



HJALTLAND



Hjaltland Seafarms Ltd.
Gremista, Lerwick
Shetland ZE1 0PX

Rob Ware
Secretary, Sleat Community Council
Tigh a Chiobair
Ord
Sleat
Isle of Skye
IV44 8RN

June 19, 2013

Dear Rob,

Re Hjaltlands visit to Sleat, Isle of Skye, 21 May

Thank you for your attendance at the Sabhal Mor Ostaig drop in session and your response arising from this and the subsequent public meeting. I am glad to hear that the residents of Sleat who attended the drop in session found it useful. Grant and I found the sessions to be very beneficial and we gained useful information that will inform how we proceed with the proposed developments.

I will address each point raised in order and I hope the information I can provide at this stage will be of use. Without having the surveying and modeling results some points will have to be answered at a later stage.

- **ADD: Do these induce deafness in sea mammals and what is the scientific evidence of the effects of these devices?**

There is little evidence and consensus within the literature available and most base their conclusions on extrapolations. It is possible that sea mammals could have their hearing impacted by ADD's if they remain in the area while the ADD is active although there is no direct experimental evidence for this. In 2010 the Scottish Aquaculture Research Forum (SARF) commissioned the Sea Mammal Research Unit at the University of St Andrews and Ecologic to undertake an "assessment of the impacts and utility of acoustic deterrent devices". <http://www.sarf.org.uk/cms-assets/documents/28820-18834.sarf044---final-report.pdf>

In 2002 SNH commissioned the Sea Mammal Research Unit at the University of St Andrews and Ecologic to produce a report titled "potential impacts of acoustic deterrent devices on Scottish marine wildlife" <http://ecologicuk.co.uk/SNHADDReview.pdf>

If seal predation is ongoing while an ADD device is active then it is not being effective and as such Hjaltland usually does not continue ADD use for more than one month. Hjaltland will use an ADD that does not emit a continuous sound as it is triggered by fish behavior. By limiting the time an ADD is deployed and by using an ADD that selectively emits we hope to minimize the impact of ADD devices on marine mammals.



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- **What effect will the fish farms have on the local fishermen and will they be blocked out from these sites?**

Please see appendix 1. We would advise local fishermen to discuss this with the fishermen who operate out of Dunvegan pier as they have experience of working alongside our developments.

- **Will the 8 jobs promised be spread over the three sites and will all these be based on Skye? If you are unsuccessful for gaining consent for all three sites what revision of jobs created would there be?**

The eight full time jobs that will be directly created will be spread over the three sites. If we received consent for only one site this would generate four direct jobs, consent for two sites would create six jobs. All these positions would be based on Skye and we would look to employ locally. On top of these jobs there will be a number of auxiliary positions, such as divers, hauliers, engineers and processing factory workers, generated or maintained due to these proposed developments.

- **Do you propose to proceed with all three sites if the necessary consents are granted or do you anticipate a selection process?**

We would opt to proceed with all three sites if we received planning permission and the necessary consents. It may be that during the surveying process we decide that a proposed site may not be suitable and we would therefore not proceed to a planning application.

- **To what extent will there be heavy road traffic on the Tarskivaig road if you propose a shore base there, and what are the proposals for access beyond the public highway?**

As a result of discussions at our drop in sessions we are no longer looking to site our shore base in Tarskivaig. All transportation of feed and fish is undertaken by sea minimizing any increase in road traffic as a result of our proposed developments.

- **Where will the proposed large storage building be located? How will the visual, environmental and ecological impact of the building be mitigated?**

We are still considering a number of options including the possibility of trying to acquire one of the two existing fish farm shore bases within the area. The building of any new shore base and associated infrastructure will be subject to a separate planning application/environmental impact assessment and mitigation measures will be discussed during this process.

- **What are the PARAMETER S prospects for tidal dispersal and problems for visible and invisible particulate movements and excess nutrients?**

I am planning to undertake hydrographic, visual and benthic surveys over the next few weeks/months and will be able to give site specific answers regarding dispersal and particulate movement once this has been completed. This information will be supplied to SEPA as part of an application under the controlled activities regulations (CAR) license process, see appendix 2 for more information.

- **Will the company agree to the conditions imposed by SEPA and SNH to minimize impacts?**

Hjaltland will adhere to the conditions imposed by SEPA, SNH and other government agencies involved in the regulation and monitoring of fish farming to minimize impacts. We will comply with any monitoring required and will undertake any actions deemed necessary. It is in our best interest to remain compliant as licenses are likely to be revoked otherwise.



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- **What impact will SLICE (Emamectin benzoate) have on fish/mammals and the seabed and how will you address concerns regarding excess quantities of this chemical on the seabed? ALSO WHAT ARE THE AZE's PROPOSED?**

"Provided guidelines for safe use are followed, Emamectin benzoate should not harm wildlife or the environment. It is rapidly eliminated and excreted by fish and does not bioconcentrate in any organisms. Due to its low solubility in water, most releases will end up in sediments or particulate material. It is usually dispersed fairly efficiently, but is otherwise not particularly mobile. The amount of time taken for it to be broken down depends on the conditions (availability of oxygen, acidity), but it is usually removed within a few months. However, one of the main products of its breakdown is equally as toxic. Releases of Emamectin benzoate are only likely to have an impact on a local scale and are not thought to be of concern at a global level." SEPA

<http://apps.sepa.org.uk/spria/Pages/SubstanceInformation.aspx?pid=171>

The use of SLICE is regulated and monitored by SEPA under the controlled activities regulations (CAR) license process, see appendix 2 for more information. Seabed samples are used to monitor the amount of SLICE in the sediment, SEPA impose environmental quality standards which if breached will lead to a reduction in biomass or the site having to undergo an extended fallow period.

I have yet to obtain the necessary hydrographic data to model the sites so the AZE is still undetermined.

- **Criticisms were expressed of the previous application by Marine Harvest for the Loch Slapin site and 91 objections were received. How would you respond to these criticisms and objections?**

Members of the public are welcome to comment and offer constructive criticism through the planning application process and we will respond to the planning officers regarding the comments made.

- **Commercial fishing interests have strong concerns about the proposal. How does the company respond to their concerns?**

Please see appendix 1. We would advise local fishermen to discuss this with the fishermen who operate out of Dunvegan pier as they have experience of working alongside our developments.

- **Is the timescale for June 2014 for start-up still realistic?**

We are looking to submit planning applications towards the end of 2013 and if we were to gain planning permission we would then have to apply for further licenses, such as the CAR license from SEPA. It is likely that a planning decision will be in place by June 2014 but production is unlikely to have started.

- **Would the company look at the possibility of closed containers rather than open cages?**

To date, the production of farmed Atlantic salmon in closed containment facilities has proven to be financially unsustainable. However, there are a number of experiments currently being undertaken to investigate the possibility new closed containment systems. If these systems prove to be successful and sustainable then we would investigate the possibility of using these closed containers.



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- **Concerns were expressed at your company's absence from the public meeting which was arranged for the purpose of collectively informing the community. The meeting was conducted in a balanced and informative way and it is disappointing that you chose to decline to attend the meeting despite the fact you were in Skye at the time. How do you respond to this?**

We did invite the Sleat Community Council to a meeting to discuss our development plans, but this invitation was declined. The decision to decline the invitation to the public meeting was taken as we believed that the most effective platform for exchanging information at this stage of the process was through the drop in sessions that we held in Sleat, Elgol and Broadford. Public meetings tend to be dominated by a few individuals and are not the most effective vehicle for consultation as the flow of information is mostly one way. By holding the drop in sessions we were able to discuss the development one to one or in a small groups and this facilitated a great exchange of information. By speaking on a one to one basis or in small groups we could focus on the issues that were of most importance to our guests. The feedback we gained has informed the decision not to pursue Tarskivag as a possible location for a shore base and it will inform future decisions as we progress with this development.

- **Concerns were expressed about the use of chemicals/copper solutions/antibiotics and the high incidence recently of gill disease in farmed fish. How would you propose to control these AND WHAT MEDICINES WOULD BE USED TO CONTROL SEA LICE?**

Chemicals – Therapeutic medicines may be used under veterinary instruction and are regulated and monitored by SEPA under the CAR license process.

Copper solutions – Copper is used as an antifouling agent on nets although its use is reducing as new effective methods of net cleaning become available. It is important, for fish health, that adequate oxygenated water flows through the fish farm and a build up and fouling can impede this flow. Hjaltland use Aqua-net, a copper based antifouling.

SEPA's 2007 "Marine Fish Farming Data Review" discusses the discharge of Copper from fish farms and concluded that

"Multivariate analyses suggested that sediment concentrations of emamectin benzoate, copper and zinc had no toxic impacts on benthic communities."

"Mean copper and zinc sediment concentrations were below SEPA's 'possible effect' quality standard for the cage edge and 25m stations."

"Copper and zinc concentrations at the cage edge and 25m were significantly higher than the reference sites suggesting that copper from the cage nets and copper and zinc from food and faeces make a significant contribution to the measured concentrations of these metals close to the cages."

"No evidence was found to suggest that either copper or zinc have a negative effect on macrobenthic community structure around farm cages. This may be because copper and zinc may bind to sulphides and/or organic material in the sediment, thereby reducing their bioavailability to non-toxic levels."

SEPA

http://search.sepa.org.uk/sepa/C=eJwdy0EOgzAMRNE5ShY9AL1Dxa6bXgC5MCqWEpPagXJ8oMv*pP*FU1yNgdeYUy9e0kOapBc35Q8ZNBiCVVDnxdh0RIfMUgR3SK2!7CfEWGDc6LjtNYYs9olr*RdN3pkTmq!8ZHCZdl1zOwAaZCjm?action=preview&q=Marine%20Fish%20Farm%20Data%20Review&previewindex=0&url=http%3a%2f%2fwww.sepa.org.uk%2fwater%2fwater_regulation%2fregimes%2faquaculture%2fmarine_aquaculture%2fidoc.ashx%3fdocid%3d40ab5f7a-3fc8-465f-9627-ecffee6bc314%26version%3d-1



ORGANIC FOOD FEDERATION



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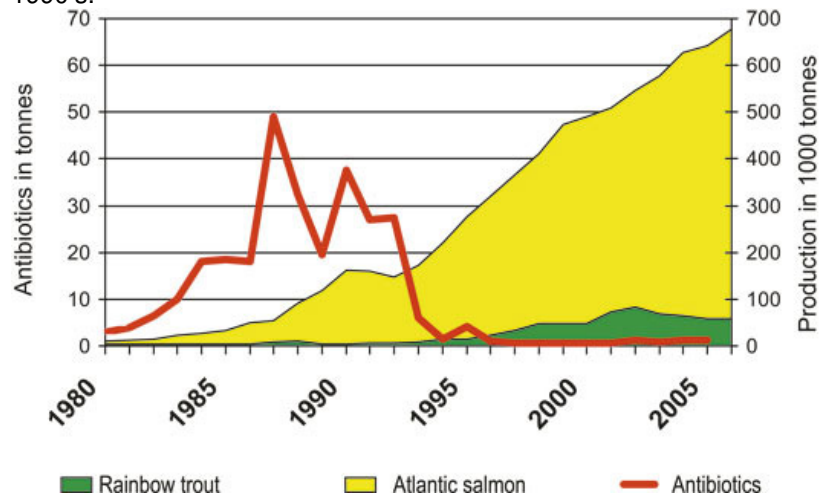
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Antibiotics – Antibiotics are only prescribed by a vet to treat illness and are not used as a preventative measure or to promote growth. To reduce the use of antibiotics all fish will be vaccinated against frunculosis, IPN and vibriosis prior to entry into the site. The following graph shows antibiotic use in aquaculture has substantially reduced over the past twenty years and remained stable since the late 1990's.



Source Directorate of Fisheries and Norwegian Food Safety Authority
<http://www.regjeringen.no/en/dep/md/documents-and-publications/government-propositions-and-reports-reports-to-the-storting-white-papers-2/2006-2007/Report-No-14-2006-2007-to-the-Storting/7/7.html?id=495462>

Amoebic Gill Disease (AGD) – please see press release from the Scottish Salmon Producers Organization on http://www.scottishsalmon.co.uk/userFiles/779/SSPO_agd_statement_final_sep_12.pdf

Sea Lice – Hydrogen Peroxide is used to treat sea lice and as it breaks down to water and oxygen it is non-toxic in the marine environment. Hjaltland would also apply, through the CAR license process (see appendix 2), to use the following therapeutic chemicals to treat sea lice –
 In feed treatment – Emamectin Benzoate (SLICE).
 Bath treatments – Azamethiphos (Salmosan), Cypermethrin (Excis) and Deltermethrin (AMX).

- **Fears were expressed about the loss of the local commercial fishery and that any socio-economic benefit from these fish farms would be cancelled out by the loss of these fisheries. How do you respond to these fears?**

Please see appendix 1. We would advise local fishermen to discuss this with the fishermen who operate out of Dunvegan pier as they have experience of working alongside our developments.

- **How will the sites be accessed?**

We are still considering a number of options on how the site will be accessed, including the possibility of acquiring one of the two existing unused shore base within the area. All transportation of feed and fish is undertaken by sea minimizing any increase in road traffic as a result of our proposed developments.



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- **The meeting expressed a wish for hard factual information based on scientific research. Are you able to supply answers based on scientific information?**

Yes. We use a variety of sources such as scientific journals, government agencies and industry experts to gain information based on scientific research. If there are specific areas that you would like factual information on please feel free to ask.

- **The view was expressed that according to the Rio Convention and the 'precautionary principle', nothing should be deposited on the seabed without full knowledge of what it is and its possible effects. Do you agree with this and will you adhere to this if the farms go ahead?**

We can predict using SEPA approved modeling software, how discharges such as feed, faeces and therapeutic chemicals from fish farms will act and their possible effects. Regulation and monitoring is undertaken by SEPA under the controlled activities regulations (CAR) licensing process. We will not deposit any substances requiring a license without first obtaining the consent and this will involve assessing any possible impacts. Where new information highlights issues, or new products become available, we will follow government advice and implement any mitigation measures available.

To be granted planning permission and the necessary consents to operate a fish farm we have to provide evidence to government agencies showing how we will comply. If the agencies, SEPA, SNH, MSS etc are not satisfied we will not be granted a license and if we do not comply with the license conditions it could be revoked so it is in our best interest to maintain compliance. The government agencies look at worst case scenarios when determining to grant or refuse a license and this brings in the precautionary principle.

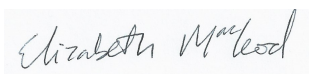
- **Will you adhere strictly to no more than one common seal kill per year as described in your pamphlet?**

Hjaltland will adhere to this statement. So far, we have exceeded this statement in our other Skye sites and have not had to dispatch any seals within Loch Dunvegan. Parts of Loch Dunvegan are designated as an SAC for seals.

I hope to proceed with the surveying work for the three sites towards the end of this month and I will keep you updated as I proceed. As discussed within this letter it has been decided, as a result of discussions at the drop in sessions, that Tarskivaig would not be a suitable location for a shore base and that there are two unused fish farm shore bases within the area. Hjaltland is now looking at the possibility of taking on one of these existing bases instead of building the infrastructure from scratch.

I hope the information contained within this letter is of use and please feel free to contact Grant or myself if you have any further queries.

Best regards



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APPENDIX 1

Commercial Fisheries

The site will remove a small area of potentially suitable fishing ground and it is likely that directly beneath the cages, in the area 'degraded' due to organic enrichment, that Nephrops will be excluded. Minimising feed wastage will help to reduce the area affected, minimising the loss of suitable benthos for Nephrops. It will still be possible to set creels within the grid area, as is the case at the existing Skye sites, and it is likely that Nephrops numbers will increase along the gradient of organic enrichment.

Any concern regarding the use of chemical therapeutics in the vicinity of shellfish production is addressed by the CAR licence issued by SEPA. This does not allow medicinal residues to accumulate above strict Environmental Quality Standards set at specific distances from the farm, therefore any possible impact is restricted to a small area of the loch in close proximity to the farm. As the proposed developments are over 1km away from any shellfish production this should not be a concern.

In Loch Slapin and Loch Eishort fishing is mainly for Nephrops. Fishing effort for Nephrop tends to be concentrated within, although not restricted to, the 10m to 60m contour. Trawling does occur within the area but is limited to a few weeks per year in the deeper water.

In Loch Slapin the area seen as suitable for creel fishing is approximately 4.64km². The current consented, but not operational, fish farm within Loch Slapin could occupy 0.04km² of this area. The proposed development will cover a further 0.04km² leading to an area of suitable fishing ground covered by fish farm consents within the Loch of 0.08km² or 1.72%. The financial viability of the boats should not be affected by this development as the total area covered is less than 2%.

There is currently one consented, but not operational, fish farms within Loch Eishort. The area of suitable creel fishing grounds in Loch Eishort is approximately 7.55km² and the proposed development could cover an area of 0.04km² or 0.08km² when the unused consent is considered. The area covered, including the unused consent, will be 1.06% of the suitable fishing area. The financial viability of the boats should not be affected by this development as the total area covered is less than 2%.

There are currently no consented fish farms within Outer Loch Eishort. The area of suitable creel fishing grounds in Outer Loch Eishort is approximately 26.063km² and the proposed developments will cover an area of 0.04km² or 0.15% of this. The financial viability of the boats should not be affected by this development as the total area covered is less than 2%.

Cumulatively the three proposed sites and the unused consents within Loch Slapin and Loch Eishort will cover an area of 0.20km². The suitable area for creel fishing within Loch Slapin, Loch Eishort and Outer Loch Eishort is approximately 38.253km² and the proposed sites, including unused consents, will cover 0.52% of this. The financial viability of the boats should not be affected by this development as the total area, including unused consents, covered is less than 2%.



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APPENDIX 2

The Water Environment (Controlled Activities) (Scotland) Regulations 2005, the CAR Regulations.

<http://www.legislation.gov.uk/ssi/2011/209/contents/made>

In order to obtain a CAR licence, the Operator is required to collect hydrographic, visual and benthic data from the site. The visual and benthic data can indicate the presence of any protected species or habitat (EU Habitat Directive) as well as providing baseline data. From the hydrographic data obtained the site is modelled to determine the permitted biomass and the associated chemicals allowed and their corresponding quantities using SEPA's modelling package, autoDepomod. SEPA's modelling package, bathauto, is used to determine the chemicals allowed and their corresponding quantities for therapeutics administered as bath treatments.

SEPA's approach to consent to the use of the in-feed therapeutants is based on limiting the maximum concentration of chemical within the surface layer of the seabed. The maximum quantity of chemical allowable in a single growth cycle determined by the maximum quantity of chemical applied in a single dose that does not exceed SEPA's standards (EQS values) within particular areas of the seabed (AZEs). This presents a worst-case scenario of the maximum amount of chemical being applied in one single treatment. SEPA has set an "upper limit" on the quantity of chemical that may be applied to a site in a growth cycle. This is a 5 times peak biomass for EmBZ (SLICE). In certain circumstances where a large amount of material is lost from the model grid, these upper limits may be reduced by the conditions imposed in the final consent documentation.



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