context.
Isolation or 'wildness'	Less remote and relatively accessible stretches of coast, or areas set within a context of inhabited or more developed stretches of coastline, loch, voe or sea. Areas characterised by activity, and where the presence of the bustle of frequent maritime traffic is a key characteristic. Landscapes where the hinterland is clearly managed, with a back drop of forestry or fields.

[3] Modified from SNH guidance - The siting and design of aquaculture in the landscape: visual and landscape considerations (2011).

Location, siting and detailed design

Choosing an appropriate location is the first step in seeking new sites or to expand existing sites that fit well in the landscape. Amendments to layout and detailed design can create a more attractive and appropriate structure, but are unlikely to mitigate the negative effects of a poorly sited development in the first place. Development proposals should relate to the specific landscape and visual characteristics of the local area and the scale, placement, layout, and orientation of installations should reflect the scale and subtleties of the surrounding landform, coastline and coastal character.

Developers should demonstrate how they have reduced potential adverse impacts on local landscape character and visual amenity when deciding on orientation, micro-siting and the size and layout of aquaculture installations. To assist consideration of siting and design developers should refer to background **Map DC1a** which shows the location of national and local landscape designations, and follow the SNH Guidance: *The siting and design of aquaculture in the landscape: visual and landscape considerations*.

Landscape and visual assessment

The developer will be required to submit information which demonstrates that the proposal can be satisfactorily integrated with the landscape through appropriate siting and design. For larger scale developments or development in sensitive landscape areas, planning applications should be supported, as appropriate, by a Landscape and Visual Impact Assessment (LVIA) in line with current best practice and guidance from Scottish Natural Heritage and Argyll and Bute Council. The Council will be able to advise on landscape sensitivities to be considered in any such assessment during pre-application discussion.

LVIAs should be undertaken in accordance with a methodology acceptable to Scottish Natural Heritage which may require the preparation of a Zone of Theoretical Visibility (ZTV) to inform the selection of representative viewpoints which will be the subject of photomontages. Information should also be provided on details of alternative locations considered by the applicant and scaled diagrams of all surface equipment including, top nets cages, feed barges and other ancillary equipment.

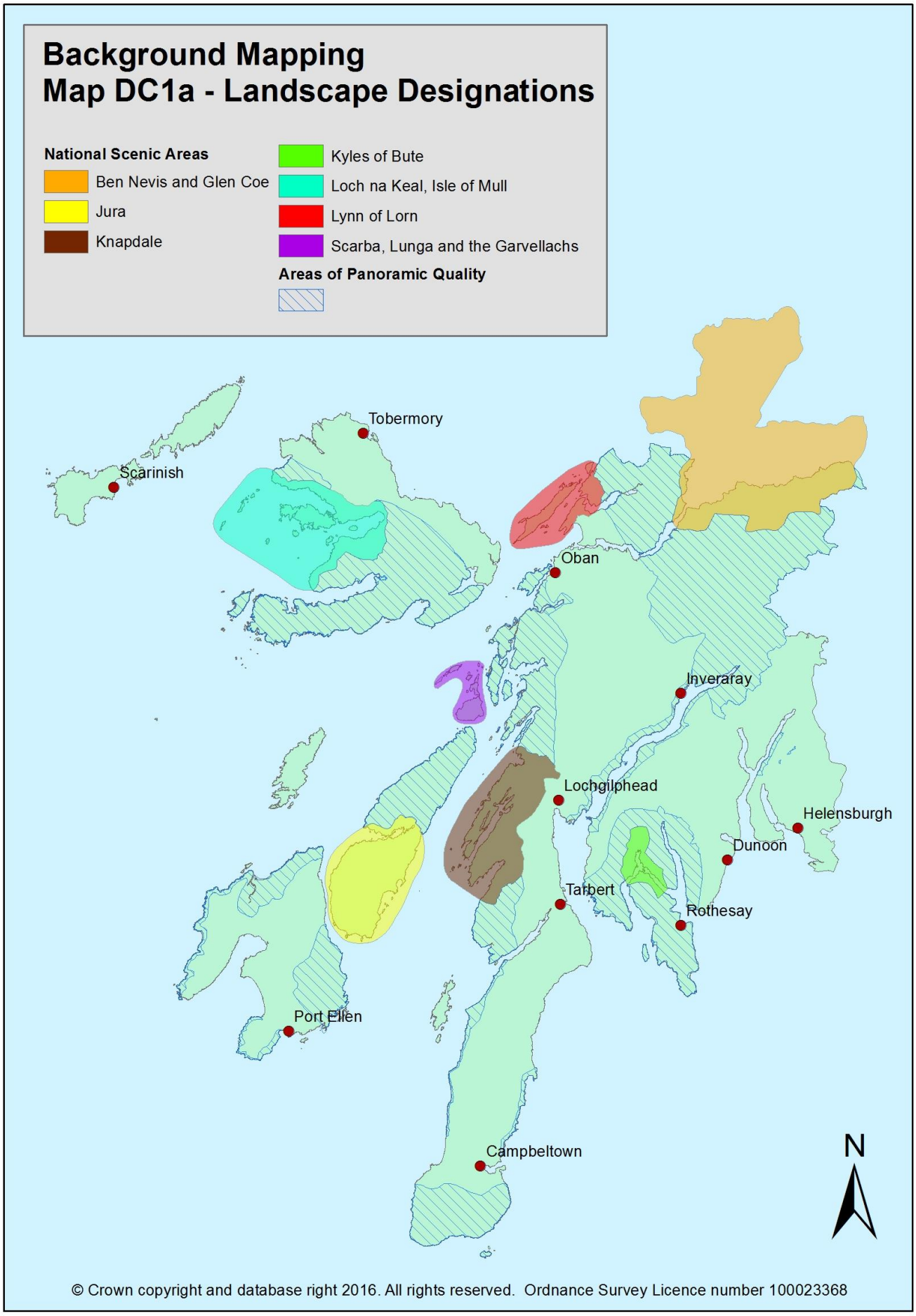
Cumulative impacts

Where development proposals are in an area where other aquaculture sites are present, cumulative landscape and visual effects of the proposed development in combination with existing development must be considered. This should focus on the number of developments seen together from key viewpoints and the sequential experience of development as viewed from coastal roads, paths or by boat.

Supporting maps

- **Map DC1a** – National Scenic Areas & Areas of Panoramic Quality

Background Mapping
Map DC1a - Landscape Designations



DC2 Isolated coast and wild land

Isolated Coast

The Isolated Coast is distant from centres of population and lacks obvious signs of development or other human activity. Such areas are valued because of their qualities of relative perceived wildness which are limited in number and extent, are also 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.

Argyll and Bute Council has identified areas of Isolated Coast across Argyll and Bute which are displayed in **Map DC2a**. These areas relate to where the 'Very Sensitive Countryside Zone', identified in LDP, abuts the coastline. Onshore development within isolated coast will only be permitted in exceptional circumstances as outlined in Policy LDP DM1 which are limited to specific categories of resource based development on appropriate sites. These categories include development directly supporting aquaculture.

Aquaculture development proposals in marine waters adjacent to areas of isolated coast will need to consider the impact of the development in terms of its location and scale on the isolated and remote character of the coast.

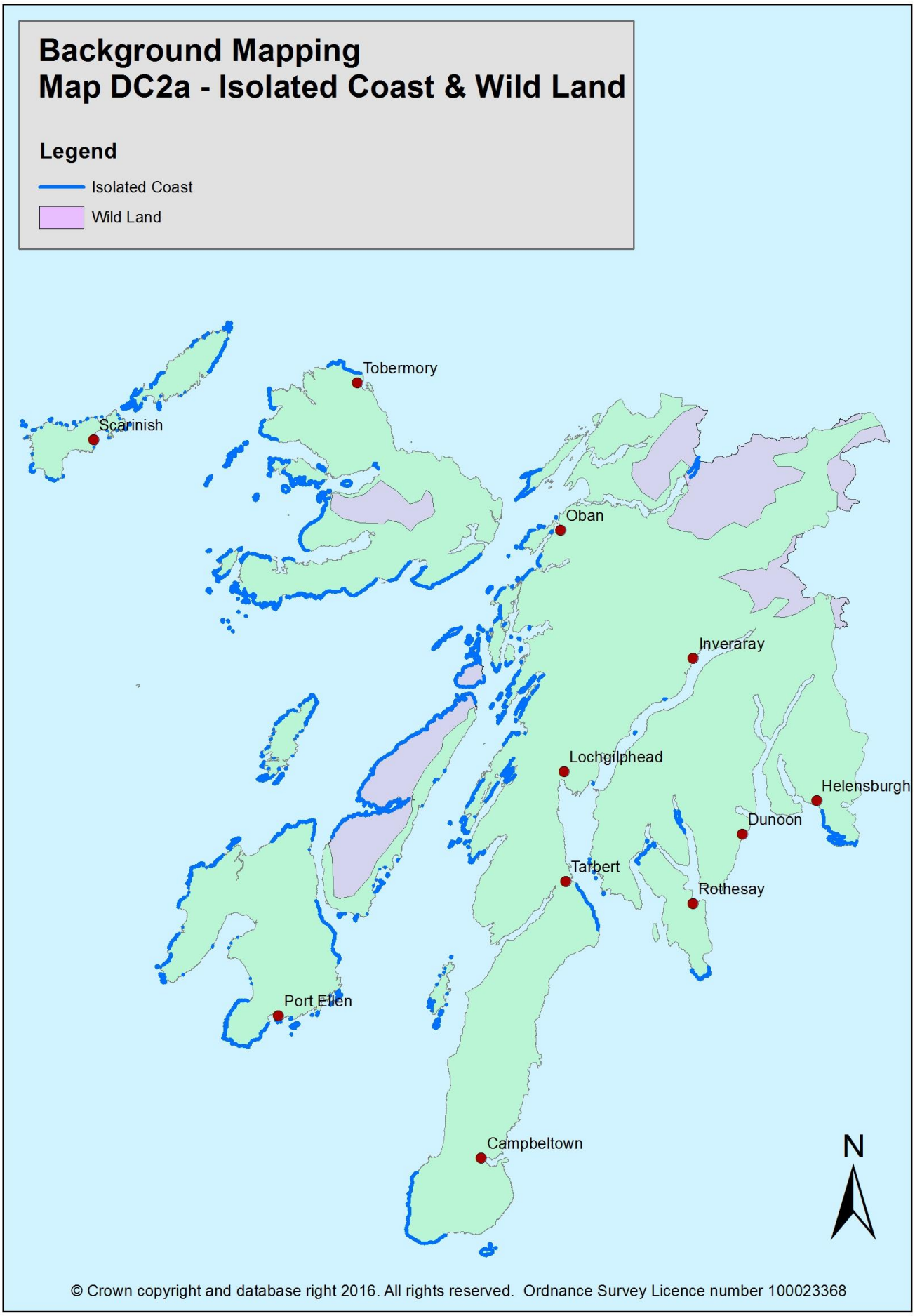
Wild land

The wild character of parts of Argyll and Bute provide valued elements to local and national identity. They are enjoyed for recreational purposes and aesthetic reasons and can be important tourism assets. Aquaculture proposals adjacent to areas of wild land will be assessed against **SG LDP ENV 9 – Development Impact on Areas of Wild Land**, and applicants will be expected to submit supporting evidence that addresses the impact on the wild character of this designation. Argyll and Bute Council will resist development proposals where it is determined that the wild character of an Area of Wild Land would be significantly harmed or diminished, unless these adverse effects are clearly outweighed by social, economic or environmental benefits of national importance.

Supporting maps

- **Map DC2a** – Isolated coast and areas of search for wild land

Background Mapping
Map DC2a - Isolated Coast & Wild Land



DC3 Historic or archaeological sites & their settings

Heritage assets are a finite and often irreplaceable resource and can be vulnerable to a wide range of human activities. Listed buildings, scheduled ancient monuments and their surroundings, historic gardens and designed landscapes and conservation areas are all subject to special protection measures to ensure that inappropriate or unsympathetic development does not damage the property or its setting.

Development proposals which could affect historic interests will need to be consistent with **Policy LDP – Supporting the Protection, Conservation and Enhancement of our Environment and supporting SG**, which will not permit development in locations where they would have an unacceptable adverse impact on the historic environment.

Marine aquaculture development has the potential to impact on the setting of onshore historic interests and affect wrecks of historic importance. Planning authorities have a responsibility to protect and support the retention of features or sites of archaeological and historical importance and will expect developers to take account of these interests when submitting planning applications for aquaculture.

Map DC3a identifies the following coastal historic interests where adjacent aquaculture development may have the potential to affect their coastal setting[4]:

Interest	Description
Scheduled Ancient Monuments	Scheduled Ancient Monuments are protected under the Ancient Monuments and Archaeological Areas Act 1979 and are scheduled by the Scottish Ministers.
Listed Buildings	Listed Buildings make a significant contribution to the character and amenity of Argyll and Bute. They are a valuable resource that can stimulate enjoyment of the wider environment and act as an important medium for education, economic development, recreation and tourism. Category A Listed Buildings are of national importance. Category B Listed Buildings are of regional importance while Category C Listed Buildings are of local importance and more numerous.
Conservation Areas	Conservation Areas form an important physical record of the architectural development and historical growth of an area. They are an irreplaceable cultural and economic resource that contributes to the distinctive character and unique quality of Argyll and Bute and therefore must be protected.
Historic Gardens & Designed Landscapes	Argyll and Bute enjoys a wealth of historic gardens and designed landscapes. They are an important part of the area's history, character and scenery and add greatly to the enjoyment of the countryside and settlements. In many cases they provide a landscape setting for an important building, have rare plant collections or contain interesting woodland or wildlife habitats. It is for these reasons that it is important for these sites to be protected and if possible enhanced to allow future generations to enjoy them in the years ahead. An Inventory of Historic Gardens and Designed Landscapes in Scotland is compiled and maintained by Historic Environment Scotland. Planning authorities must consult with the Historic Environment Scotland on any proposed development that may affect site contained in the Inventory.

[4] Not all historic interests on the coast will necessarily have a coastal setting

Marine interests

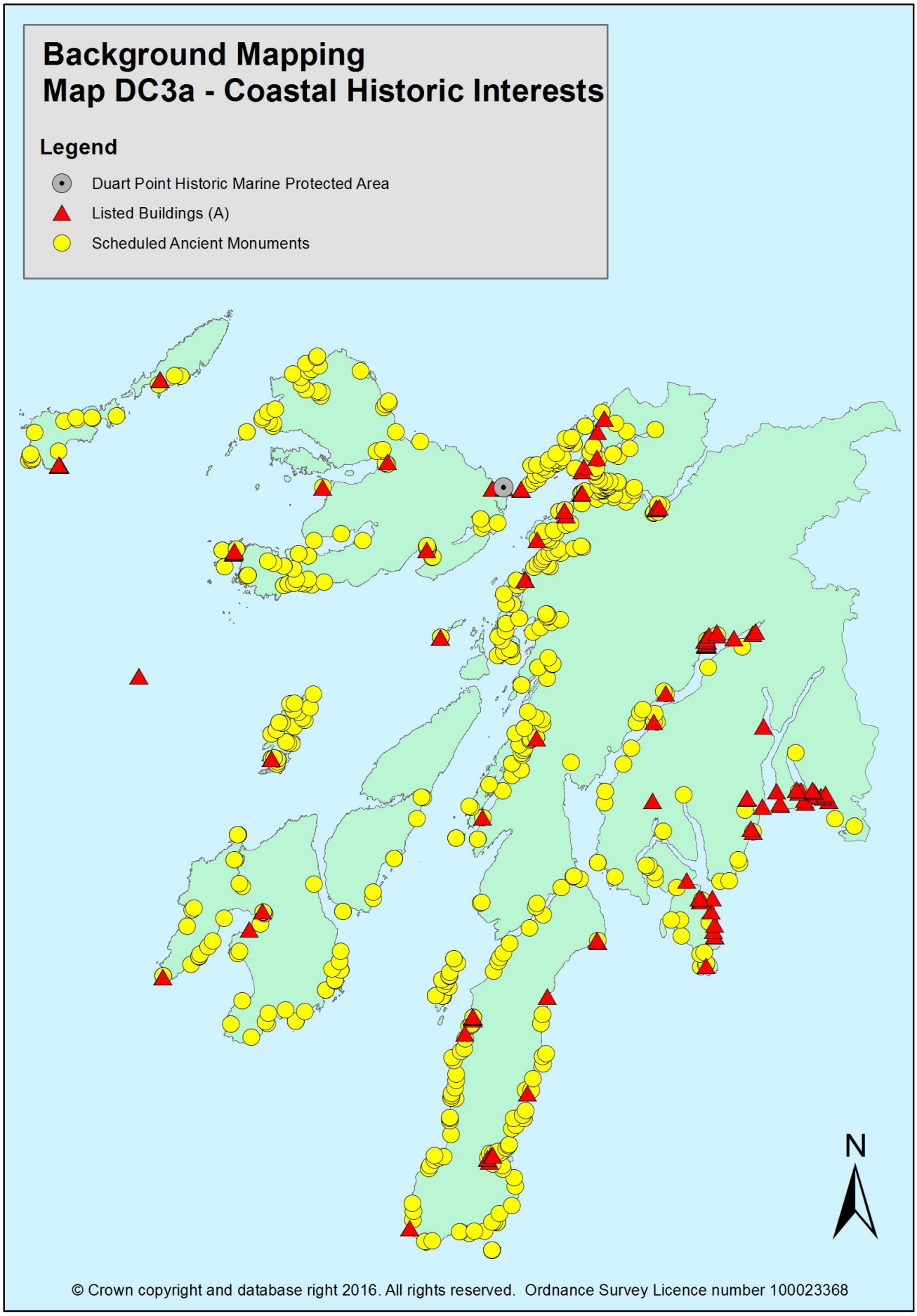
Duart Point wreck was designated in 2013 as a Historic Marine Protected Area. When considered in the context of Duart Castle, this associated wreck site adds to the understanding of the coastal landscape of the Sound of Mull, and the growing vulnerability of its castles to attack by seaborne artillery.

Opportunities exist for siting aquaculture development in areas which do not compete with iconic or important coastal features either visually or in terms of setting or context, or directly impact on protected wreck sites.

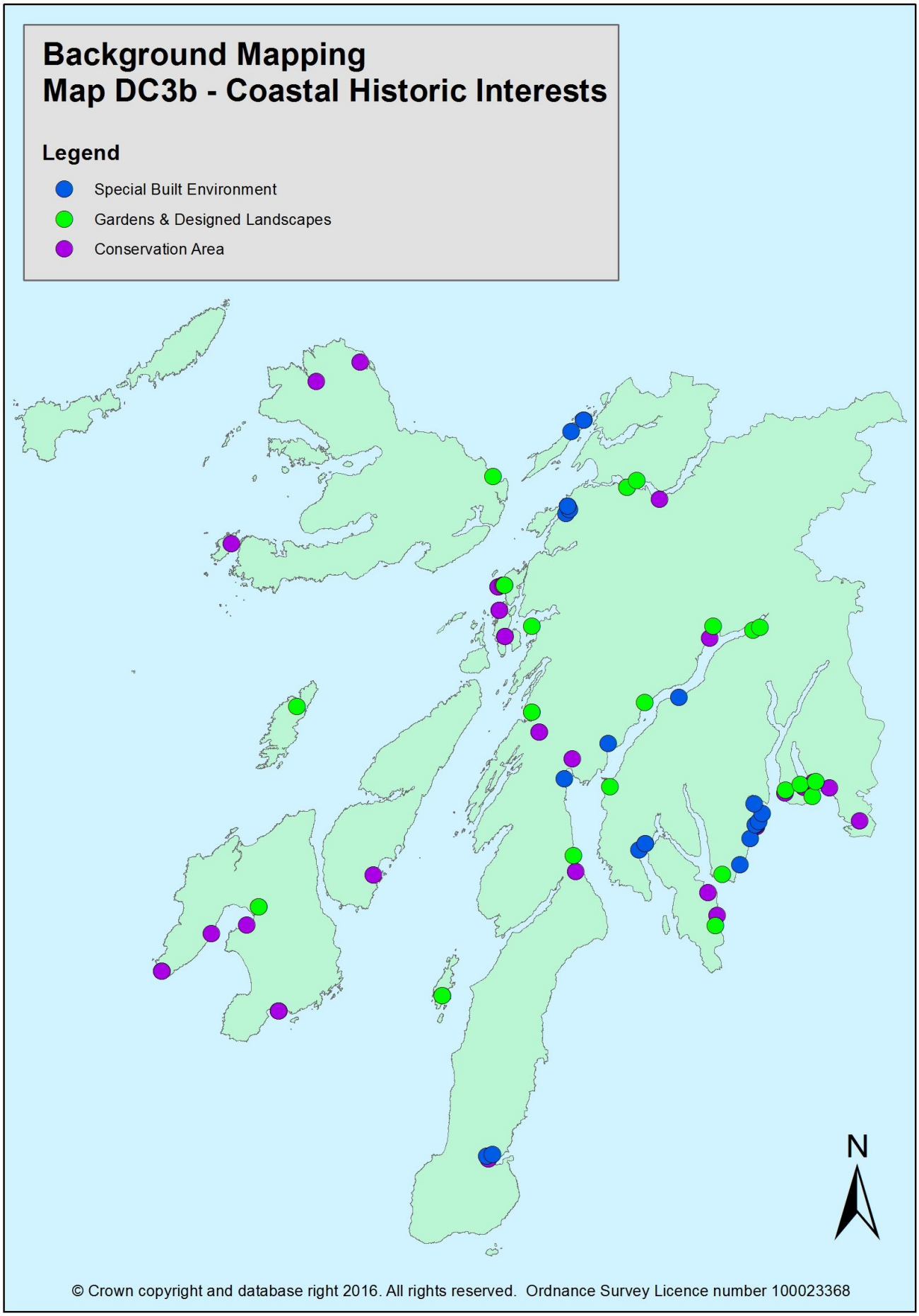
Supporting maps

- **Map DC3a** – Coastal Historic Interests: Coastal Scheduled Ancient Monuments, Category A Listed Buildings and Designated Wreck
- **Map DC3b** – Coastal Historic Interests: Gardens and Designed Landscapes, and Conservation Areas
- **Map DC3c** – Coastal Historic Interests: Coastal Category B & C Listed Buildings

Background Mapping
Map DC3a - Coastal Historic Interests



Background Mapping
Map DC3b - Coastal Historic Interests

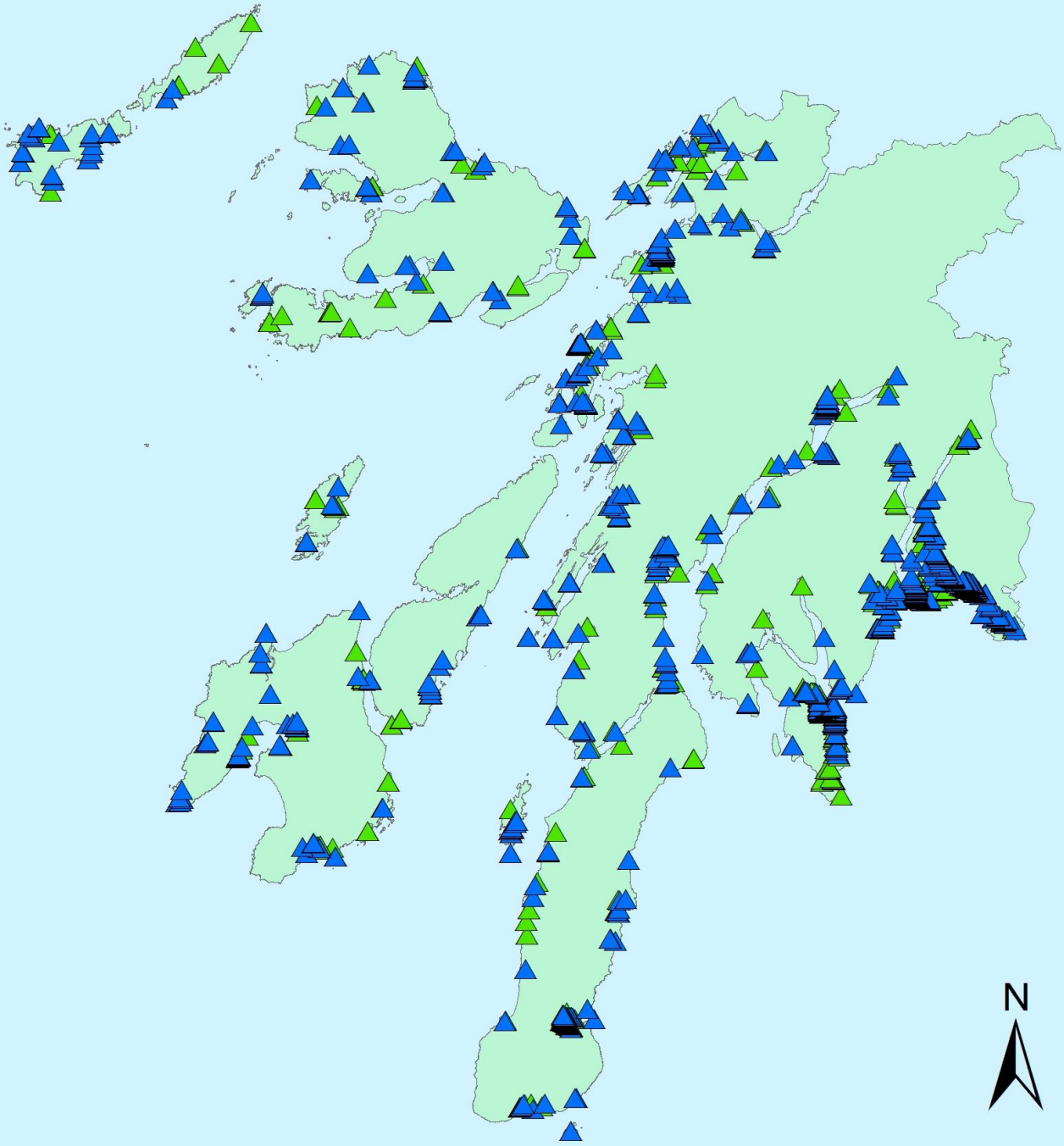


Background Mapping
Map DC3c - Coastal Historic Interests

Legend

Listed Buildings

- B
- C



DC4 Priority habitats/species and designated sites for nature conservation

Argyll and Bute has a wealth of natural heritage and biodiversity resources and its coastal waters are both physically and ecologically diverse, ranging from very exposed waters bounded by rocky coastline to extremely sheltered sealochs. Within and between these extremes, this area supports a diversity of seabed habitats and associated flora and fauna. Those of particular ecological and conservation interest include rocky reefs, biogenic habitats (e.g. maerl, mussel and seagrass beds), burrowed mud and intertidal sediment flats. Much important flora and fauna is contained within these areas, but they also provide foraging areas for various fish and birds, as well as supporting broader ecological functioning of the marine environment. Marine mammals are also an important feature of the natural heritage of this area.

Argyll and Bute's marine and coastal environment is recognised as being truly outstanding with many areas protected by International, European and UK designations and legislation. It is also increasingly recognised as a significant economic and social asset for local communities.

Potential impacts of aquaculture development

Scottish Planning Policy states that when determining planning applications, authorities should take into account the effects of the proposed development on the environment, including effects on the seabed. Protected or important marine habitats and species both within and out with designated sites can be affected by aquaculture development through the deposition and accumulation of waste on the seabed, interactions with wildlife from the operation of the site and the control of predators. The following natural heritage interests are considered of relevance to marine aquaculture development.

International designations

There are 8 Ramsar sites in Argyll and Bute. Meeting UK commitments under the Ramsar Convention, these sites are recognised as wetlands of international importance. Four of these sites are considered to either extend into the marine environment or support features which may interact with marine aquaculture development.

Ramsar Site	Designated Features	Relevant to finfish development	Relevant to shellfish development
Bridgend Flats, Islay	Greenland Barnacle goose	No	Yes (Oyster only)
Gruinart Flats, Islay	Greenland Barnacle, Greenland white-fronted and Light-bellied Brent geese	No	Yes (Oyster only)
Sleibhtean agus Cladach Thiriodh	Greenland Barnacle and Greenland white-fronted geese, Breeding dunlin, oystercatcher, redshank, ringed plover. Non-breeding ringed plover and turnstone.	No	Yes (Oyster only)
Inner Clyde	Non-breeding birds (redshanks)	No	Yes (Oyster only)

European designations

Special Areas of Conservation (SACs)
Designated by Scottish Ministers under the EC Habitats Directive, these areas represent the range and variety of habitats and (non-bird) species within the EU, as listed in Annexes I & II of the Directive. Thirteen of these sites are considered to either extend into the marine environment or support features which may interact with marine aquaculture development.

Special Area of Conservation (SAC)	**Relevant Qualifying Features**	Relevant to finfish development	Relevant to shellfish development
Loch Creran	Reefs	Yes	Yes
Firth of Lorn	Reefs	Yes	Yes
Treshnish Isles	Grey seal, reefs	Yes	Yes (reef feature)
Moine Mhor	Intertidal mudflats and sandflats, Otter (*Lutra lutra*)	No	Yes (Oyster only)
Eileanan agus Sgeiran Lios mor	Common seal	Yes	Yes
South-east Islay Skerries	Common seal	Yes	Yes
Coll Machair	Machair	No	Yes (Oyster only)
Oronsay	Machair	No	Yes (Oyster only)
Tiree Machair	Machair	No	Yes (Oyster only)
Loch Etive Woods	Otter	Yes	Yes
Glen Creran Woods	Otter	Yes	Yes
Taynish and Knapdale Woods	Otter	Yes	Yes
Tayvallich Juniper and Coast	Otter	Yes	Yes
Mingarry Burn	Freshwater pearl mussel	Yes	No
Inner Hebrides and the Minches	Harbour Porpoise	Yes	No

Special Protection Areas (SPAs)

Classified by Scottish Ministers under the EC Birds Directive, these are areas identified as the most important for rare and regularly occurring migratory birds in the EU. Ten of these sites are considered to either extend into the marine environment or support features which may interact with marine aquaculture development. Scientific advice from SNH and JNCC has recommended additional marine SPAs including two draft SPAs in Argyll and Bute. Further information on the status of these draft SPAs can be found on the SNH website.

Special Protection Area (SPA)	**Relevant Qualifying Features**	Relevant to finfish development	Relevant to shellfish development
Bridgend Flats, Islay	Greenland Barnacle goose	No	Yes (oyster only)
Gruinart Flats, Islay	Greenland Barnacle, Greenland white-fronted and Light-bellied Brent geese	No	Yes (oyster only)
Coll	Greenland Barnacle, Greenland white-fronted geese	No	Yes (oyster only)
Inner Clyde	Non-breeding birds (redshanks)	No	Yes (Oyster only)
Laggan, Islay	Greenland Barnacle, Greenland white-fronted	No	Yes (Oyster only)

	geese		
Treshnish Isles	Breeding storm petrel	Yes	Yes
Sleibhtean agus Cladach Thiriodh	Greenland Barnacle and Greenland white-fronted geese, Breeding dunlin, oystercatcher, redshank, ringed plover. Non-breeding ringed plover and turnstone.	No	Yes (Oyster only)
Oronsay and South Colonsay	Corncrake and Chough	No	Yes (Oyster only)
North Colonsay and Western Cliffs	Breeding seabird assemblage. Breeding guillemot and kittiwake.	Yes	Yes
Glas Eileanan (Sound of Mull)	Common tern	Yes	Yes

Collectively, SPAs and SACs sites are termed Natura sites. Ramsar sites are also designated as SPA and/or SAC and will therefore be assessed on the same terms. Any development proposal which is likely to have a significant effect on a Natura site and is not directly connected with or necessary to the conservation management of that site will be subject to an Appropriate Assessment by Argyll and Bute Council.

Development which could have a significant effect on a Natura site will only be permitted where:

- *an Appropriate Assessment has demonstrated that the proposal will not adversely affect the integrity of the site; or*
- *there are no alternative solutions and there are imperative reasons of overriding public interest, including those of a social or economic nature*.

National designations

Parts of the Argyll and Bute coast are also subject to national natural heritage designation, primarily Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR). Marine aquaculture development has the potential to interact with the following national natural heritage designations.

Nature Conservation Marine Protected Areas (MPAs)

These sites are designed to conserve a selection of marine biodiversity features (species and habitats) and geodiversity features (the variety of landforms and natural processes that underpin the marine landscapes), offering long-term support for the services our seas provide to society. 30 Nature Conservation MPAs have been designated in Scotland with 5 of these sites within Argyll and Bute inshore waters.

Nature Conservation Marine Protected Areas (MPA)	**Relevant Designated Features**	Relevant to finfish development	Relevant to shellfish development
Clyde Sea Sill	Biodiversity: black guillemot; circalittoral sand and coarse sediment communities; fronts. Geodiversity: Marine Geomorphology of the Scottish Shelf Seabed.	Yes	Yes
Loch Creran	Biodiversity: flame shell	Yes	Yes

	beds. Geodiversity: Quaternary of Scotland.		
Loch Sunart to the Sound of Jura	Biodiversity: common skate. Geodiversity: Quaternary of Scotland.	Yes	Yes
Loch Sween	Biodiversity: burrowed mud; maerl beds; native oysters; sublittoral mud and mixed sediment communities.	Yes	Yes
Upper Loch Fyne & Loch Goil	Biodiversity: burrowed mud; flame shell beds; horse mussel beds; ocean quahog; sublittoral mud and mixed sediment communities.	Yes	Yes

The Scottish Government MPA Management Handbook provides guidance on the duties of public authorities in making licensing decisions which may affect nature conservation MPAs. This document states that public authorities must not authorise an activity unless they are satisfied that there is no significant risk of the activity hindering the achievement of the stated conservation objectives for the Nature Conservation MPA.

Sites of Special Scientific Interest (SSSIs)

These areas provide protection for the best examples of the UK's biological, geological or physiographical features, down to mean low water of spring tides (MLWS). Many SSSIs overlap with SACs and SPAs. Twenty one of these sites are considered to either extend into the marine environment or support features which may interact with marine aquaculture development.

Sites of Special Scientific Interest (SSSIs)	**Relevant Designated Features**	Relevant to finfish development	Relevant to shellfish development
Oronsay and South Colonsay	Grey seal, Chough	Yes	Yes
Moine Mhor	Saltmarsh	No	Yes (Oyster only)
Taynish Wood	Rocky shore	No	Yes (Oyster only)
Ulva, Danna and the McCormaig Isles	Mudflats	Yes	Yes
Gruinart flats	Mudflats, goose features, Chough	No	Yes (Oyster only)
Bridgend flats	Saltmarsh, sandflats, goose features	No	Yes (Oyster only)
West Colonsay seabird cliffs	Breeding guillemot, kittiwake, razor bill & seabird colony	Yes	Yes
Sanda Island	Cormorant, guillemot, shag, storm petrel, fulmar, great black-backed gull, kittiwake, manx shearwater, puffin & razorbill	Yes	Yes

Ruel estuary	Saltmarsh	No	Yes (Oyster only)
Linne Mhuirich	Saltmarsh	No	Yes (Oyster only)
Sleibhtean agus Cladach Thiriodh	Breeding bird assemblage. Breeding dunlin, oystercatcher, redshank, ringed plover. Non-breeding purple sandpiper, sanderling, ringed plover and turnstone, goose features	No	Yes (Oyster only)
Treshnish	Breeding seabird colony, grey seal	Yes	Yes
Staffa	Breeding fulmar, puffin and shag	Yes	Yes
Inner Clyde- Ardmore Point	Saltmarsh; non-breeding birds (cormorant, eider, goldeneye, oystercatcher, red-breasted merganser, red-throated diver, redshank)	No	Yes (Oyster only)

National Nature Reserve
There are two coastal National Nature Reserves in Argyll and Bute – Staffa and Taynish.

Development proposals that may affect a SSSI or NNR will only be permitted where:

- *they will not adversely affect the integrity of the area or the qualities for which it has been designated; or*
- *any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance.*

Habitats and species of conservation interest

European Protected Species (EPS)
Listed on Annex IV of the EC Habitats Directive as species in need of strict protection, marine EPS in Scotland are otters, cetaceans and marine turtles. It is an offence to deliberately or recklessly injure, capture, kill, harass or disturb an EPS (for legal detail see the Conservation Regulations 1994).

Otters are distributed widely throughout Argyll and Bute. Although marine aquaculture development is not considered likely to significantly affect otters, an otter survey may be required in certain circumstances. Disturbance of otters/holts could be an issue for; onshore facilities and activities (sheds/ feed lines/ vehicle movements etc), for works in intertidal areas (shellfish operations), and marine construction activity (if within 200m of high water mark). Disturbance is less likely to be an issue for finfish marine operations as they are usually at some distance from shore.

Cetaceans should be considered in terms of possible exclusion effects from the use of Acoustic Deterrent Devices to deter seal predation, particularly where ADDs use is proposed in narrow restricted areas of sea that are well used by cetaceans.

Cetaceans seen regularly in Argyll waters (Mull of Kintyre to Isle of Mull) include:

- Harbour porpoise (*Phocoena phocoena*)
- risso's dolphin (*Grampus griseus*)

- bottlenose dolphin (*Tursiops truncatus*)
- white beaked dolphin (*Lagenorhynchus albirostris*)
- common dolphin (*Delphinus delphis*)
- minke whale (*Balaenoptera acutorostrata*)
- killer whale (*Orcinus orca*)

Sightings of cetaceans in the Clyde include minke whales, bottlenose dolphins and porpoises. Other species do occur but are only occasional visitors to the inshore waters.

Wildlife & Countryside Act, 1981

Marine species with special protection under schedules 5 and 8 of this act include basking shark, otters and all cetaceans and marine turtles. The waters surrounding the island of Coll are important for basking sharks and as a result form part of a larger search area for a potential Marine Protected Area. Marine turtles are rare in Scotland but it is likely that they are annual visitors to the west coast of Scotland. Most Scottish records have been of leatherback turtles, the largest and most cold-tolerant species. Also protected under schedule 5 is the freshwater pearl mussel. This species can be indirectly affected by finfish development through interaction between farmed and wild salmon. In addition to the Mingary burn SAC there are other freshwater pearl mussel sites which cannot be mapped but site specific advice can be provided at the pre-application stage on a case by case basis.

Where aquaculture development is proposed in close proximity to know coastal nesting sites for seabirds and raptors the protection afforded to relevant wild bird species under the Act will need to be considered.

Seals

Two species of seal live and breed in Argyll and Bute waters; the grey seal (*Halichoerus grypus*) and the harbour seal (*Phoca vitulina*), which is also known as the common seal. The Inner Hebrides supported approximately 8% of the Scottish grey seal pup production in 2010, with about 3,400 pups being born in the region each year (SCOS 2011). The 2007-2010 population estimate for harbour seals in the Strathclyde and Clyde regions combined is 6645, which is approximately 32% of the Scottish population (SCOS 2011).

Good practice in managing interactions with seals involves initial farm site selection, appropriate husbandry practices, choice of the most appropriate net designs and tensions, creation of seal-exclusion barriers, reduction of attractants to seals and use of Acoustic Deterrent Devices (ADD). The shooting of rogue seals as a last resort, is managed through a separate licensing process under the Marine (Scotland) Act, including requirements for reporting and monitoring to Marine Scotland.

Other species and habitats of conservation interest

There are some marine species and habitats present in Argyll and Bute which do not receive explicit protection (except where designated as features of protected areas), but are particularly important in the context of biodiversity conservation and/or ecosystem function – many are listed under the Scottish Biodiversity List, UK Biodiversity Action Plan and OSPAR lists and can be sensitive to aquaculture development.

Under the Nature Conservation (Scotland) Act 2004, all public bodies have a duty to further the conservation of biodiversity and the Scottish Biodiversity Strategy. When considering aquaculture development proposals the Council will seek to contribute to the delivery of the objectives and targets set by the Local Biodiversity Action Plan (LBAP) and the Scottish Biodiversity Strategy.

The Argyll and Bute Local Biodiversity Action Plan (LBAP) was renewed in 2010 and identifies habitats and species important in the local context and includes Action Plans for their conservation and enhancement.

Priority Marine Features

Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC) have developed a prioritised list of marine features in Scotland to underpin conservation action across Scottish Government's

'three-pillar approach' as presented in their Marine Nature Conservation Strategy. The recommended list contains 81 habitats and species, termed Priority Marine Features (PMFs) which are considered to be of particular importance in Scotland's seas. This list will help deliver Marine Scotland's vision for marine nature conservation outlined in the Marine Nature Conservation Strategy.
Approximately 50 of the 81 Priority Marine Features are represented in Argyll and Bute inshore waters and these features will be the main focus for protection of marine biodiversity outside designated sites and protected species.

Wild migratory salmonids

Wild fish, particularly Atlantic salmon and sea trout, are an important economic resource and component of biodiversity in Argyll and Bute. Atlantic Salmon are widely distributed, usually spending two years in rivers as fry and parr before migrating to sea as smolts. Most salmon (grilse) spend one winter at sea before returning, although some remain at sea for two or more years before returning to spawn; these are known as multi-sea winter salmon. Sea trout have a similar freshwater life history to salmon but differ in that after entering the sea they generally remain in local inshore waters for several months before dispersing more widely.

There are many freshwater and marine factors that can affect migratory fish populations but the most significant factor is the number of returning fish that survive and spawn in their natal river. In inshore coastal waters wild and farmed salmonids can be susceptible to predation and sealice infection, with recent studies suggesting the impact of coastal sea lice exposure accounts for 1-2% of salmon mortality.

In determining planning applications for finfish development, Argyll and Bute Council will consider advice in relation to potential interactions between wild migratory salmonids and farmed salmonids, from Marine Scotland, Scottish Natural Heritage (SNH), the local District Salmon Fisheries Board (DSFB) and SEPA as statutory consultees.

Statutory consultee	Role in relation to wild migratory salmonids
Marine Scotland	Marine Scotland (MS) has statutory responsibilities for the health of both farmed and wild fish. Health of farmed fish is dealt with under The Aquatic Animal Health (Scotland) Regulations 2009. Containment and parasite (sea lice) control is covered under The Aquaculture and Fisheries (Scotland) Act 2007. Marine Scotland Science (MSS) conducts a surveillance program of inspections under The Aquatic Animal Health (Scotland) Regulations 2009 and The Aquaculture and Fisheries (Scotland) Act 2007.
Scottish Natural Heritage	SNH provides scientific advice on SACs for wild fish and freshwater pearl mussel, such that they comply with the Habitats Regulations. SNH also advises on impact on wild fish populations for species listed on Schedules of the Wildlife and Countryside Act 1981 (as amended) and the UKBAP/Scottish Biodiversity Strategy.
District Salmon Fisheries Board	DSFBs provide specific local advice in relation to the conservation and improvement of fisheries and fisheries management within their district.
SEPA	SEPA licence the use of chemical treatments for treatment of sea lice and set limits on the maximum amount of chemicals that can be used to treat sea lice.

In terms of the potential for aquaculture development to impact upon wild salmonids, the main areas for consideration are the potential for:

- impacts of disease and parasites on wild fish resulting from the presence of fish farms;
- impacts of escaped farmed fish through inter-breeding and competition with wild fish; and
- introduction of non-native farmed species.

Effective management of sea lice is important for the welfare of farmed fish, as well as mitigating against the potential impacts of aquaculture on wild salmonids. Sea lice feed by grazing on the mucous and skin of

fish and unless properly managed can harm the welfare of farmed salmon. While wild fish can be a source of sea lice to farmed fish, effective management is required to prevent sea lice from proliferating on a farm and becoming a significant source of infection for wild fish. Marine Scotland Science advise that scientific evidence from Norway and Ireland indicates a detrimental effect of sea lice on sea trout and salmon populations. There is increasing scientific evidence that this is also the case for sea trout in Scotland although scientific studies investigating the case for Scottish salmon are lacking.

Containment of farmed fish is crucially important to the economic efficiency of fish farming. Escapes of farmed fish also present identifiable hazards to wild salmonids, including the transfer of infection or sea lice from farmed to wild fish; escaped farmed fish cross-breeding with wild fish; and escaped fish competing with or consuming smaller wild fish. The risk of these hazards being realised is dependent on a number of factors and in practice would not necessarily result in a significant adverse impact on wild fish. Developers are nonetheless expected to produce a realistic plan for preventing damage to wild salmonid populations caused by escaped fish. Particular consideration should be given to areas near or within designated sites for Atlantic Salmon or fresh water pearl mussel.

Policy Wild Fish 1 of the National Marine Plan requires that '*the impact of development and use of the marine environment on diadromous fish species should be considered in marine planning and decision making processes. Where evidence of impacts on salmon and other diadromous species is inconclusive, mitigation should be adopted where possible and information on impacts on diadromous species from monitoring of developments should be used to inform subsequent marine decision making*'. Where finfish development proposals are considered to represent a significant increased risk to wild salmonids the applicant may be required by condition to develop and adhere to an Environmental Management Plan to manage the interactions between the operation of the farm and the wild fish environment. Such a plan would set out agreed mitigation to be employed in relation to containment and sea lice control and identify intended monitoring frequency and audit intervals.

Developers are statutorily required to meet high standards of animal health and welfare under the Animal Health and Welfare (Scotland) Act 2006, The Aquaculture and Fisheries (Scotland) Act 2007, The Fish Farming Business (Record Keeping) (Scotland) Order 2008, The Aquatic Animal Health (Scotland) Regulations 2009, and the Aquaculture and Fisheries (Scotland) Bill 2013. All Scottish farms are operated under the oversight of Veterinary Surgeons and are inspected by the Marine Scotland Fish Health Inspectorate. Developers are also expected to adhere to the industry Code of Good Practice (CoGP), which is an independently audited scheme going beyond the regulatory requirements and covering best practice, biosecurity, farmed fish welfare-management and minimising the impact of farming on wildlife, including wild fish.

Information requirements

Benthic impacts

Aquaculture can impact on the seabed (benthic impact) by means of carbon deposition (from waste feed and faecal material) and from chemical toxicity. Shellfish farming in the water column can have the potential to affect the seabed through accumulation of pseudofaeces and shells of the farmed species. For finfish development, SEPA regulate these matters by way of a CAR licence which is determined by approved modelling methods which are precautionary and site specific in order to ensure levels permitted are strictly controlled and set environmental limits are not breached. This modelling information should be provided in support of an EIA application.

For most finfish applications and some shellfish applications, applicants should undertake a baseline visual survey, in accordance with SEPA's Fish Farm Manual (Annex F) in order to assess the presence of vulnerable habitats/sensitive species below and around the cages, in particular those on the UKBAP list, or the OSPAR list of threatened and declining species/habitats. The guidance in this manual sets the thresholds for when visual surveys are required in terms of the scale of development and sensitivity of the location.

Predator control

Applicants should provide information on predator control measures, normally submitted as a Predator Control Plan and an assessment of the likely interaction with known predators considering the distribution of these species and experience at other local sites (if applicable). If the use of ADDs is proposed, information on the type and proposed use of the device and likely interaction with cetaceans should be provided.

Wild migratory salmonids

The key information requirements in relation to interaction with wild migratory salmonids include:

- Details of measures to minimise the risk of escapes (equipment specification or attestation, predator control measures, escape contingency plan);
- Details of husbandry procedures to minimise the risk of disease spread;
- Details of relevant Farm Management Agreement, including:
  - confirmation of synchronous sea lice treatments with other farms within the FMA
  - confirmation of synchronous fallowing with other farms within the FMA
  - confirmation that all farms within an FMA will be farmed as a single year-class;
- Sea lice treatment regime and efficacy statement relating to amount of available treatment;
- Other management proposals and options for managing sea lice, including the use of cleanerfish;
- Assessment of the potential impact of the proposed development on fisheries, and on species protected under the UKBAP/ Scottish Biodiversity Strategy.

Early pre-application consultation when considering site location is encouraged with the local DSFB and Fisheries Trust. An early view can be given on the sensitivity of wild fish interests and available data that can aid assessment.

This is a complex area involving a number of different agencies and more detailed information on requirements for planning applications by SNH, SEPA and Marine Scotland as statutory consultees, in relation to impacts on wild migratory salmonids and benthic impact are outlined in an Aquaculture Working Arrangements document which sets out the responsibilities of organisations with a formal role in aquaculture development, including how they will consult each other and how information will be shared.

Opportunities

Opportunities for siting aquaculture where effects on designated sites, habitats and species of conservation interest will be limited, include:

- Locations where the operation of the aquaculture site is unlikely to affect qualifying features of designated sites (for example within SACs, where the depositional footprint of the farm site does not overlap with qualifying seabed habitats);
- Locations where the operation of the aquaculture site is unlikely to significantly disturb wildlife;
- Locations which avoid benthic habitats vulnerable to sedimentation and nutrient enrichment, such as maerl beds, horse mussel beds and seagrass meadows;
- Locations that will avoid adverse effects on freshwater pearl mussel; and
- High energy sites which promote good dispersal, minimising organic loading on the seabed.

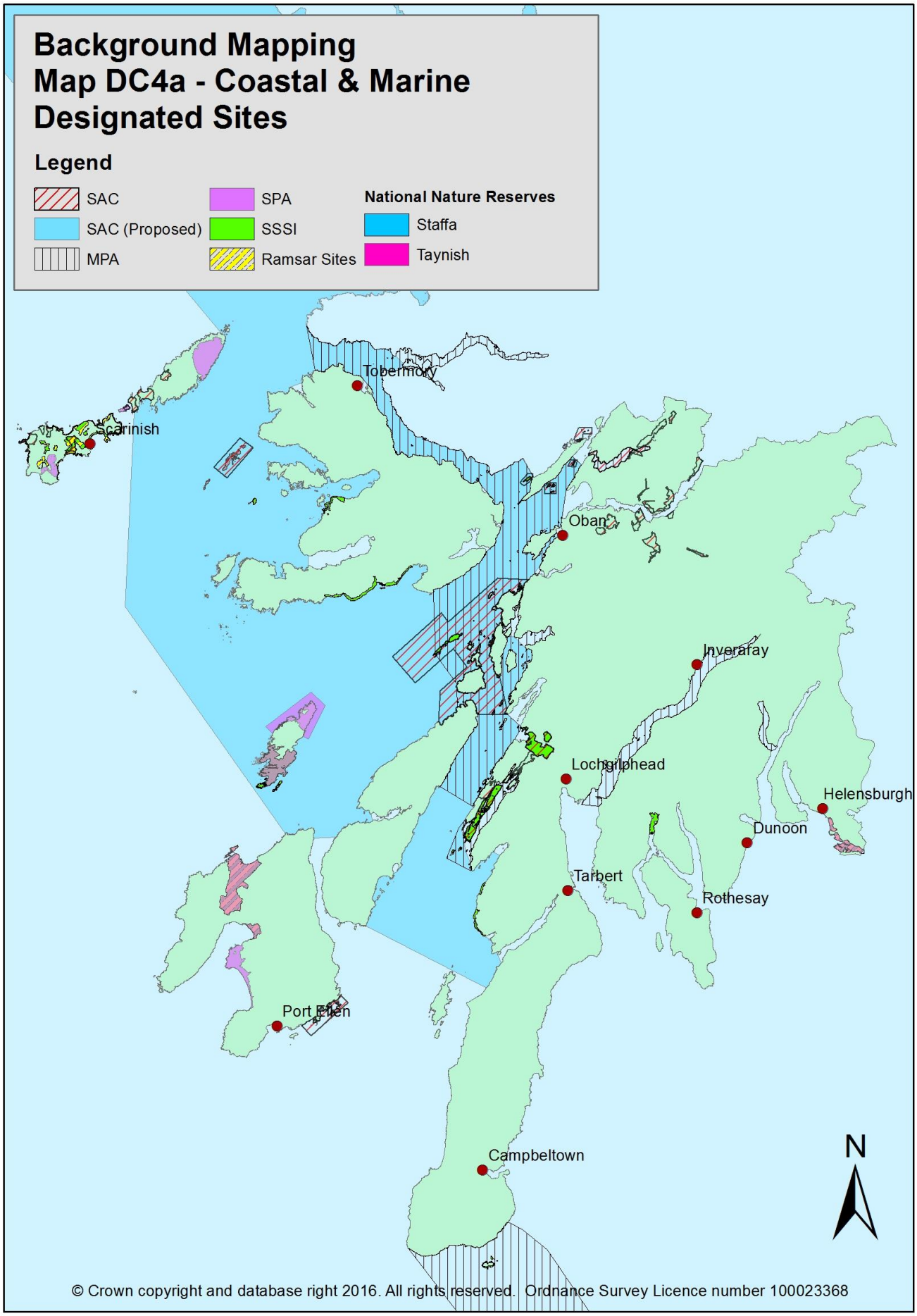
Supporting maps

- **Map DC4a** – Coastal and marine designated sites
- **Map DC4b** – Wild migratory salmonids & seal haul-out sites

Future maps

When data becomes available the following maps will be added to this guidance:

- Distribution of Priority Marine Features;
- Designated seal haul-out sites; and
- Wild migratory salmonids – sensitivity of coastal waters to finfish development.


Background Mapping
Map DC4a - Coastal & Marine Designated Sites
Legend
SAC
SAC (Proposed)
MPA
SPA
SSSI
Ramsar Sites
National Nature Reserves
Staffa
Taynish
Tobermory
Carinish
Oban
Inverarary
Lochgilphead
Helensburgh
Dunoon
Tarbert
Rothesay
Port Ellen
Campbeltown
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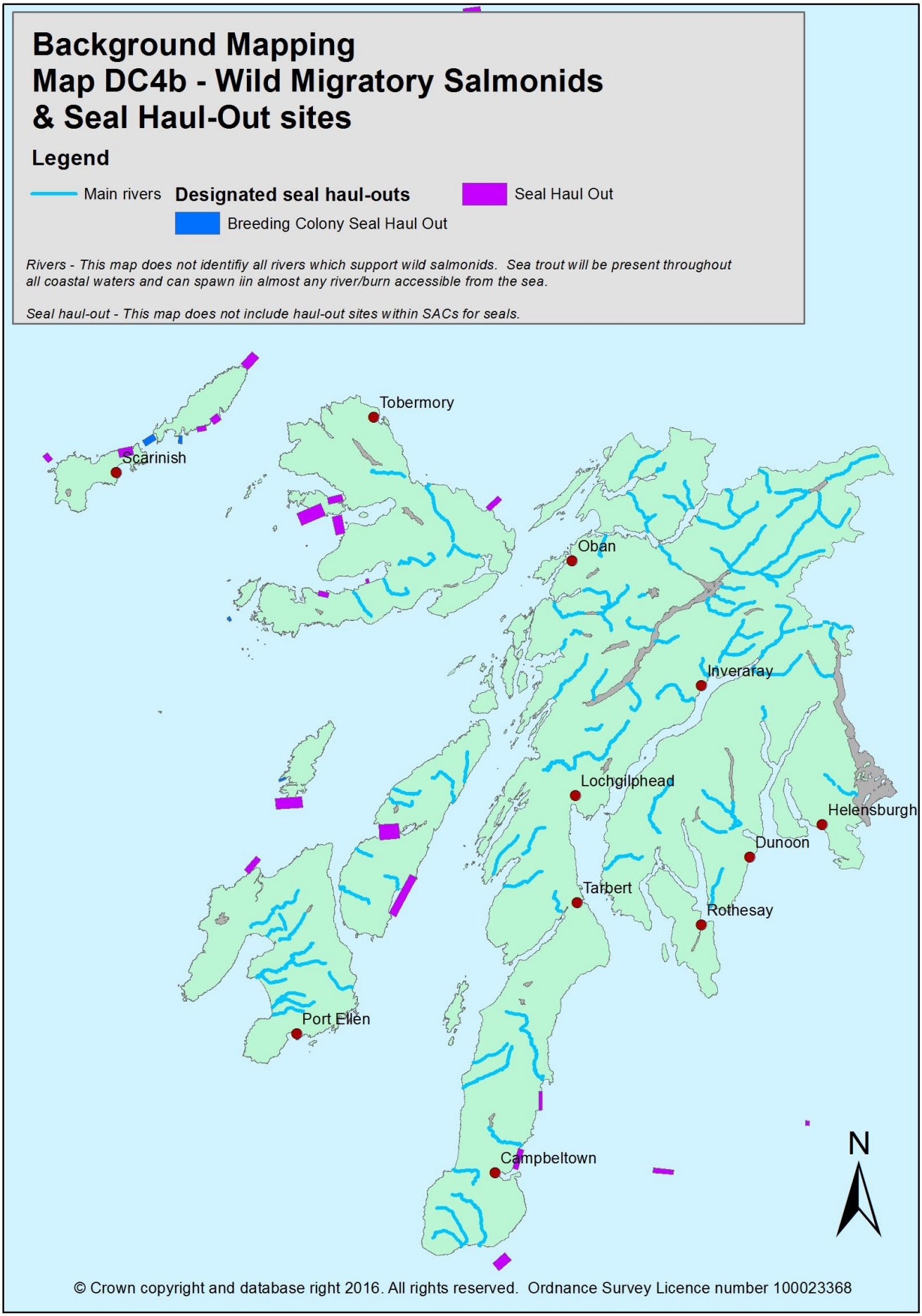
Background Mapping
Map DC4b - Wild Migratory Salmonids
& Seal Haul-Out sites
Legend
Main rivers
Designated seal haul-outs
Seal Haul Out
Breeding Colony Seal Haul Out
Rivers - This map does not identifiy all rivers which support wild salmonids. Sea trout will be present throughout all coastal waters and can spawn iin almost any river/burn accessible from the sea.
Seal haul-out - This map does not include haul-out sites within SACs for seals.
Tobermory
Scarinish
Oban
Inveraray
Lochgilphead
Helensburgh
Dunoon
Tarbert
Rothesay
Port Ellen
Campbeltown
N
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DC5 Ecological status of water bodies and biological carrying capacity

All aquaculture developments rely on high water quality and a degree of tidal flushing. In inshore marine locations, it is important to select sites with good water exchange characteristics where tidal currents can disperse waste materials, maintain well-oxygenated water conditions and, in the case of shellfish cultivation, provide adequate supplies of planktonic food organisms.

Scottish Planning Policy states that when determining planning applications, authorities should take into account the effects of the proposed development on the environment, including carrying capacity. For finfish development, impacts on the water column from nutrient enrichment and discharge of chemical treatments will be considered and proposals should be consistent with **SG LDP ENV 7 - Water Quality and Environment**. Developments that may have a significant detrimental impact on the water environment will not normally be permitted unless it can be demonstrated that the impacts can be fully mitigated so as to ensure non-deterioration of waterbody status as required by the EU Water Framework Directive and the River Basin Management Plans covering Argyll and Bute.

River basin planning

Under River Basin Management Planning, coastal surface waters include all transitional (estuarine) and coastal water bodies out to three nautical miles seaward from the Scottish territorial baseline. SEPA monitor and classify the overall ecological status of these water bodies, assessing parameters such as biology, chemistry, hydromorphology and marine non-native species. Many water bodies are also part of protected areas identified as requiring special protection because of their sensitivity to pollution or their particular economic, social or environmental importance. In Argyll and Bute, protected areas within the coastal zone include Bathing Waters, Shellfish Waters, water dependent Special Areas of Conservation (SAC), and Special Protection Areas (SPA). The 2013 classification of coastal water bodies in Argyll and Bute is shown in **Map DC5a** and protected areas are shown in **Map DC5b**.

Fresh water demand and waste water requirements

Onshore aquaculture development, particularly processing sites and hatcheries can use significant amounts of fresh water and can have waste water requirements resulting from any discharge of effluent. It is imperative that developers contact Scottish Water as early on in their proposals, wherever relevant, to ensure sufficient capacity exists and the maximisation of network capacity to accommodate any resulting demand.

Shellfish waters

Shellfish waters are designated in order to support shellfish life and growth, contributing to the high quality of edible shellfish products and also to protect shellfish growing waters against pollution and, where necessary, establish programmes to reduce pollution. These protected waters are therefore the preferred areas for new shellfish farming development, in relation to water quality.

Role of SEPA

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR*)* provide SEPA with powers to ensure that activities which may pose a risk to the water environment are controlled. With regard to fish farming, SEPA sets limits on the amount of fish that can be held in the cages, the amount of food used and the amount of certain medicines that can be administered and discharged. The CAR licensing process takes account of the likely effects of discharges from the proposed development on both the water column and benthic environments.

Planning Authorities are cautioned not to duplicate controls exercised by SEPA and Marine Scotland in their assessment of proposals. Where planning permission is being sought for new sites or modifications

involving an increase in biomass, evidence will be required to satisfy SEPA that the proposals are environmentally acceptable for them to confirm to the Planning Authority they have no objections to the proposals.

Locational Guidelines (relevant only to finfish development)

The Scottish Government's *"Locational Guidelines for the Authorisation of Marine Fish Farms in Scottish Waters"* categorise sea lochs, voes and embayments into 3 categories based on predictions of the impacts from the existing scale of development. Models predicting the nutrient enhancement of the water column and the proportion of sea bed likely to be degraded are used to identify areas more likely to be able to support additional farmed fish biomass. Currently, no further increases in maximum biomass are permitted in Category 1 areas. Increases are more likely to be permitted in Category 2 and 3 areas (subject to site-specific assessment through EIA and CAR). It should be noted that loch categories may change with increasing or decreasing levels of production and for this reason these guidelines are regularly updated.

Within Argyll and Bute, seventeen sealochs have been identified as Category 3 areas which have additional carrying capacity and on the grounds of carrying capacity assessment alone, have further development potential (see Map DC5c). The Guidelines do not categorise bodies of open water outwith sea-lochs since these cannot be accurately assessed by the predictive models available. Site selection outwith sea-lochs will require site specific survey including assessment of exposure, depth and current speed and direction.

Marine Scotland Science will consider the suitability of finfish farming applications against the Locational Guidelines Categorisation and will respond with this information at pre-application consultation and EIA screening and scoping.

Invasive non native species (INNS)

Aquaculture development has the potential to contribute to the spread and proliferation of marine non-native species. The main risks relate to the farming of non-native species or species out with their normal range and the transfer of stock from one location to another.

Aquaculture operators are required to develop a biosecurity plan for Marine Scotland, as part of registering a new aquaculture site and measures to reduce the risk of introduction and/or spread of INNS should be included in this plan.

Nutrient enhancement

Applicants will be required to submit nutrient loading and enrichment information from biomass production, including cumulative impacts from other fish farms. This should be compared to the hydrographical details of the area and used to calculate the overall nutrient enhancement. Nutrient enhancement calculations according to a Equivalent Concentration Enhancement (ECE) model are described on the Marine Science Scotland website.

The Council is supportive of the development of Integrated Multi Trophic Aquaculture (IMTA) where fish are farmed together with other species including shellfish and seaweed, potentially creating a more efficient, cleaner and less wasteful production system. IMTA allows nutrients from fish farms that are otherwise lost to the environment to be turned into useful products as they are utilised by these additionally grown species.

Information requirements

A requirement of the EIA Directive (85/337/EEC) is that all significant environmental effects from developments exceeding EIA thresholds should be assessed. Therefore, where water quality impacts of proposed developments have not already been assessed by SEPA under CAR regulation, benthic

enrichment impacts should be assessed through the EIA process. In such cases, proposals will require to be accompanied with modelling and calculations which demonstrate that the benthic and water column impacts of the proposed farm are localised and within environmental limits.

It is recommended that control and contingency measures for marine non-native species are considered by the applicant. Where a development proposal is considered a risk in relation to INNS, the applicant will be asked to provide information as directed by SEPA, SNH, Marine Scotland and the Council which will be assessed during the determination of the application.

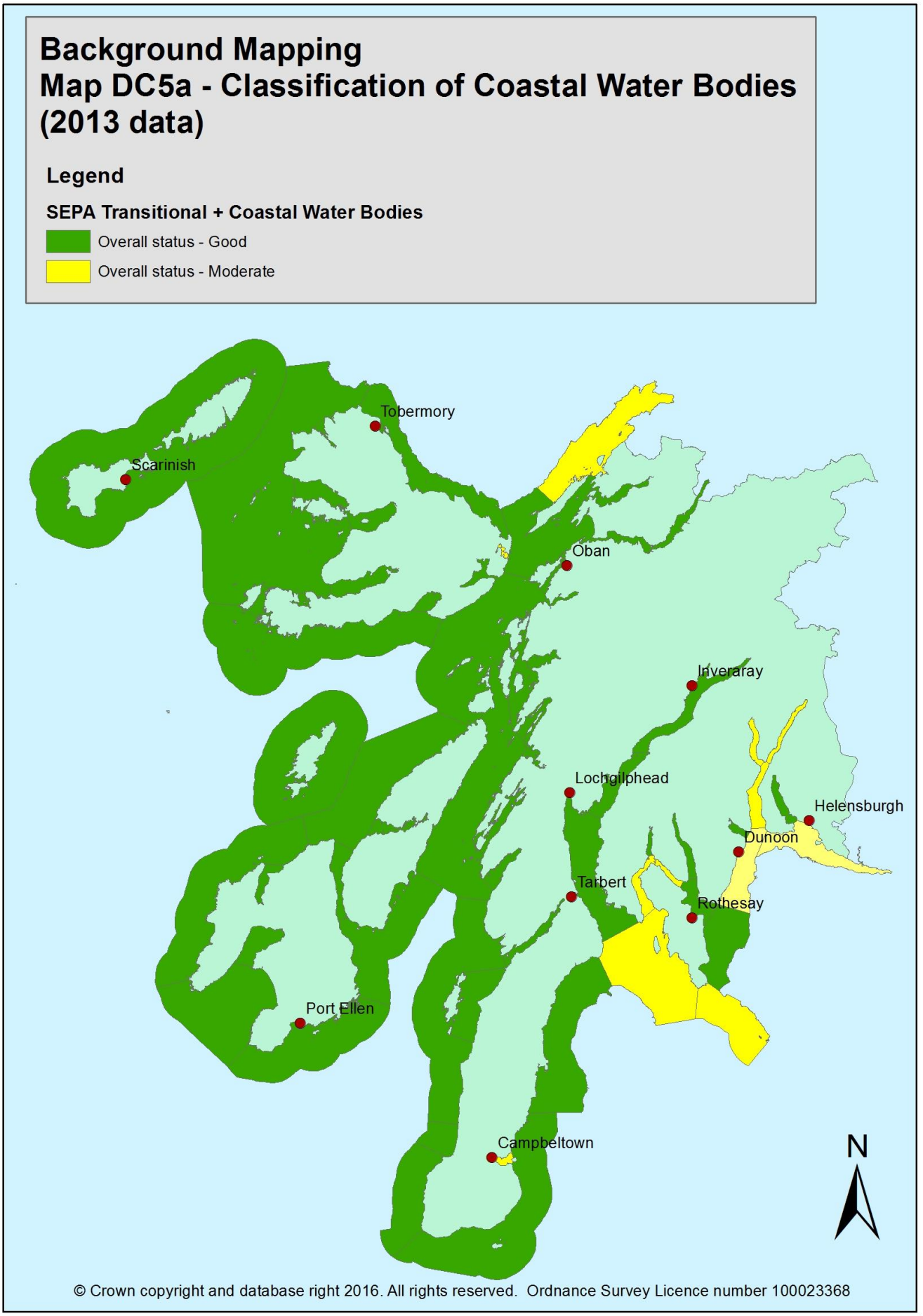
Opportunities

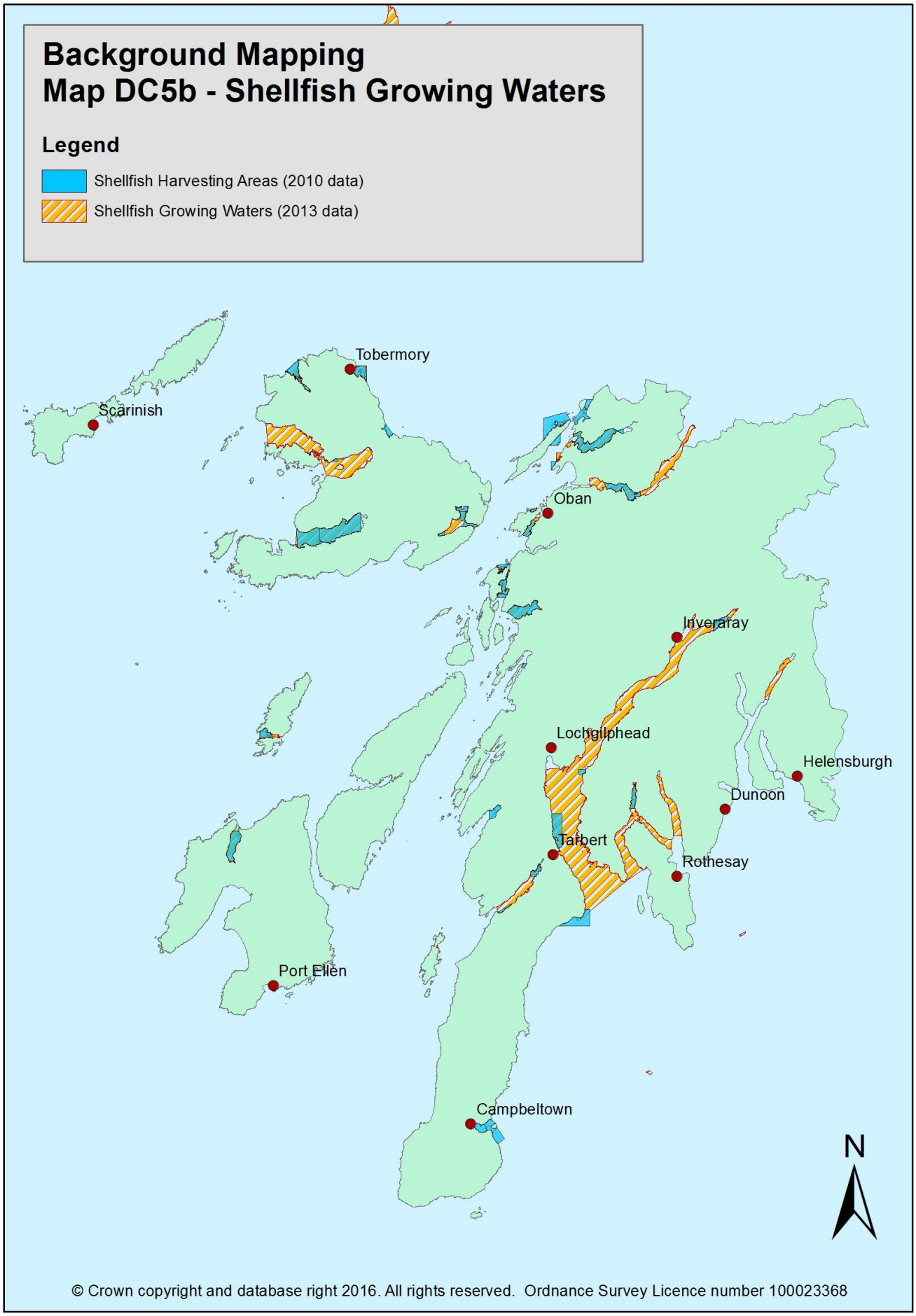
In relation to nutrient enhancement and biological carrying capacity, opportunities for new finfish development are likely to be within Category 3 Locational Guidelines Areas; more open coastal waters where the potential for nutrient enhancement is limited; and outwith coastal water bodies sensitive to aquaculture as a pressure. Opportunities for shellfish development are likely to be within existing Shellfish Waters.

Supporting maps

- **Map DC5a** – Classification of coastal water bodies
- **Map DC5b** – Shellfish Waters
- **Map DC5c** – Locational Guidelines

Background Mapping
Map DC5a - Classification of Coastal Water Bodies (2013 data)




Background Mapping
Map DC5b - Shellfish Growing Waters
Legend
Shellfish Harvesting Areas (2010 data)
Shellfish Growing Waters (2013 data)
Tobermory
Scarinish
Oban
Inveraray
Lochgilphead
Helensburgh
Dunoon
Tarbert
Rothesay
Port Ellen
Campbeltown
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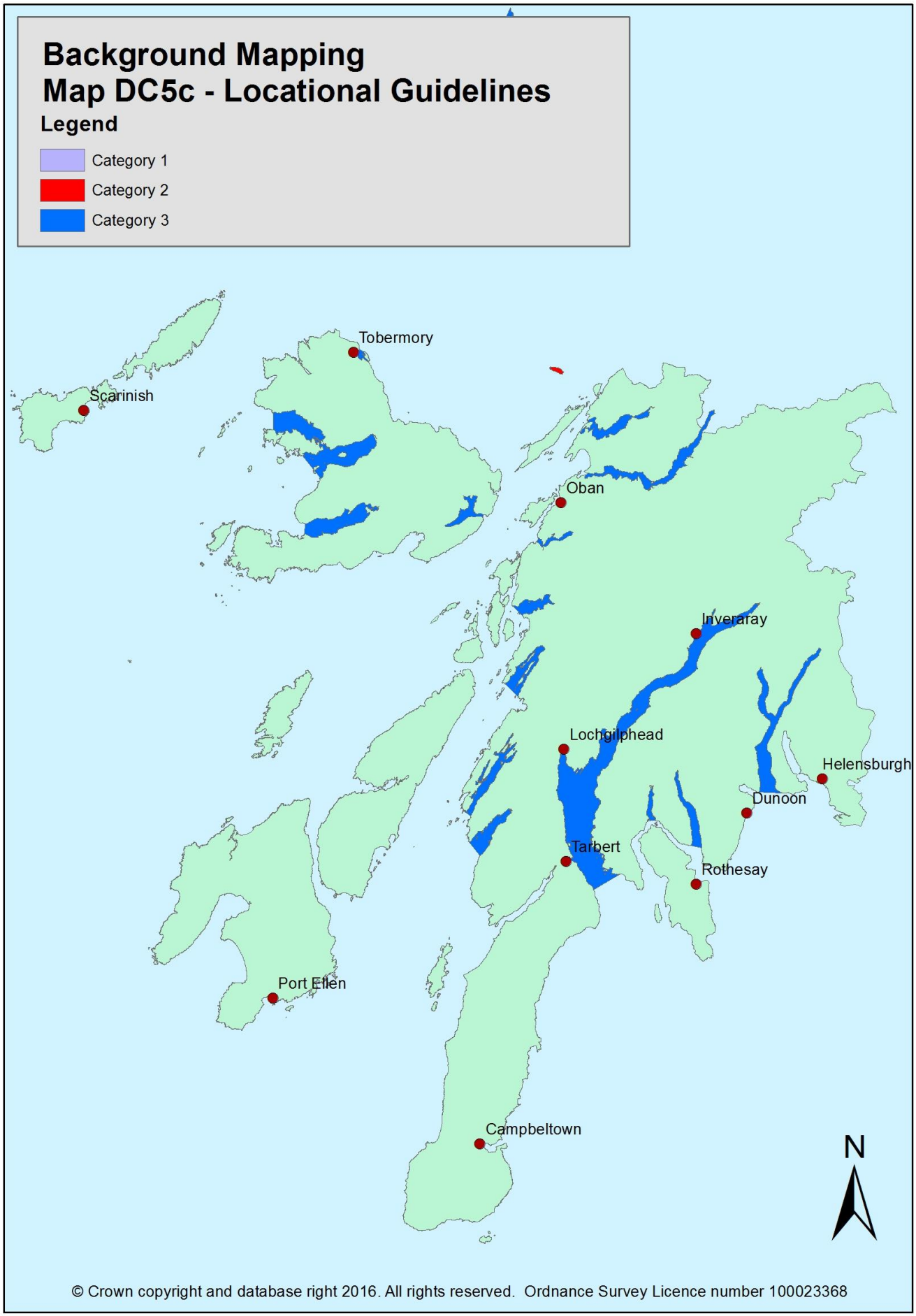
Background Mapping
Map DC5c - Locational Guidelines
Legend
Category 1
Category 2
Category 3
Tobermory
Scarinish
Oban
Inveraray
Lochgilphead
Helensburgh
Dunoon
Tarbert
Rothesay
Port Ellen
Campbeltown
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DC6 Commercial and recreational activities

The marine environment is increasingly used for commercial and recreational purposes and represents an important social and economic resource in Argyll and Bute.

Scottish Planning Policy requires that a range of other marine interests are taken into account in determining the appropriateness of new fish farming development in the marine area. These include recreation; tourism; navigation and commercial fisheries as well as MOD activities. This does not however mean that aquaculture should be excluded wherever another activity occurs. The Council will promote multiple use of space where activities are considered compatible or following appropriate mitigation of negative interactions.

Developers should demonstrate that any potential impacts of proposals on other users of the marine environment have been identified and where conflicts of interest are likely, should provide details of likely impact and any proposed mitigation measures. Attention must be paid to public safety considerations as well as ensuring that access to the foreshore for recreational activities is not impeded.

Commercial fishing

There is potential for conflict between aquaculture developments and local fishing interests, including commercial inshore fishing and recreational fishing. New aquaculture developments, and other forms of marine development, have the potential to restrict access to existing fishing grounds. Although some developments may involve relatively small areas of seabed, the restriction of mobile gear fishing in particular, can be well beyond its location and the cumulative effect of many developments can be an issue. Restricting access to fishing grounds can have an economic impact on local fishermen, the scale of which will depend on factors including the size of the area affected; importance and productivity of the fishing grounds; intensity of fishing; and the number of vessels it supports.

The Scottish Government 'ScotMap' project provides a snapshot of spatial information on the fishing activity of Scottish registered commercial fishing vessels under 15m in overall length. This data relates to activity for the period 2007 to 2011 and provides aggregated information on monetary value, relative importance and the number of fishing vessels. Maps of this information can be accessed through the 'National Marine Plan Interactive' mapping tool on the Scottish Government website.

The effects of aquaculture development on traditional fishing grounds should be considered in selection of the location for development. Developers are advised to make contact with the relevant fishermen's associations and individual local fishermen at pre-planning stage to ascertain whether or not the proposal is likely to conflict with this activity.

Tourism & recreation

Tourism and recreation in Argyll and Bute is heavily focussed on the marine and coastal environment. This significant recreational resource is important to the visitor experience and has seen an increase in recreational activities with many residents and visitors enjoying sailing, sea kayaking, diving and whale and dolphin watching.

Tourism

In addition to consideration under this criteria, the effects of aquaculture development on tourism are also considered through Development Criteria (DC1-4 & 7)) considering the natural and cultural heritage that supports tourism activity and economic impact. Independent research commissioned by the Scottish Aquaculture Research Forum[5] found no evidence of a negative link between aquaculture and tourism. In many instances fish farms can be a point of interest for tourists rather than a deterrent. Aquaculture

[5] Nimmo, F & Cappell, R. 2009. Assessment of evidence that fish farming impacts on tourism (SARF045)

development is not considered by the Council to be incompatible with tourism. Both industries are important to Argyll and Bute and a balance must be met which allows sustainable economic development whilst protecting our outstanding environment which underpins both tourism and aquaculture.

Water-based recreational and tourism activities

There are a wide range of recreational activities occurring within Argyll and Bute. Along its shores activities such as sea angling, kayaking, scuba diving, sailing, windsurfing and walking are popular. A number of local businesses are orientated around these activities and they are important to the wellbeing of those living by and visiting the area.

Aquaculture development will be resisted where development is considered to have a significant adverse impact on recreational activity, including blocking access to existing moorings, anchorages and established infrastructure such as pontoons and marinas.

It is currently not possible to map all moorings, anchorages, dive sites and marine areas used for sea angling, however if this information is collated in response to regional marine planning, it will be integrated into this guidance. **Map DC6b** shows the RYA sailing routes in Argyll and Bute.

Developers are encouraged to review the 'Welcome Anchorages' publication to identify the location of established anchorages and consult West Highland Anchorages and Moorings association (WHAM) and the Royal Yachting Association pre-application, where proposals are in the vicinity of recreational boating interests.

Key beaches

Argyll and Bute hosts some of the most spectacular beaches in Scotland, Europe and possibly the world. Beyond their recreational and scenic value they have an inherent value in the area as a destination. The introduction of fish farming infrastructure into these locations could have a significant direct and indirect impact on the area. These beaches include but are not restricted to the following locations which have been identified on **Map DC6a**:

- Ganavan Sands, Oban (Bathing Water and Seaside Award)
- Tralee Bay, Benderloch
- Machrihanish Bay (Bathing Water, Seaside Award and key surfing location)
- Ettrick Bay, Bute (Bathing water)
- Gott Bay, Tiree (Key windsurfing location)
- West Bay, Helensburgh

Marine renewables development

Argyll and Bute has significant renewable resource of offshore wind, wave and tidal energy and is ideally placed to take advantage of this marine energy development potential.

Lease agreements for offshore wind and tidal developments are shown on **Map DC6a**, in addition to areas of potential resource for wind, wave and tidal development. These areas identified for renewable energy exploitation should be avoided unless the developer can demonstrate that the energy resource will not be sterilised by the proposed development and that the operational requirements of both sectors are respected.

Ports, harbours and key navigational routes

There are many key ports and harbours in Argyll and Bute which are essential for servicing lifeline ferry services and supporting commercial fishing, recreation and aquaculture, with further opportunities to service the emerging marine renewables industry. In addition, there are numerous smaller harbours and marinas supporting commercial and recreational fishing activities, yachting and recreation throughout this

region. Key navigational routes within Argyll and Bute inshore coastal waters relate mainly to the many island ferry routes. These interests are displayed in **Map DC6a & b**.

Aquaculture development should avoid recognised navigational routes and the entrance to key ports, harbours and marinas and established anchorage areas used for shipping should also be avoided. Planning authorities are advised not to duplicate controls exercised by other regulators and in this respect navigational safety considerations are addressed by way of a marine licence application. The Northern Lighthouse Board advises developers and regulators of marking and lighting requirements for marine developments for both planning and marine licencing.

Subsea power cables and pipelines

Numerous domestic subsea power cables exist within inshore waters in this region, connecting areas of the mainland on the West coast and connecting the mainland to islands off the West coast. These cables could be damaged by aquaculture moorings or anchors and development which overlaps with active power cables will be resisted.

MOD activity

Although MOD activity is widespread in Argyll and Bute coastal waters restrictions on marine development are limited to MOD noise ranges in Loch Goil and Loch Fyne and HMNB Clyde at Faslane. These areas are identified on **Map DC6c**.

Information requirements

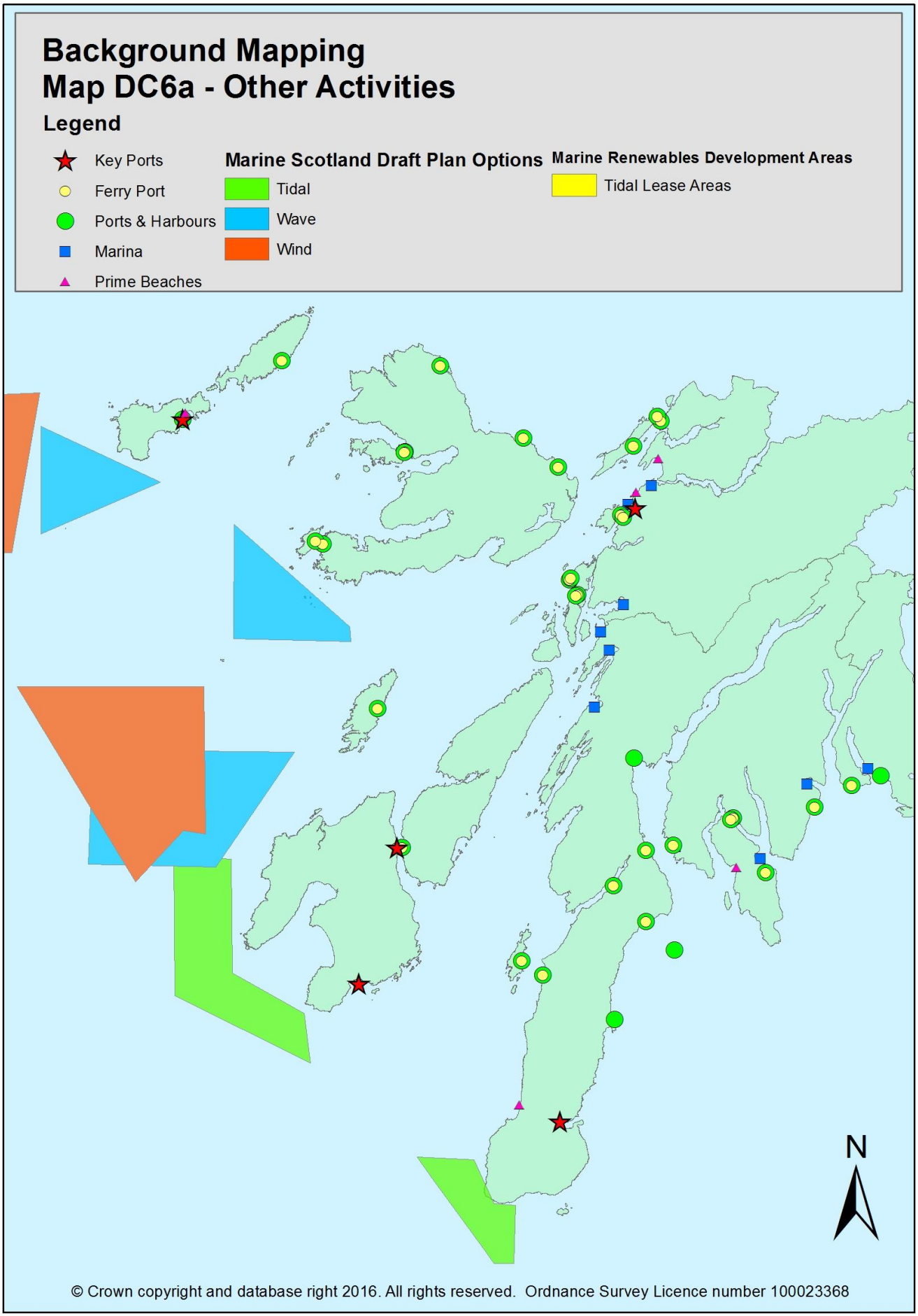
Developers should provide evidence that potential impacts of proposals for new or extended fish farm sites on commercial fisheries; ports & harbours; navigational routes, anchorages; and recreational and leisure activities have been identified and where there are likely to be conflicts, provide details of impacts and the mitigating measures proposed.

Opportunities

There may be opportunities for aquaculture developments to coexist with marine renewable developments on the same site, where the renewable infrastructure may afford a degree of shelter in more exposed offshore locations.

Supporting maps

- **Map DC6a** – Other Activities
- **Map DC6b** – Navigational Routes
- **Map DC6c** – MOD Activity


Background Mapping
Map DC6a - Other Activities
Legend
Key Ports
Ferry Port
Ports & Harbours
Marina
Prime Beaches
Marine Scotland Draft Plan Options
Tidal
Wave
Wind
Marine Renewables Development Areas
Tidal Lease Areas
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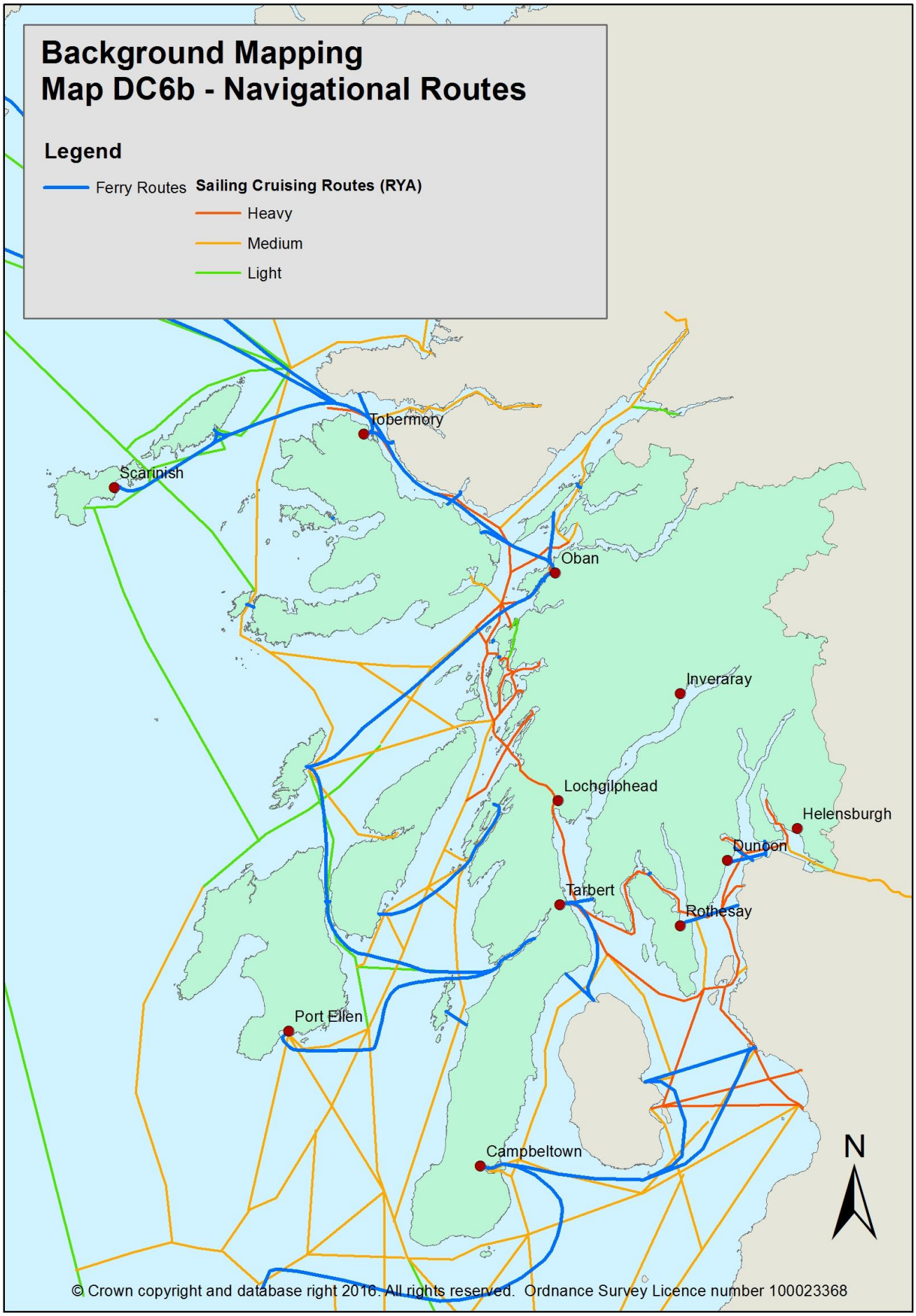
Background Mapping
Map DC6b - Navigational Routes
Legend
Ferry Routes
Sailing Cruising Routes (RYA)
Heavy
Medium
Light
Tobermory
Scarinish
Oban
Inveraray
Lochgilphead
Helensburgh
Dunoon
Tarbert
Rothesay
Port Ellen
Campbeltown
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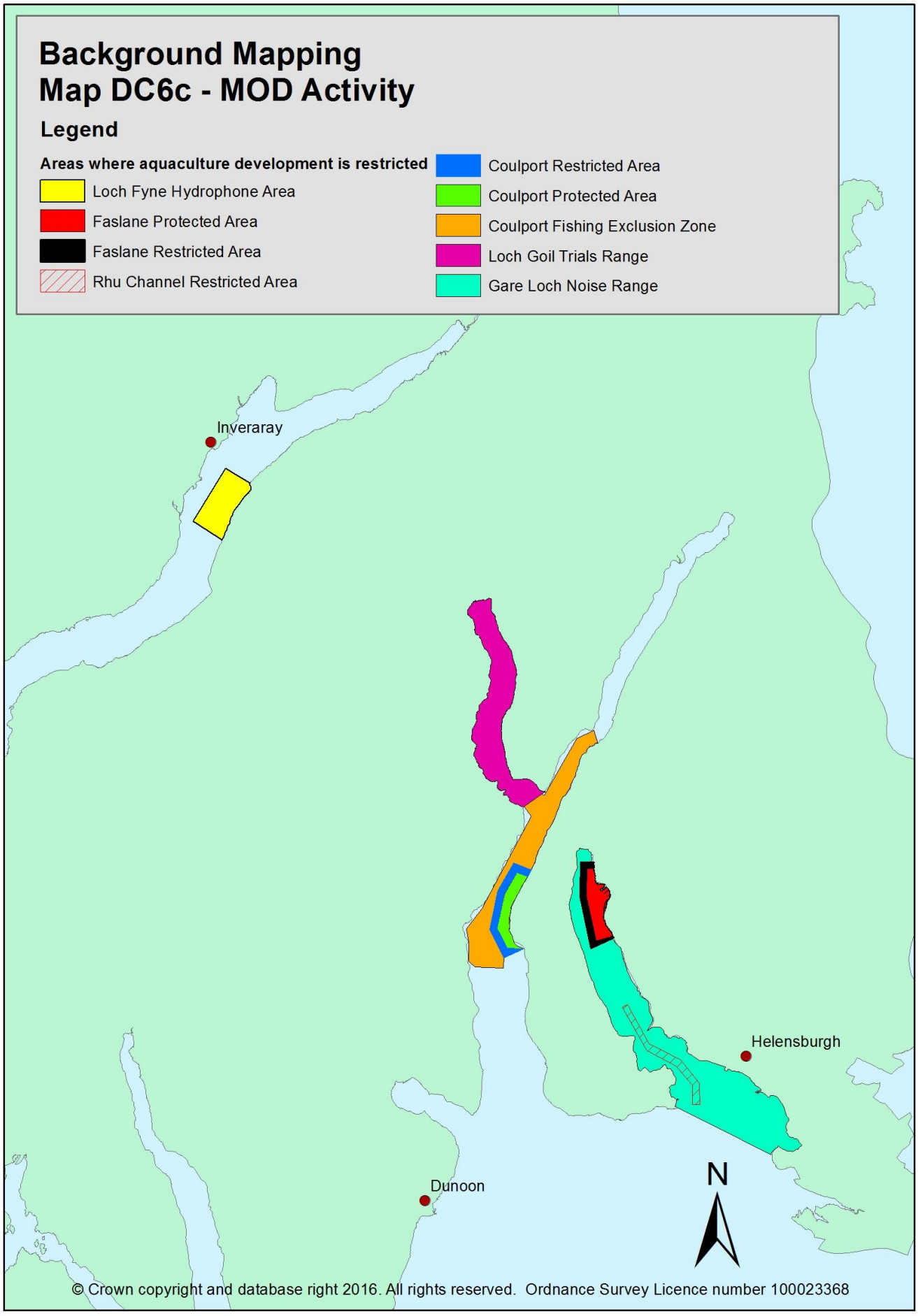
Background Mapping
Map DC6c - MOD Activity
Legend
Areas where aquaculture development is restricted
Loch Fyne Hydrophone Area
Faslane Protected Area
Faslane Restricted Area
Rhu Channel Restricted Area
Coulport Restricted Area
Coulport Protected Area
Coulport Fishing Exclusion Zone
Loch Goil Trials Range
Gare Loch Noise Range
Inveraray
Helensburgh
Dunoon
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DC7 Economic impact

The Council will consider the economic benefits of development proposals as detailed in **Policy LDP 5 - Supporting the Sustainable Growth of Our Economy**. The economic impact will also consider any potential negative economic impacts on other activities, such as loss of commercial fishing ground resulting from competition for space. Additional weight will be given to the economic benefits of aquaculture proposals adjacent to Economically Fragile Areas as identified in **Map DC7a**, provided the proposal is consistent with relevant LDP policy or associated SG.

Developers should provide details of the anticipated economic benefits arising from the proposed development including direct and indirect employment.

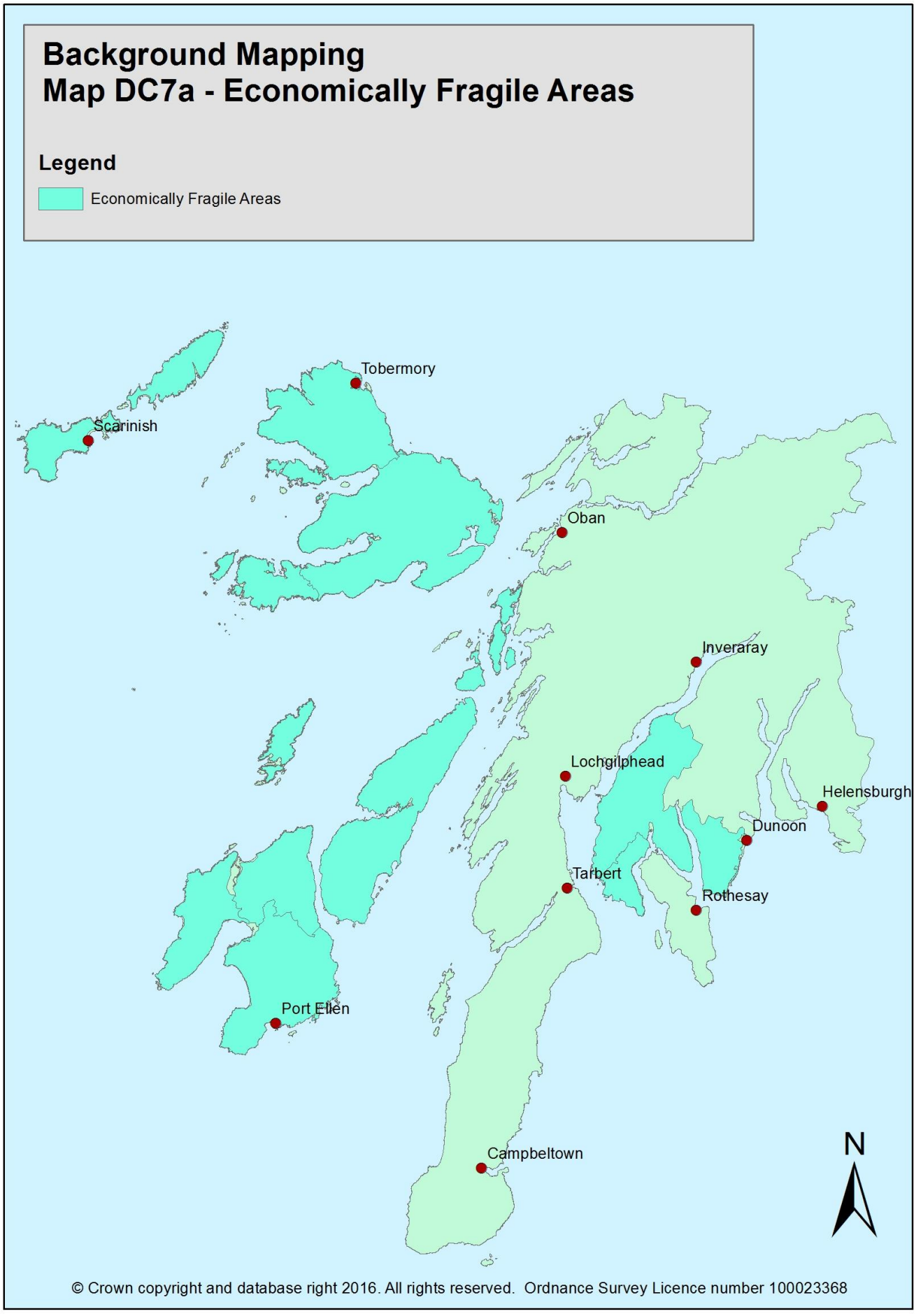
Supporting maps

- **Map DC7a** - Economically Fragile Areas

Supporting information

- **Marine Scotland Report – An Assessment of the Benefits to Scotland of Aquaculture (2014)**

Background Mapping
Map DC7a - Economically Fragile Areas



DC8 Management areas (relevant only to finfish development)

Farm Management Areas (FMAs) describe areas where finfish farmers undertake to coordinate many of their activities and synchronise production in order to reduce and manage risks posed by infectious agents and parasites which can be present in the environment, in wild and farmed fish, and in other naturally occurring biota. In some cases, FMAs will focus mainly on sea lice management, while in others, they will relate to other issues which have a potential to affect fish health.

Farming activities within an FMA are covered by a documented Farm Management Agreement which should cover approaches in each area to issues such as: stocking; fallowing; husbandry and biosecurity; management practices, including for the control of sea-lice; and information sharing.

FMAs are based on tidal excursions around active farms. Farms with overlapping tidal excursions will usually be within the same management area. New sites that would have no effect on management areas or are in management areas of their own pose less of a risk to the spread of disease than those which bridge management areas.

New finfish sites within existing FMAs or Area Management Agreements will be expected to be managed in accordance with existing sites. Sites outwith these areas, but within tidal excursion of existing management areas will need to be carefully assessed to determine whether an extension of an existing area or establishment of a new management area is acceptable. Marine Scotland will provide advice to the Council in this regard.

DC9 Operational impact (waste, noise, light and odour)

New aquaculture developments should be designed so as to minimise any negative impacts arising from their operation and will be assessed to ensure adequate waste management measures; no significant adverse environmental or amenity impacts arising from the servicing and operation of the site; and satisfactory measures for the restoration of the site, including removal of redundant equipment.

Noise and lighting

The potential impacts of noise from fish farming activities both on and off shore can be detrimental to neighbouring uses, while inappropriate lighting can cause neighbour nuisance and/or be visually intrusive in the landscape. With the exception of navigation lights, surface lighting should be directed downwards by shielding and be extinguished when not required for the purpose for which it is installed on the site. Generators on fish farms close to the shore have potential to cause a noise nuisance, in particular where there are residential properties close to the site.

Noise and lighting impacts are assessed by comparing the background noise and lighting levels against proposed levels associated with the development. The significance of an impact is therefore site specific. In some coastal areas where the background noise levels are low, sound will be a greater issue and night time limits may be appropriate.

Waste management

There is potential for aquaculture development to generate waste during construction, operation and decommissioning. Waste can affect both visual amenity and the natural environment. For example residual waste from operations includes redundant parts of fish cages, plastic bags, old ropes, and discarded buoys and floats.

Site condition and restoration

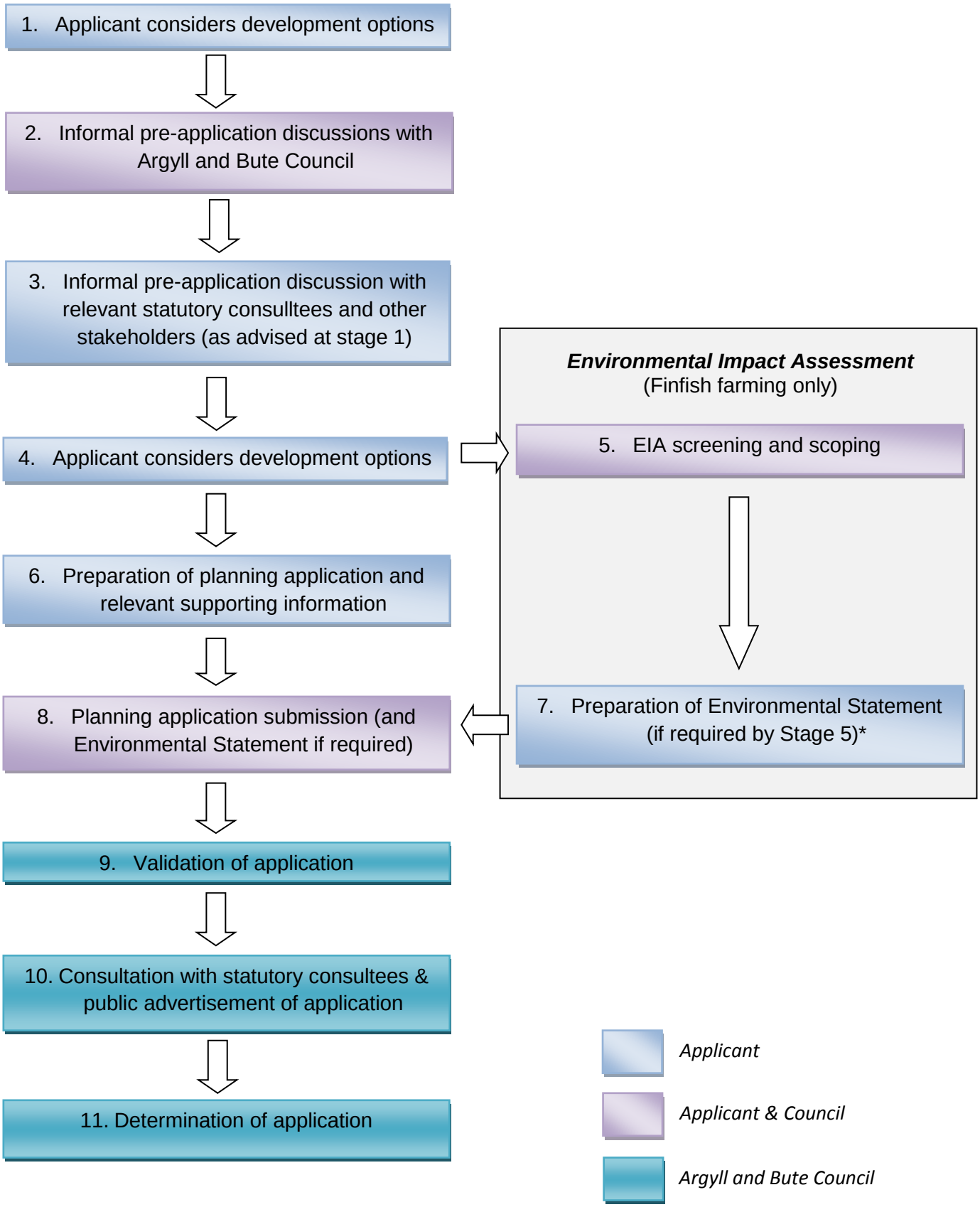
Planning permissions will be conditioned to ensure that in the event of equipment falling into disrepair or becoming damaged, adrift, stranded, abandoned or sunk in such a manner as to cause an obstruction or danger to navigation, the developer will carry out or make necessary arrangements for lighting, buoying, raising, repairing, moving or destroying, as appropriate, the whole or any part of the equipment. On final cessation of operations at a consented site, all surface and sub-surface equipment requires to be removed and the site restored to its pre-developed state.

Information requirements

Developers will be required to provide details on noise and light emissions relating to the proposed development, along with details of any mitigating measure that will minimise the impacts. This should include details of surface and underwater lighting and details of noise generating equipment and hours of operation.

Information on the arrangements for waste management at the proposed site should be submitted along with the planning application. Where necessary, this should be supported by Site Waste Management Plan which should demonstrate how the waste generated by the development during the construction, operational and decommissioning phases will be dealt with, including steps that will be taken to reduce, re-use and re-cycle wastes and how any remaining wastes will be disposed of.

Annex A – Planning process for aquaculture development



Annex B - Council adopted marine and coastal plans

Argyll and Bute Council has developed Integrated Coastal Zone Management (ICZM) Plans for Loch Etive and Loch Fyne which were adopted as non-statutory planning guidance in 2011 and 2009 respectively.

A Marine Spatial Plan for the Sound of Mull was developed as part of a Scottish Government pilot project on marine planning. Argyll and Bute Council was a lead partner in this project and adopted the plan in 2011.

These plans were developed in collaboration with local stakeholders and regulators and provide guidance for coastal development and activities, with a particular focus on guiding aquaculture development.

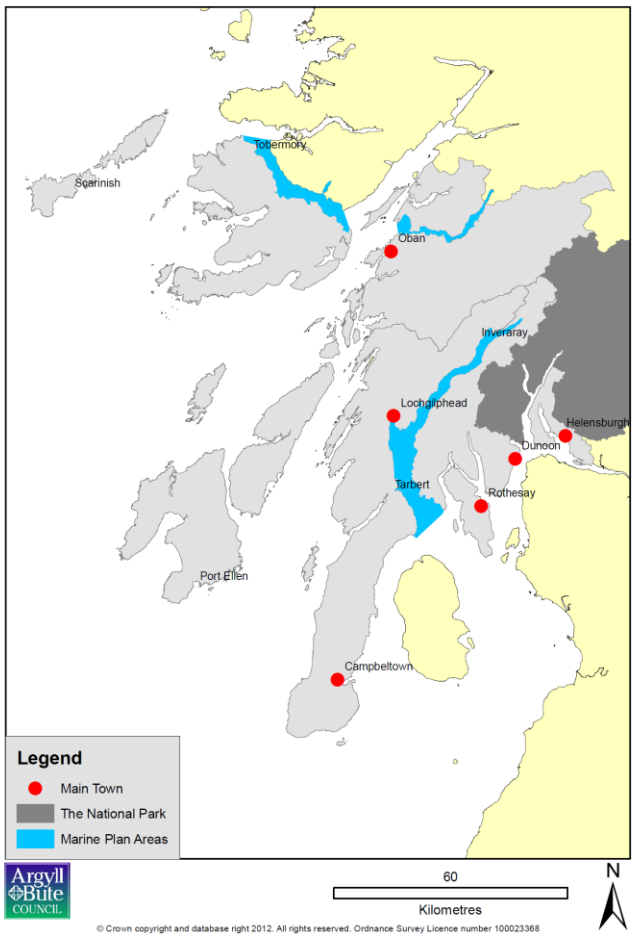
Argyll and Bute Council will give consideration to these plans, as non-statutory planning guidance, in the determination of any planning applications for coastal development in Loch Fyne, Loch Etive and the Sound of Mull.

The plans should be used by developers, regulators and other stakeholders in conjunction with the Local Development Plan and its supporting Supplementary Guidance.

The plans are available to view on the Council website and cover the coastal areas shown in Figure 5.1.

Loch Etive ICZM Plan – www.argyll-bute.gov.uk/lochetive
Loch Fyne ICZM Plan – www.argyll-bute.gov.uk/lochfyne
Sound of Mull Marine Spatial Plan – www.argyll-bute.gov.uk/soundofmull

Figure 5.1 – Map of Council adopted ICZM/Marine Plan areas



Annex C - Responsibilities of statutory authorities in relation to aquaculture development

Argyll and Bute Council	• Prepare planning policy and guidance for aquaculture development in Argyll and Bute. • Process and determine planning applications for new or modifications to existing marine and fresh water fish farms. Relevant Authority under the *EIA (Fish Farming in Marine Waters) Regulations 1999*. • Informally consulted by SEPA and Marine Scotland on CAR licences for fish farms and marine licences for aquaculture development. *For further information, visit the Scottish Government Planning pages.*
Marine Scotland	• Under the Aquaculture and Fisheries (Scotland) Act 2007, Marine Scotland enforces provisions on containment and parasite control through information gathering, inspections and enforcement measures aimed at controlling and improving containment and parasites. Marine Scotland also implements measures that regulate the movement of live fish with a view to preventing the spread of fish diseases. • Marine Scotland issues the single marine license covering navigation issues and deposits in the marine environment including discharges from well boats. • When a commercial activity could cause disturbance to a European Protected Species such as cetaceans, Marine Scotland issues a licence for the activity. Strict legal tests are required to be satisfied. • Marine Scotland is the licensing authority for seals under the Marine (Scotland) Act 2010 and can issue licences for the killing or removal of seals for activities such as research or to protect the welfare of farmed fish to prevent serious damage. *For further Information, visit Scottish Government Aquaculture pages.*
Scottish Environment Protection Agency (SEPA)	• Under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) SEPA has powers to ensure that activities which may pose a risk to the water environment are controlled. With regard to finfish farming, SEPA sets limits on the types and amount of fish that can be held in the cage (known as maximum biomass) and the amount of certain medicines that can be administered and discharged from cages. The CAR licensing process takes account of the likely effects of discharges from the proposed development on both the water column and benthic environments. Shellfish farms are not currently regulated by SEPA. *For further Information, visit Scottish Government Aquaculture pages.*
Scottish Natural Heritage (SNH)	• Provide advice on natural heritage matters. In particular with respect to aquaculture, SNH is a statutory adviser to the Council, as the Competent Authority, under the Conservation (Natural Habitats, &c.) Regulations 1994 with regard to Natura Sites (Special Areas of Conservation and Special protection Areas) and European Protected Species (EPS). • SNH also advises Marine Scotland with respect to EPS licensing and seal licensing under the Marine (Scotland) Act 2010. SEPA are advised by SNH with respect to CAR applications. SNH welcomes pre-application consultation with developers. *For further Information, visit SNH Aquaculture pages.*
The Crown Estate (TCE)	• The Crown Estate is the public body in Scotland that owns and manages approximately 50% of the foreshore, the beds of tidal rivers and territorial seabed out to 12 nautical miles, with renewable energy and (non-hydrocarbon) mineral rights out to 200 nautical miles. • The Crown Estate's management of the territorial seabed means that any developer acquiring the necessary permissions to implement an aquaculture development will require rights to the area of seabed to which those continuation permissions apply, in the form of a lease of seabed from The Crown Estate, in order to exercise those permissions. • Planning permission for an aquaculture development granted by the Council attaches to the land (seabed in this case) and not the applicant, and therefore securing the necessary seabed rights is part and parcel of ensuring a successful outcome to any development proposal. *For further Information, visit Scottish Government Aquaculture pages.*

Annex D – Marine Planning area for Aquaculture Development