

Community of Arran Seabed Trust  
Old Pavilion  
Lamlash  
Isle of Arran  
KA27 8LS

Tel: 01770 600656  
Email: [email@arrancoast.com](mailto:email@arrancoast.com)

F.A.O. Iain Davies  
Planning  
North Ayrshire Council  
Cunninghame House  
Irvine  
North Ayrshire  
KA12 8EE

28 September 2019

Dear Sir

**COAST Objection to Planning Application Ref: 19/00609/PPM  
Installation and operation of an Atlantic Salmon Fish Farm comprising 20 x 120m circumference fish pens  
and an accompanying feed barge to the east of Millstone Point, North Arran**

The Community of Arran Seabed Trust (COAST) is a community-led organisation and registered charity working for the protection and restoration of the marine environment around Arran and the Clyde. The aims of COAST are to:

- improve the local marine environment for the benefit of everyone
- help sustain the livelihood of those dependent on fishing and tourism
- increase the popularity of the area as a diving site and tourist destination
- educate future generations on the need for marine conservation.

COAST have been successful in establishing the first marine No Take Zone in Scotland (the first community-led NTZ in the UK) and achieving the statutory designation of the South Arran Marine Protected Area. We are members of the Clyde Marine Planning Partnership and the Coastal Communities Network. We own and run a marine discovery visitor centre on Arran, called the Octopus Centre, are a business partner of Visit Arran and have clear knowledge and experience of why tourists visit the island.

COAST strongly objects to this application for a new open-cage salmon farm at North Arran. This is a completely inappropriate development in a beautiful, undeveloped area of Arran that it will be a blight on Arran's environment and natural beauty to the detriment of the island's tourism industry and associated economy.

The proposed development is contrary to a number of Local Development Plan (LDP2) policies. Policy 25 (Supporting Aquaculture) is particularly relevant here because under this policy any proposals for new development should not have any unacceptable adverse impacts (including cumulatively) on the natural environment and recreational and tourism interests. The North Arran proposal is in breach of Policy 25 and under this policy alone it is very clear that the development cannot be supported.

We fully appreciate the importance of supporting opportunities for jobs and the economy on the island, but the North Arran application will have no net benefit to the island's economy. No new island jobs are guaranteed and profits from the proposed development will not directly benefit Arran. The economic case presented in the application does not take account of the value of the island's natural environment to the local economy and jobs, nor the likely future damage to Arran's environmental credentials and appeal (and associated visitor-based economy) if the development goes ahead.

The Environmental Impact Assessment (EIA) has serious flaws and gaps and fails to fully identify and describe the nature and scale of the impacts of the proposed development. This invalidates the conclusions of the submitted

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assessment of no adverse effect. Further, the application has not complied with key aspects of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017.

The adverse environmental and economic implications of the application mean that it is contrary to the following policies of the North Ayrshire Local Development Plan 2 (LDP2):

- Strategic Policy 1: Spatial Strategy
- Detailed Policies:
  - Policy 6 – Supporting Sustainable Tourism
  - Policy 8 – Business Development on Arran and Cumbrae
  - Policy 15 – Landscape and seascape
  - Policy 16 - Protection of Designated Sites
  - Policy 22 – Water Environment Quality
  - Policy 24 – Alignment with Marine Planning
  - Policy 25 – Supporting Aquaculture

We have set out our detailed objections to the application in more detail below this covering letter.

We urge North Ayrshire Council Planning to reject this application which is so clearly contrary to the Council's policies.

We would like to have an opportunity for a COAST representative to speak at the planning committee's meeting at which this application will be determined. There is a precedent here, when a COAST member spoke at a North Ayrshire Council Planning Committee determination meeting for about 30 minutes with accompanying MS-PowerPoint slides, and we therefore request a similar amount of time to be set aside for COAST in this case. We understand that the determination meeting is currently planned for early December.

Yours faithfully,



Paul Chandler

Executive Director; Community of Arran Seabed Trust (COAST)

**COAST's detailed comments supporting the objection to the North Arran Salmon Farm:  
Planning Application Ref: 19/00609/PPM**

Our detailed comments on the proposed North Arran salmon farm are provided below under the following headings:

1. Scottish Parliamentary inquiry 2018 into the salmon farming industry in Scotland
2. Compliance of the EIA and NAC's assessment process with The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017
  - a. Consideration of alternative options
  - b. Cumulative effects
  - c. EIA report must be based on the scoping opinion
  - d. Completeness of the information provided
3. Compliance with North Ayrshire Local Development Plan (LDP2)
  - a. Strategic policy
  - b. Detailed policies
4. Detailed Comments on Planning Application Documents and the Policies Breached
  - a. Economic assessment
  - b. Environmental Impact Assessment
    - i. Landscape and seascape
    - ii. Waste and chemical discharges
    - iii. Wild salmon and sea trout
    - iv. Iconic marine and coastal species (seals, cetaceans, basking shark and otters)
    - v. Seabed habitats and Priority Marine Features
5. Sustainability

**1. Scottish Parliamentary inquiry 2018 into the salmon farming industry in Scotland**

The 2018 inquiry by Scottish Parliamentary committees into the salmon farming industry in Scotland provides a national view on this industry in terms of its regulation and environmental impacts.

The reports produced for this inquiry by the Rural Economy and Connectivity (REC) and Environment Climate Change and Land Reform (ECCLR) committees both identify many serious issues caused by open cage salmon farming and highlight the lack of progress in tackling the environmental impacts of the industry. Both committees concluded that the "status quo" of the salmon farming industry in Scotland in terms of regulation and enforcement is not acceptable, and that urgent and meaningful action needs to be taken to address deficiencies in regulation, fish health and environmental issues before the industry can expand. Global warming of our seas will only further exacerbate certain issues such as sea lice infestations, viral and bacterial infections and biotoxic algae blooms.

The North Arran mega salmon farm application needs to be seen against this documented background of a poorly regulated industry that has been shown to be damaging marine life and the wider marine environment. The North Arran application needs to prove that it is not going to just continue to cause all the environmental issues that have been identified in the REC and ECCLR committee reports. Much is made in the North Arran application's EIA of the innovative integrated technology of the SeaQure Farm concept design; but this technology is unproven and the proposed system remains fundamentally flawed as it still based on a standard open cage farm and all the negative environmental impacts of that. If the "status quo" is not an option, then the application should be dismissed as there is nothing in the proposal that will effectively address the known problems of open cage salmon farming.

**2. Compliance of the EIA and NAC's assessment process with The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017**

The Environmental Impact Assessment (EIA) contravenes the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulation 2017 in a number of key areas:

- a. Consideration of alternative options

As well as being a requirement of the EIA Regulations (Regulation 5(2)(d) and Paragraph 2 of Schedule 4), consideration of alternative options is also a requirement of North Ayrshire Council's Scoping Opinion for this proposed development and is also considered particularly relevant to Strategic Policy 1 (Spatial Strategy) and Detailed Policy 8 (Business

Development on Arran and Cumbrae) of the LDP2 ('Proposals will be supported where they have demonstrated a sequential approach to site selection.....':

The assessment of alternatives provided in the EIA is wholly inadequate with minimal consideration of the comparative environmental impacts even of the five location options that are listed in the EIA.

We do not need to damage our marine environment, wild areas, landscapes and seascapes for these farms - other options are available. The consideration of alternatives should include the option of land-based recirculating aquaculture systems (RAS), also known as closed containment, where water is filtered and cleaned before discharge back into the sea. This is an alternative to open cages, which is being invested in heavily worldwide, and is recognised widely as the only sustainable way forward for the future of this industry. Within North Ayrshire such land-based systems could be sited on vacant and derelict land like the Ardeer Peninsula south of Stevenston or even on the site at Hunterston; Peel Ports have a land-based finfish farm in their Hunterston PARC Draft Master Plan with initial estimates of 60 FTE jobs and GVA of £5.3 million per annum. North Ayrshire is 4<sup>th</sup> in the top five areas in Scotland with the amount of derelict and vacant land available as 'brownfield' sites for development.

These alternative options have not been addressed or investigated at all within the application and therefore breach the EIA regulations, NAC scoping opinion and LDP2 policies referred to above.

#### b. Cumulative effects

In addition to being a requirement of the EIA Regulations (Regulation 5), the assessment of cumulative impacts is a requirement of NAC's EIA scoping opinion and Policy 15 and Policy 25 of the LDP2.

The cumulative effects of many aspects of the operation and siting of the proposed farm are unknown and have not been accounted for within the EIA and therefore breach the regulations, NAC scoping opinion and policies referred to above. For example:

- the cumulative effect of waste and chemical discharges from the proposed farm into the water body of the Clyde Marine Region (which already has 16 salmon farms in existence, with 6 more new applications proposed and 3 further expansions of existing farms) is not addressed in the EIA. The modelling used is discredited and not considered fit for purpose (see section c below).
- the cumulative impact of the proposed North Arran salmon farm on migratory salmon and sea trout in conjunction with impacts from other open cage salmonid farms in the Clyde is not addressed in the assessment
- a cumulative impact of noise disturbance of marine mammals, and other wildlife, from the 32 acoustic deterrent devices in conjunction with the background noise levels of the Clyde region and other fish farms has not been undertaken

#### c. EIA report must be based on the scoping opinion

The EIA report **must** be based on any scoping opinion that has been issued (EIA Regulation 5 (3)); 'Planning authorities **must** also ensure, where a scoping opinion or direction has been issued, that the EIA report is based on that opinion or direction' (EIA Regulations 2017, Circular 1st Edition 1.0 16/05/2017, Adequacy of the EIA Report).

The EIA for the North Arran application has not fulfilled all the requirements of NAC's scoping opinion:

- It does not provide an adequate consideration of alternatives (including site location, layout and other design considerations)
- It does not include an extended baseline benthic survey
- It does not include hydrodynamic and in-feed chemical treatment modelling.
- The modelling of the waste volumes, dispersal and seabed effects presented in the EIA uses long discredited and now superseded AutoDEPOMOD software (SAMS and SEPA reporting). The software cannot model dispersal over a sloping seabed; this site has a steeply sloping seabed. The model does not have regard to cumulative impact as the waste dispersal and sedimentation from each group of ten cages is modelled as a separate 2500 tonne farm, rather than a single 5000 tonnes, 20 cage farm (which it patently is) and there is no hydrodynamic modelling of waste dispersal and sedimentation presented, which takes into account any other existing or planned open cage fish farms. The modelling therefore breaches the requirements of the scoping opinion and the EIA regulations and policies referred to in section b. above, Cumulative effects.

#### d. Completeness of the information provided

EIA Regulations 2017, 5(3) and Part 6, 26(2), make clear that all information that may reasonably be required to reach a reasoned conclusion on the significant effects of the development on the environment needs to be provided taking into account current knowledge and methods of assessment. The North Arran application

does not meet this requirement as several elements of the EIA are based on very limited data and have not been undertaken in accordance with best practice. For example, the modelling of waste and chemical discharges is not based on current best practice, the seabed survey is very limited in its scope and has not been completed in line with Scottish Environmental Protection Agency (SEPA) guidance and no site specific new survey data on migratory wild salmonids or the presence, distribution and abundance of marine mammals has been collected.

Under EIA regulations it is North Ayrshire Council's (NAC) responsibility to ensure that the submitted EIA report contains the information specified in Regulation 5(2) and, where relevant, Schedule 4 to the Regulations and must ensure that the EIA report is based on the scoping opinion or direction. For the reasons set out throughout this Section 2 response it is clear that the SSC EIA has not complied with the EIA regulations.

### 3. Compliance with North Ayrshire Local Development Plan (LDP2)

The proposed development breaches several of North Ayrshire's Local Development Plan policies due to the impact it will have on the natural environment including landscape and seascape and because it will not bring any **net** economic benefit to Arran. The claims in the application about the local economic benefits of the proposed development to the island are unsubstantiated and the EIA and accompanying documents fail to properly identify the environmental impacts and costs to Arran if it goes ahead.

The proposed development is in **breach** of the local development plan (**LDP2**) policies identified below:

#### a. Strategic policy

- **Strategic Policy 1: Spatial Strategy (LDP2)**

This policy is based on the principle that the right developments occur in the right place. It recognises the importance of protecting North Ayrshire's countryside areas as a valuable natural asset whilst enabling a sustainable pattern of development.

The proposed North Arran salmon farm is the wrong development in the wrong place and it fails to meet the requirements of this policy (it will damage Arran's natural environment, is not a sustainable development and will not result in a net economic benefit).

#### b. Detailed policies

- **Policy 6 (LDP2) – Supporting sustainable tourism**

This policy identifies that tourism and related activities will, in principle, be supported.

Arran's tourist industry is vital to the island's economy and supports year-round employment. It is essential that the natural assets that attract people to the island and which provide the basis for future sustainable development of the tourism industry on Arran, such as the area of wild undeveloped coast and sea at the north end of the island, are not damaged or degraded. The proposed salmon farm will damage and degrade the local environment and will be an impediment to supporting sustainable tourism; as such it is contrary to this policy.

- **Policy 8 (LDP2) – Business Development on Arran and Cumbrae**

The proposed salmon farm will bring unacceptable and adverse impacts on the environment and the "tourism offer" of the area, which are contrary to this policy. Policy 8 goes on to state that "proposals will be supported where they have demonstrated a sequential approach to site selection" following an order of preference set out in this policy. The proposed salmon farm has not done this. As commented on above in section 2, the consideration of alternative options for the development is grossly inadequate (only five location options listed and no consideration of land-based sites and technology), which further undermines its compliance with this policy.

- **Policy 15 (LDP2) – Landscape and seascape**

This policy supports development that protects and/or enhances North Ayrshire's landscape/seascape character and avoids unacceptable adverse impacts on designated and non-designated landscape areas and features. For detailed economic assessment points which relate to this policy please see the section 4a below.

The proposed salmon farm is in a highly natural area (the North Arran National Scenic Area) and will impact important landscapes that attract many visitors to Arran and which are a natural asset widely enjoyed by local

residents. The EIA identifies that there will be ‘major’ adverse effects on Landscape and Visual receptors as a result of the proposed salmon farm.

Despite these adverse impacts, the EIA tries to justify that this impact is acceptable as it is “characteristic of a coastal location” and because “the receiving landscape is of such a scale it has the capacity to absorb a development of this nature”. This area is a remote, undeveloped, and highly natural coastline and its special qualities are recognised in its designation as a National scenic area (one of only 40). Scottish Natural Heritage, in their scoping opinion for the proposed development, identify that the seascape/landscape assessment of the Firth of Clyde (March 2013) confirms that this stretch of coastline is “one of the most remote stretches of coastline within the whole of the Firth of Clyde.”

This stretch of coast is an iconic part of the Arran Coastal Way, which is one of Scotland’s Great Trails – one of 29 routes that have been established to enable people to explore the best of Scotland’s nature and landscapes. The northern part of Arran provides special opportunities to experience such relative coastal wilderness and is a special attraction for visitors to the island. A mega salmon farm is not in keeping with the characteristics of this isolated coastal landscape and will be a major detraction from the wild and remote nature of this coastline. The landscape cannot simply ‘absorb’ such an effect as it will be permanently visible for the duration of the development’s lifespan.

The impact of the proposed development on the landscape and seascape of a National Scenic Area is therefore clearly contrary to LDP2 Policy 15 and also contravenes policy GEN 7 Landscape/seascape. Paragraph 4.28 of the National Marine Plan 2015.

- **Policy 16 (LDP2) - Protection of designated sites:**

This policy requires developments to not have an unacceptable adverse effect on North Ayrshire’s natural environment.

The North Arran proposed salmon farm will have a number of adverse effects on the natural environment, including damage to seabed habitats and marine species from sea lice, waste, toxic chemicals and in-water noise pollution. The EIA fails to identify the scale and nature of these and therefore its conclusion of no adverse environmental impacts is invalid; as a result, the proposed development breaches LDP2 Policy 16.

For the adverse effects of this development on specific habitats and species please see section 4b below.

- **Policy 22 (LDP2) – Water Environment Quality**

This policy requires developments to have no unacceptable adverse impact on the water environment. The assessment of waste and chemical discharges from the proposed salmon farm is completely inadequate. It is based on an outdated and now discredited modelling and assessment method and does not apply recent, more stringent Environmental Quality Standards that now have to be used when determining acceptable use of chemical treatments. As a result, there is no substantiated evidence to support SSC’s statement that “the proposed development is not expected to lead to the deterioration of the water environment”.

- **Policy 24 (LDP2) – Alignment with Marine Planning:**

This policy requires that all proposals identify environmental impacts and mitigate against these to ensure that there are not any unacceptable adverse impacts. Developments on undeveloped sections of coast with special environmental qualities are to be resisted unless there would be a significant economic value of the development and environmental impact issues can be satisfactorily addressed.

Aquaculture Policy 5 of Scotland’s National Marine Plan 2015 states that aquaculture developments should avoid and/or mitigate adverse impacts upon the seascape/landscape and visual amenity of an area. General Policy 9 (Natural Heritage) of the National Marine Plan states that development and use of the marine environment must protect and, where appropriate, enhance the health of the marine area and not result in significant impact on Priority Marine Features.

The economic arguments made in favour of the proposed development are unsubstantiated in relation to the benefits to Arran and fail to take account of the negative impact of this development on 400,000 visitors and the £61,000,000 tourist industry on Arran. As we have already stated above, the North Arran application fails to fully identify the scale and nature of the environmental impacts and, as a result, the conclusion of no significant adverse effect from the proposed development is invalid. The proposed farm will degrade a highly natural, undeveloped section of coast that has special environmental qualities both above and below the water. It is contrary to LDP2 Policy 24 and contrary to policies in the National Marine Plan.

- **Policy 25 (LDP2) – Supporting Aquaculture**

This policy states that new development will be supported where there is no unacceptable adverse impact (including **cumulatively**) on a range of environmental interests and human use including:

- landscape, seascape and visual amenity
- coastal and marine species (including wild salmonids) and habitats
- the sea bed
- other users of the marine environment including tourism, recreational, and leisure activities

As noted in relation to the other policies, there will be an adverse environmental impact, negative impact on the tourism and leisure value of the coast and cumulative impacts have not been addressed. The proposed development is therefore not compliant with and breaches LDP2 Policy 25.

#### **4. Detailed Comments on Planning Application Documents and the Policies Breached**

##### **a. Economic assessment**

Our detailed comments provided here on the economic case for the proposed development are particularly relevant to the requirements of Strategic Policy 1 (Spatial Strategy) and Policy 15 (Landscape and seascape) and other aspects of the Local Development Plan that require consideration of the balance between adverse environmental impact and net economic benefit. The economic case for overall net economic benefit from the proposed development is seriously flawed (see detailed points below); there is no justifiable argument that the alleged economic gain from this development should outweigh the value of the natural environment to Arran, its community and existing tourism-based economy.

1. The proposed development fails to fully consider the adverse impacts that will occur to Arran's existing well-established tourism and visitor-based industries and economy and its future potential. The statements in the application about the economic and social benefits that the development will bring to Arran are not substantiated and are contradictory.
2. Throughout the application documents and during their public engagement the SSC have implied that there will be 10 FTE direct jobs on Arran, with but this is never stated clearly and yet through their PR consultants this has developed into a mythical truth among some people on the island. The social and economic impacts report does not show any sustainable net economic value coming to Arran, which directly relate to the development, and no new island jobs guaranteed out of the predicted 10 jobs stated in the planning application. It is not clear where the site will actually be serviced from and there is also reference to staff living on the barge, which means that the staff could be shipped in and out by boat from off island further undermining claims of new jobs on the island. The Arran site is proposed to be highly automated, compared to existing sites, which reduces the need for staff; indeed, the proposed conceptual SeaQure technology seems designed to reduce the need for staffing for certain aspects of the farm production. SSC state in their application that their estimated 61 full time equivalent jobs across Scotland, repeated several times as a key figure, 'may reduce with greater automation' from 2021 onward.
3. SSC write about supporting local housing in the application but this is not defined and their community support to date is cursory and disingenuous. For example, they state that they supported footpath construction on Holy Isle when, in fact, they were paid for this work; they say that they support Arran Riding for the Disabled but this local organisation is sadly no more. All this is misleading and shows very little respect for the intelligence and culture of the people of Arran.
4. The socio-economic report does not address in any robust way the significant risks to the island's primary industry – tourism - by a development that will have a tangible visual and polluting environmental impact and destroy the unique sense of place on the Island's north-east coast things that make Arran such an attractive place to visit and live. What is implied in their documentation is that the building of a fish farm will act as a white knight and have some sort of aspirational miraculous impact, and improve our services, without making it clear how this will come about. In their public engagement the SSC talked often about their award-winning apprenticeship scheme but there is no written commitment in the application to this being operational on Arran.
5. Despite the SSC statements to the contrary there is little evidence that salmon farming enriches our coastal communities, whether in housing, ferry services or otherwise. The only reason, as stated by them in a public meeting when pressed, that they want to site a new mega-farm off Arran is because they thought that they would face less planning opposition on our isolated coast and they need to keep growing shareholder value and returns; this was a particular pressing priority for them as they were in takeover negotiations at the time with the new owner Bakkafrost.

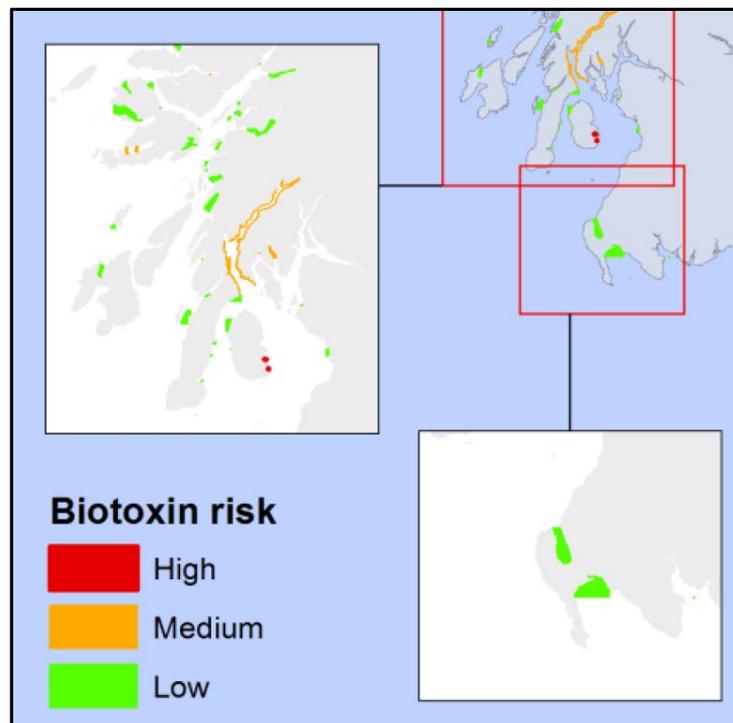
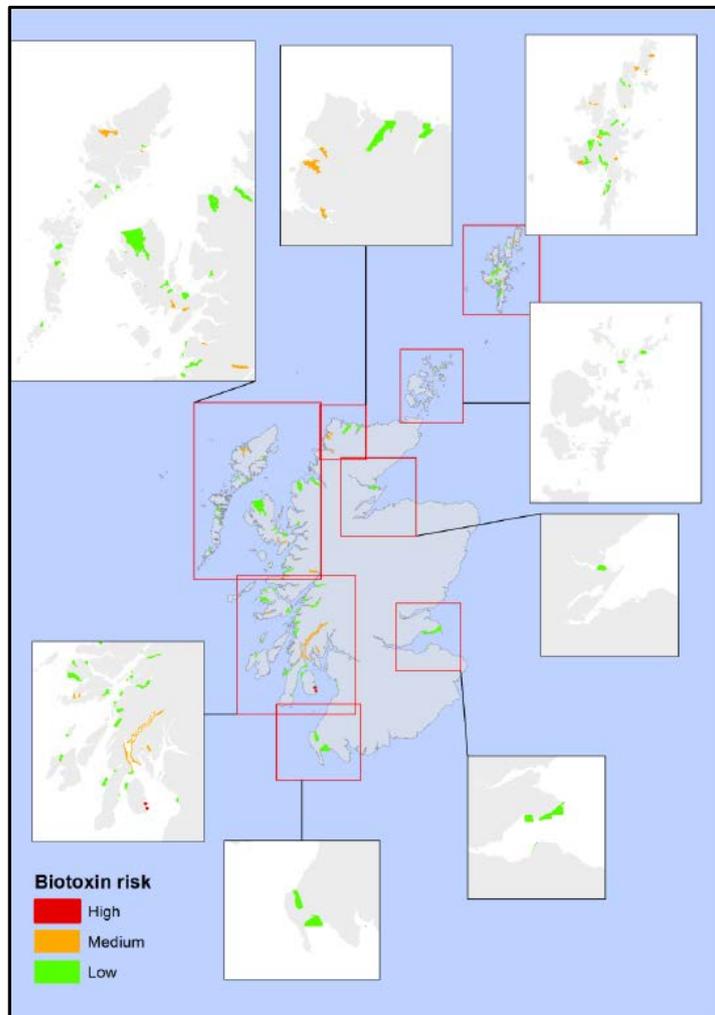
6. Working on the basis of 400,000 visitors and a tourist industry on Arran worth in excess of £60 million if the proposed development results in a loss of just a small proportion of this value that is a significant loss to the Island's economy. A drop in visitors by only 3% (just a couple of days of ferry passengers) is a loss of £1,800,000 off the bottom line turnover will have a large effect on the subsequent multiplied GVA of our island economy as this tourist money no longer circulates among our businesses. Even if 10 jobs were to materialise on Arran (which we seriously doubt is likely), at an average salary of £30,000/year that is still only £300,000; we see no net value to Arran for the damage that this development will do.
7. Creel fishermen and trawlers operate along the coast of the North Arran site and off Millstone Point. The sea lice chemical treatment (emamectin benzoate SLICE) in the salmon feed poses a significant potential risk to our shellfish. SEPA, in its recent study of eight Shetland salmon farms, has concluded that this chemical had the biggest negative effect on crustacean abundance and diversity. Use of this chemical therefore puts our wildlife and our fishermen's livelihoods at risk. The cumulative effect of this farm and the others in the Clyde and the financial risk to the commercial fishers are not considered in this application and need to be taken account of by the Council.
8. Alternative carbon-audited technologies and alternative locations have not been assessed adequately in the application. One alternative is to see the Scottish Salmon Company (SSC) investing their millions (£17 million of CAPEX in first two years in the application) in land based aquaculture to still make use of the Scottish quality brand and use vacant, derelict brownfield and abandoned or diversifying farm sites, and light industrial sites to farm salmon sustainably, without infecting our seas and precious wildlife with waste, lice and disease. If we persist with growing open cage farming we will get left behind by foreign land-based competition and the Arran and Scotland food brand image will be damaged for everyone along with Arran's image as a great tourist destination, which cares about its landscape and seascape. Peel Ports in part of their Hunterston Master Plan have proposed a land based salmon farm with an annual GVA of >£5 million and 60 jobs, the abandoned Big Idea site on the Ardeer Peninsular could also be a possible site for land based fish farms. These parts of mainland North Ayrshire would welcome investment for sustainable employment and these brownfield site alternatives have not even been considered by the Scottish Salmon Company in their planning application. They have opted instead for the same old, same old visual impact on our landscape and seascape and using their farms as open sewers into our waters. It is not sustainable and not what Arran's community and most businesses want to be associated with.

For further information on how these alternatives are rapidly growing right now, despite SSC putting out publicly that they are not viable options, please undertake your own google searches and see some examples from the following sites; <https://thefishsite.com/articles/a-sneak-preview-of-norways-largest-land-based-salmon-site>, <https://atlanticsapphire.com/our-product>, <https://www.pure-salmon.com/about-us/> We also understand from their submission to the REC committee that FishFrom Ltd., a Scottish company, have planning permission to construct a 2,100 tonne RAS land-based Atlantic salmon farm on the Kintyre peninsula and are moving ahead with their investment.

## **b. Environmental Impact Assessment (EIA)**

The environmental impacts from the proposed North Arran salmon farm development mean that it **breaches the following LDP2 policies: Strategic Policy 1 and detailed policies 6, 8, 15, 16, 22, 24, and 25**. Our detailed comments provided below explain why the conclusion of the EIA that there will be no significant adverse effect from the proposed North Arran salmon farm development is invalid; briefly this is because:

1. Many issues have not been adequately assessed or the findings (such as 'major' adverse landscape impacts) are dismissed out of hand with no substantive evidence to support these claims.
2. The proposed management measures to mitigate impacts of the salmon farm will, in themselves, cause environmental impact. For example, chemical treatment of sea lice within salmon feed and as external bath treatments in order to reduce the likelihood of infection of wild salmonids with sea lice results in toxic chemicals being released into the environment; these chemicals are known to be able to persist in the marine environment with the potential to adversely affect other marine animals such as lobsters and crabs that are fished commercially; the full implications of these chemicals are not assessed in the EIA.
3. For a number of areas covered by the EIA there is a lack of survey data to inform the assessment **despite being required by the NAC scoping opinion** (and SEPA's own CAR license application guidelines) and this has been used as a basis to conclude no adverse effect. In brief, the modelling of waste and chemical discharges is based on the outdated and discredited AutoDEPOMOD software model, there is no hydrodynamic modelling or extended **baseline** benthic survey and therefore cannot be relied upon to assess the risk of environmental damage. If SEPA fail to address this, and do not ensure that their own CAR License application guidelines are followed in their response to NAC planning, as a statutory consultee, then there will have been a clear breach of EIA regulations as NAC will have failed to have had 'access to sufficient expertise to examine the EIA report' (Regulation 4(7)). **This can leave the EIA assessment process open to legal challenge if SEPA are not considered to have discharged their duty adequately and provided the sufficient expertise to NAC planning.**
4. Much is made in the application of the innovative, integrated technology of the SeaQure Farm concept design. This technology is unproven and its main purpose seems to be to aid removal of dead fish and to reduce the handling of the fish for certain stages of the farming cycle. The proposed innovations and enhanced management measures identified in the EIA report are nothing new. None of this addresses the fundamental issues associated with open cage salmon farm: discharge of waste and toxic chemicals into the marine environment, damage to seabed habitats, infection of wild salmonids with sea lice and disturbance to marine mammals from the 32 acoustic deterrent devices. The 'enhanced management measures' referred to in relation to the farm husbandry are no more than standard open cage fish farm procedures and bring nothing new to the proposal that would mitigate the actual impacts of this type of industrial-scale, open cage aquaculture.
5. There is no assessment in this application of the increasing risks through time to this development and the seas around it which result from climate change and warming of the seas of the Clyde Marine Region; in fact, the SSC has scoped these out of the EIA. This continued warming will undoubtedly result in the increasing risk of more toxic algal (biotoxin) blooms and major sea lice outbreaks, which we have seen have already resulted in major farmed salmon mortalities on Scottish Salmon Company farms in Loch Fyne and in Loch Roag respectively. The section of the Marine Scotland Shellfish Hygiene 'risk maps' shown below illustrate the biotoxin risk in the Clyde region; the waters of Loch Fyne and Loch Striven have the risk assessed as medium (amber), while those of east Arran have a high risk (red).



The North Arran salmon farm development will fall between these two areas of biotoxin risk, add to the nutrient supply (eutrophication) and increase the biotoxin risk further. This risk will continue to increase further as our seas warm. **This lack of risk assessment, zero mitigation and the continuous introduction of salmon waste into the Clyde breach LDP2 Policy 25, which clearly states that supported aquaculture developments are required to be sustainable.**

i. Landscape and seascape

Our comments on landscape and seascape provided here explain in more detail why the proposed development will have an unacceptable adverse impact on landscape and seascape and, as a consequence **breaches LDP2 Policy 25 (Supporting Aquaculture), and also breaches Strategic Policy 1 (Spatial Strategy), Policy 6 (Supporting sustainable tourism), Policy 15 (Landscape and seascape) and Policy 24 (Alignment with Marine Planning).**

- The coastline of North Arran has special qualities that make it a significant natural asset for the island, providing rare opportunities in the Clyde to experience such coastal wilderness and, as such, is a special attraction for visitors to and residents on the island.
- The designation of this area as a National Scenic Area recognises these special qualities, making it one of only 40 places in Scotland to be recognised in this way as one of the country's finest landscapes. The Arran Coastal Way (designated as one of Scotland's Great Trails by Scottish Natural Heritage in June 2017) runs along the coast of North Arran and attracts visitors from all over Scotland and the World. The northern part of Arran provides special opportunities to experience such relative coastal wilderness.
- The EIA identifies that there will be major adverse effects on Landscape and Visual receptors as a result of the proposed salmon farm, but then goes on to simply dismiss these impacts as acceptable but with no justifiable argument to support this conclusion.
- The visual impact will be more adverse than presented in the EIA. The assessment fails to fully represent the fish farm structures that will be present - the visual impact information fails to show the walkways and SeaQure spine that will be a substantial part of the structure. In addition, the imagery is commonly shown as viewing the proposed farm from sea level when in fact the Arran Coastal Way is elevated above sea level along this part of the coast, which increases the visual impact by several orders of magnitude. **The SSC continues to present this misleading visual presentation of the structure in their current advert in The Arran Banner (dated 28 September 2019).**
- The visual, light and sound impact from the proposed fish farm will be massive and will extend for over a kilometre along the Arran Coastal Way. These main structures will be visible over an area equivalent to c.33 football pitches (each of 5000 square metres), using the dimensions as presented in the map shown as the SCHEMATIC\_DIAGRAM\_OF\_DESIGN-866958.pdf within the planning application. The impact of this is not the same as transient coastal activities, such as fishing boats, that might be present for a short period of time as they move through an area – the fish farm structures will be permanently visible as a man-made industrial intervention in a wild and undeveloped area.
- The visual intrusion of the farm structure will be made more prominent by the fact there will be workboats visiting the farm every day, with more vessels present when treating and harvesting the salmon, and the cages will be lit with navigational lights as well as underwater lighting to provide extended daylight hours as part of the growing cycle. These will just further emphasise the presence of an industrial farming system in the middle of a quiet and isolated area.
- The conclusion of the EIA that there will be no significant adverse effect from the proposed development on landscape and seascape is invalid and unfounded. The proposed development will have unacceptable adverse impact on a nationally important landscape area and breaches a number of policies in the North Ayrshire local development plan.

ii. Waste and chemical discharges

Our comments on waste and chemical discharges provided here explain in more detail why the conclusions of the EIA are invalid and why proposed development will have an unacceptable adverse impact the marine environment (water quality, marine wildlife and amenity value) and, as a consequence **breaches LDP2 Policy 25 (Supporting Aquaculture), and also breaches Strategic Policy 1 (Spatial Strategy), Policy 6 (Supporting sustainable tourism), Policy 16 (Protection of designated sites), Policy 22 (Water Environment Quality) and Policy 24 (Alignment with Marine Planning).**

- The assessment of waste and chemical discharges in the submitted EIA is grossly inadequate and the conclusion of no significant adverse effect from the waste and chemicals is invalid.
- The assessment of waste and chemical discharges in the EIA is fundamentally flawed as it uses an outdated and discredited modelling approach that is based on primitive assumptions about seabed conditions, water flows and long-term fate of deposited material and applies The quoted Environmental Quality Standards (EQS)

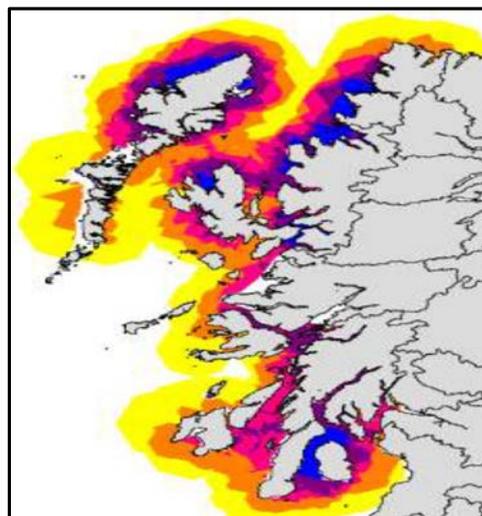
for chemicals have been substantially revised and do not reflect the current levels of knowledge. As a result, it presents a flawed assessment of the dispersion and dilution of waste and treatment chemicals. Work by SEPA (2018) has shown that impacts from open cage salmon farms occur well away from fish farm sites but these impacts are not captured at all in the old modelling approach. SEPA's new regulatory framework now requires more detailed and sophisticated modelling and sets much more precautionary EQSs.

- Even though the North Arran application is for 20 x 120m diameter cages with a maximum standing biomass of 5000 tonnes, for the waste modelling, SSC has treated it as two farms each of 10 cages and 2500 tonnes biomass. This means that the impacts from each set of 10 cages is modelled separately using the older AutoDEPOMOD approach and there has been no cumulative assessment of the 20 cages in combination even though the two sets of 10 cages are right next to each other and all the waste and discharges will combine. The consequence of this is that a cumulative assessment of the impact of waste and chemicals from the proposed development **has not been made in accordance with the EIA Regulations 2017, 5(3), Part 6, 26(2), which require taking into account current knowledge and methods of assessment when preparing the EIA.**
- Even using the old modelling approach, and the SSC's own figures, the nutrient pollution from the North Arran proposed farm at peak production is calculated to be 2000 tonnes per year. This is equivalent to the untreated sewage from a town the size of Troon (14,000 people) entering the water every day. It is clear that with the well-known wind and current activity on that coast that this will be carried in suspension and washing on to the shores of North Arran, onto Sannox Beach and into Lochranza despite anything the SSC concludes to the contrary.
- The chemicals used in the salmon feed and used externally to treat sea lice on salmon are toxic. SSC will retain the use of chemical treatments at this farm and this is documented in their application. SEPA's Shetland study (2018) on cumulative effects of pesticides and treatment chemicals concluded that there was a risk to crustaceans (shellfish) from these chemicals; sea lice are crustaceans and the chemicals work to stop them growing and reproducing. What about other crustaceans in the sea such as crabs and lobsters? The risk to the Clyde and Arran creelers working off NE Arran and their livelihood is not accounted for at all in the EIA or the economic report.

iii. Wild salmon and sea trout

Our comments on the impacts on wild salmon and sea trout provided here explain in more detail why the conclusions of the EIA are invalid and why proposed development will have an unacceptable adverse impact on these species and, as a consequence **breaches LDP2 Policy 25 (Supporting Aquaculture), and also breaches Strategic Policy 1 (Spatial Strategy), Policy 6 (Supporting sustainable tourism), Policy 16 (Protection of designated sites), and Policy 24 (Alignment with marine planning).**

- Wild salmon are at a tipping point in the Clyde Region; wild salmon and sea trout stocks are in a desperate state and they do not need additional pressure. Draft maps produced by Marine Scotland identify the sea area around Arran as being some of Scotland's highest sensitivity areas for wild salmon and sea trout interaction and infection from farmed salmon. A review conducted by the Rivers and Fisheries Trusts, Scotland (National Trust for Scotland, pers. comm.), identified the north end of Arran to be one of the most at risk regions in Scotland. On the map below, the blue areas indicate the areas of highest sensitivity and risk, which includes the proposed site of the North Arran farm.



- The EIA report fails to recognise that both Atlantic Salmon and Sea Trout are statutory designated Priority Marine Features (PMF). Open-cage salmon farms are known to be the source of considerable numbers of sea lice larvae, which are released into the surrounding sea and are well known to have an adverse impact on populations of salmon and especially sea trout at ranges in excess of 30 km (Thorstad and Finstad, 2018). The arguments presented in the application that the impact on salmon is “minor and not significant” are unsubstantiated and without value. There has also been no assessment of the impact on sea trout in the application; the impact of sea lice is known to be greater on these than on salmon. This is a clear case where the precautionary principle needs to be invoked to protect these valuable Priority Marine Features.
- Open cage salmon farming has a serious impact on the health of wild salmon and sea trout; sea lice from the fish in salmon farm cages infect wild stocks of fish and escaped farmed fish dilute the gene pool and compete with wild populations. The seriousness of these impacts is recognised in recommendations from the REC committee report on the salmon farming inquiry that: (Recommendation 45) siting of farms in the vicinity of migratory routes for wild salmon must be avoided and; (Recommendation 46) there needs to be an immediate shift towards siting new farms away from migratory fish routes.
- Currently there is not adequate data on wild salmon migration routes around Arran and in the Clyde to make an informed assessment of the actual impact of the proposed North Arran salmon farm on wild salmonid populations. It is not possible to conclude that the proposed development lies outside of likely key salmonid migration routes in the firth of Clyde. The conclusions in the EIA of no significant adverse effect on wild salmon and sea trout are not supported by relevant evidence and are, therefore, invalid and the precautionary principle needs to be invoked.
- As commented on previously, the suggestion that the ‘innovative’ technology of the SeaQure system will help resolve the impacts of open cage salmon farming, including on wild salmonids, is completely unfounded. The technology is untested (not even a prototype could be presented at the time of their public engagement this year) and the practices described in their Environmental Management Plan rely heavily on their standard current chemical treatments, which have already been shown to be so problematical for the marine environment and ecosystem.

iv. Iconic marine and coastal species (seals, cetaceans, basking sharks and otters)

Our comments on the impacts on iconic marine species provided here explain in more detail why the conclusions of the EIA are invalid and why the proposed development will have an unacceptable adverse impact on these species and, as a consequence **breaches LDP2 Policy 25 (Supporting Aquaculture), and also breaches Strategic Policy 1 (Spatial Strategy), Policy 6 (Supporting sustainable tourism), Policy 16 (Protection of designated sites), and Policy 24 (Alignment with Marine Planning).**

- Arran is the most southerly location on The Hebridean Whale Trail. The north-east coast of Arran from Corrie around to Lochranza is a well-known hotspot for minke whales, dolphins, porpoise, seals, basking sharks and otters. One of the joys of this part of our coastline for visitors and locals alike is to be able to walk by the coast or visit in a boat or kayak with the anticipation of potentially seeing one or more of these iconic species.
- The assessment of impacts from the proposed North Arran salmon farm on these iconic marine species is completely inadequate. It does not include any up to date survey data for these species but instead relies on limited data compiled via a desk study; this data does not reflect the true presence, distribution and abundance of these species around the coast of North Arran. Many observations of marine mammals are not formally recorded and it is only by undertaking focussed surveys over a period of time that the use of an area by these species can be understood. As it stands, the EIA seriously underestimates the importance of the coastal and marine area for these animals. As an example of the inadequacy of the data presented in the EIA, the work undertaken by the Clyde Marine Mammal Project, David Nairn (pers. comm. and their objection to this planning application) has identified persistent presence of numbers of harbour porpoise in the area of the proposed development supporting observations that this is an important area for these species within the Clyde. The shelving seabed around the north part of Arran is also likely to provide an important foraging area for harbour porpoise.
- The assessment presented in the EIA fails to identify the unlawful use of acoustic deterrent devices (ADDs). “The use of ADDs by salmon farms constitutes “deliberate or reckless disturbance or injury to any porpoise, dolphin or whale” and is considered an offence under Scottish law and the EU habitats directive and needs to be enforced by the Scottish Government. ADDs are designed to disturb and exclude marine wildlife. A report commissioned by Scottish Natural Heritage identified that ADDs cause disturbance to cetaceans and seals and

can cause hearing damage and stress (SNH Commissioned Report No. 517). The North Arran salmon farm proposal intends to attach and use 32 of these deafeningly loud, acoustic deterrent devices.

- The structure, lights (above and underwater), feed and sewage from this proposed farm will attract local and passing wild fish bringing them into closer contact with waste and chemicals from the farm and sea lice on the caged fish. We have film of shoals of sprats passing through SSC salmon farm cages elsewhere around Arran. It is unknown what the effect of this fish aggregation will have on local mammal and predatory wild fish behaviour and the increased risk of infectious disease being passed to the wild animal populations. This effect of wildlife aggregation around such a large farm is not taken account of in the Environmental Management Plan.

v. Seabed habitats and Priority Marine Features

Our comments on seabed habitats and Priority Marine Features provided here explain in more detail why the conclusions of the EIA are invalid and, as a consequence the application **breaches the requirements of LDP2 Policy 25 (Supporting Aquaculture), Policy 16 (Protection of designated sites), and Policy 24 (Alignment with Marine Planning).**

- The seabed survey to identify seabed habitats and potential Priority Marine Features (PMFs) is completely inadequate and does not comply with SEPAs guidance. Only a limited visual survey using a Remotely Operated Vehicle (ROV) with a camera has been undertaken covering a very limited area of the development footprint.
- SEPA's own guidance on seabed survey (SEPA's Fish Farm Manual Annex F, referenced in Appendix 3 of 'Land Use Planning System SEPA Guidance Note 17') requires an Extended Benthic Baseline Survey and a Standard Visual Survey for a new fish farm of the size of the one proposed for North Arran. The need for these surveys was also identified in North Ayrshire's EIA scoping opinion. The EIA does not comply with SEPAs guidance or North Ayrshire's scoping opinion as an extended benthic baseline survey has not been completed. This is essential if the seabed habitats and any PMFs are to be adequately described.
- Even from the limited amount of visual data that has been collected (detailed in Appendix I and Appendix J of the EIA) it is clear that there are substantial areas of sand and gravel seabed habitats within the development footprint. These will contain infaunal species (animals living within the sediment) that will not be picked up on a visual survey. An appropriate benthic sample survey is required to sample these habitats. Sand and gravel seabed habitats may well support PMFs such as 'tide-swept coarse sands with burrowing bivalves' or 'maerl or coarse shell gravel with burrowing sea cucumbers'. These PMFs are part of the designated features of the South Arran MPA and it is reasonable to think that they may well be present around the northern areas of Arran. There is no reference to these habitats within the assessment and the presence of sand and gravel habitats is ignored simply because no larger species were observed on the visual survey.
- Even where the visual survey detected the presence of Priority Marine Features ('Burrowed Mud Habitat' and 'Northern Sea Fan and Sponge Communities') these are dismissed as not requiring any further investigation. The Northern Sea fan record found by the visual survey is the most southerly record of this species in Scotland (based on data in the NBN Atlas Scotland) and, as such, is an unusual and important record. Survey effort should have been expanded around where this PMF was recorded to establish the full extent of this habitat (a survey adaptation that is explained in SEPA's Fish Farm Manual Annex F). Instead, the EIA concludes that "the survey area does not contain a significant example of this feature" which is a view that cannot be justified based on the survey work that was done. Burrowed Mud habitat is one of the PMFs of the South Arran MPA and it is reasonable to consider that may well be present around the northern part of Arran. Burrowed mud is clearly present in the vicinity of the proposed development and the Fireworks anemone *Pachycerianthus multiplicatus*, a Priority Marine Feature in its own right, was recorded during the survey. The survey should have been expanded to confirm whether or not this and other key Burrowed Mud feature species are present in any part of the area likely to be affected.
- The impacts of the proposed development on the Northern Sea Fan and Sponge Communities PMF and Burrowed Mud PMF habitat and species are further dismissed in the EIA on the basis of the Marine Life Information Network (MarLIN) sensitivity tool. It is important to understand that the MarLIN sensitivity assessment assesses habitat sensitivity against a set benchmark; the scale of likely impacts arising from any specific development needs to be considered in relation to this benchmark – where likely impacts are greater than those used in the benchmark, the effects will be more severe. It is not clear whether the application-specific impacts have been applied when using the MarLIN sensitivity tool in the EIA and this seriously undermines the conclusions drawn. Basically any occurrences of this valuable and sensitive PMF within the waste seabed footprint of this farm will be destroyed and that effect has been dismissed as is not considered important within the EIA.

- As we have already commented above, the modelling of waste and discharges from the proposed development is inadequate which further undermines the EIA conclusions that there will be no impact on seabed habitats.
- Based on the limited visual survey data collected, the seabed habitats and species in the footprint of the proposed development are described as being “dominated by habitats and species of low conservation priority” (EIA report section 7.5). This conclusion is completely invalid as there is no evidence to support it and, as pointed out above, the area may in fact support a number of important and sensitive Priority Marine Features.

## 5. Sustainability

- a. Claims that open cage salmon farming is sustainable are undermined by the findings of Scottish Parliament REC and ECCLR committee reports. The ECCLR report states that if the current issues associated with salmon farming in Scotland are not addressed the proposed expansion of the industry “will be unsustainable and may cause irrecoverable damage to the environment.” The REC committee in their Recommendation 2 stated ‘The Committee strongly agrees with the view of the Environment, Climate Change and Land Reform Committee (ECCLR) Committee that if the industry is to grow, the “status quo” in terms of regulation and enforcement is not acceptable. It is of the view that urgent and meaningful action needs to be taken to address regulatory deficiencies as well as fish health and environmental issues before the industry can expand.’

The North Arran salmon farm application is for a massive new salmon farm in a highly natural, undeveloped area. The application does not address the known impacts of open cage salmon farming and therefore on many levels cannot be seen as a sustainable development. SEPA, SNH, Marine Scotland, the cross-party ECCLR and REC parliamentary committees have done a lot of work in the last two years highlighting the risks associated with open-cage salmon farming (such as, sea lice infecting wild salmon and sea trout, chemical impacts shellfish, waste impacts on the seabed and noise disturbance); these risks and likely impacts are not adequately addressed or acknowledged in the North Arran application, the socio-economic report or the Environmental Management Plan.

- b. Sustainable development is at the heart of North Ayrshire’s Local Development Plan. We have already referred to the findings of the Scottish Parliament REC and ECCLR committee reports in relation to the sustainability of open cage salmon farming in our comments on the North Arran proposal’s lack of compliance with the North Ayrshire Local Development Plan. In addition to this and as a specific example highlighting the lack of sustainability of this industry we want to comment specifically on the proposed use of cleaner fish in the salmon cages, specifically on the use of wild caught wrasse.

The application does not state how many wild-caught wrasse are to be used during the production cycles. Increased use of cleaner fish is identified as a management measure to control sea lice. There is no information about the number of cleaner fish that will be required and there is no information about the proportion of these that will be sourced for the proposed development as wild caught fish (ballan wrasse). The EIA states that these wild caught fish will be from sustainable sources, but there is no such source recognised at present. Although the Scottish Salmon Producers Organisation’s “Voluntary control measures” for the live capture of Scottish wild wrasse set a minimum voluntary standard for some aspects of wild wrasse harvesting, they do not in any way ensure sustainable harvesting of wild wrasse species. There is no quota on the numbers caught and the voluntary measures do not provide a stock assessment of the wild wrasse stocks nor systematically monitor catch effort. The scale and impact of wrasse fishing around Scotland and the rest of the UK is poorly known. These fish are territorial and species such as ballan wrasse are long lived (20+ years). This makes them highly susceptible to localised over-exploitation and depletion with knock-on impacts on the seabed habitats where they live.

In general, at the end of the farm production cycle (2 years) the cleaner fish are killed and new fish brought in for the next production cycle to avoid potential transfer of diseases. There is no evidence to support the claims that use of wild caught fish as cleaner fish in salmon farms or any other type of aquaculture is sustainable. This is just one example of where the claims made in the EIA of this being a sustainable development proposal are seriously flawed.