



Scottish Natural Heritage Dualchas Nàdair na h-Alba

All of nature for all of Scotland
Nàdar air fad airson Alba air fad

Director of Planning and Development
The Highland Council
Glenurquhart Road
Inverness
IV3 5NX

FAO: [REDACTED]

Your ref: 19/02076/FUL

Date: 6 September 2019

Dear [REDACTED],

TOWN & COUNTRY PLANNING (SCOTLAND) ACT 1997 CHANGE OF EQUIPMENT AND RELOCATION OF EXISTING SALMON FARM AT LEINISH, LOCH DUNVEGAN, ISLE OF SKYE

Thank you for consultation regarding the above.

Summary

In our view it is unlikely that the proposals as currently described will have a significant effect on harbour porpoise or common seal associated with the two Special Areas of Conservation. Any future proposals to change the anti-predator methods should be re-assessed and we recommend that you consider whether it is necessary to impose conditions to that effect.

Background

The proposal is to change the equipment at an existing fish farm from 10 x 90m circumference cages to 8 x 120m cages. The equipment would extend further north than the existing farm. Maximum biomass would increase from 1700T to 2100T and a CAR licence variation has already been granted by SEPA for this change.

A previous planning application was submitted for substantially the same development in December 2017 (17/05689/FUL). We had detailed discussions with Highland Council and the applicant regarding possible use of secondary anti-predator nets and Acoustic Deterrent Devices (ADDs). That application was withdrawn in February 2018. We welcome the current proposal to operate the farm without using those anti-predation methods.

Appraisal of the impacts of the proposal and advice

- Ascrib, Isay and Dunvegan Special Area of Conservation (SAC)

The proposal lies close to and could affect Ascrib, Isay and Dunvegan SAC which is designated for its common seal population. The site's status means that the

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requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") or, for reserved matters the Conservation of Habitats and Species Regulations 2017 apply. Consequently, The Highland Council is required to consider the effect of the proposal on the SAC before it can be consented (commonly known as Habitats Regulations Appraisal). The SNH website has a summary of the legislative requirements:

(<https://www.snh.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations>).

In our view, it is **unlikely that the proposal will have a significant effect on common seals within Ascribs, Isay and Dunvegan SAC**, either directly or indirectly. An appropriate assessment is therefore not required. We have reached this judgement because:

- The applicant proposes to use high break-strength mono nylon cage nets, tensioned using sinker tubes and slider weights; double netting at the bottom of the cages; an uplift system for the removal of morts. They state that this equipment has been successfully used in Shetland with no predation by seals, no need for ADDs and no seals shot.
- The applicant states that they have 'no plans to use separate anti-predator nets'.
- They have committed not to use ADDs.

Therefore the risk of seal mortality or disturbance arising from this development is low. However, you may wish to consider whether it is necessary to condition the anti-predator measures in order to maintain this situation in the future.

Inner Hebrides and the Minches Special Area of Conservation (SAC)

The proposal lies within Inner Hebrides and the Minches SAC designated for its harbour porpoise. The legislative requirements for this site are as detailed above.

In our view, it is **unlikely that the proposal will have a significant effect on harbour porpoise within Inner Hebrides and the Minches SAC**, either directly or indirectly. An appropriate assessment is therefore not required. We have reached this judgement because:

- The applicant proposes to use high break-strength mono nylon cage nets;
- They have committed not to use ADDs which may disturb the porpoise.

Therefore the risk of disturbance arising from this development is low. However, you may wish to consider whether it is necessary to condition the use of ADDs in case they are proposed in the future.

3. Landscape & visual

Leinish fish farm lies within the North-West Skye Special Landscape Area (SLA) which is a regional landscape designation.

A Landscape and Visual Impact Assessment was carried out by a chartered landscape architect in April 2017. We recommended the assessment should focus on visual impacts but the report offers little detail on this topic. However the visualisations are of good quality and allow us to make our own assessment of the proposals.

Due to the intricate coastline of Loch Dunvegan and the back-clothing when viewed from the opposite shore, the existing site is not particularly prominent except from close by (Husabost, Totaig and road near Skye Silver).

The photomontages demonstrate that the proposed changes (in particular moving the farm north) will result in a minor to moderate increase in the visibility and prominence of the fish farm from viewpoints on the west side of the loch.

However, the farm remains well aligned with the adjacent coast and remains subordinate in scale to the open water of the loch (including in views from the east side of the loch where multiple fish farms are visible). The decision to keep the feed barge at the south end of the farm reinforces the visual linkage with Leinish Bay. It also increases the chances of the barge being back-clothed by the dark coloured woodland in views from the opposite shore of Loch Dunvegan.

Overall, we advise that, when compared with the existing farm, the proposed changes are unlikely to have more than local impacts and will not have a significant effect on the Special Qualities of the SLA.

4. Benthic habitats

Benthic visual surveys were carried out September 2017. Two ROV transects were run, starting at the edge of the existing cages and travel N and E. The footage is good quality, allowing assessment of the biotopes present across the expanded depositional footprint.

The footage shows fairly uniform burrowed mud habitats throughout the survey area. The species present are typical of this habitat and none of the rarer biotopes, and few of the rarer macro-faunal species, were recorded. Grab sample data is available from monitoring the existing fish farm site and is consistent with this assessment. We advise that these proposals do not raise any issues of national interest regarding PMF habitats or species.

Please let me know if you would like clarification or any further advice regarding this case.

Yours sincerely,

Alex Turner
Area Officer, Skye and Lochalsh
alex.turner@snh.gov.uk

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: Noise guidance - paper to CSG
Date: 12 September 2019 09:30:39
Attachments: [image003.jpg](#)
[image005.gif](#)
[image006.gif](#)
[image009.jpg](#)
[image010.jpg](#)
[image011.jpg](#)
[CSG_1909_03_Threshold-approach-to-underwater-impulsive-noise.docx](#)
[CSG_1909_03a_Annex1.docx](#)

Dear all,

Please find attached the paper (CSG_1909_03) prepared on the noise guidance for CSG 17-18th September. The current noise guidance is attached also as an Annex to the paper.

Apologies for not being able to prepare this in consultation with you all, but timings were too tight. We have tried to include and respond to stakeholder queries on the basis of the stakeholder and regulator workshops and inter-agency discussions.

The draft guidance attached is also not final – as you know, we continue to work on it on the basis of ongoing consultations.

If you have any thoughts on the attached then please do let us know. All useful preparation for the CSG if we understand agency position.

Many thanks
All the best
Kelly

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Threshold Approach to Underwater Noise Assessment and Management in Harbour Porpoise SACs

Cover note by: [REDACTED]

Summary

The following paper re-presents the SNCB threshold approach to underwater noise assessment and management in harbour porpoise SACs. The approach was first presented to CSG in September 2017 and was endorsed by CSG as the foundation for SNCB advice to regulatory authorities and other stakeholders (excluding its application in Scotland¹).

The risks of CSG not re-affirming support for the approach are presented, as are developments that have taken place since 2017.

Action Requested

CSG are requested to re-affirm their 2017 decision to endorse the threshold approach & associated guidance.

¹ Application in Scotland was not considered necessary primarily due to a different set of noise issues relevant to the single Scottish harbour porpoise SAC in the Inner Hebrides & Minches.

Threshold Approach to Underwater Noise Assessment and Management in Harbour Porpoise SACs

Paper by: [REDACTED]

1. Introduction

In September 2017 CSG discussed a time-area threshold approach to underwater noise management in harbour porpoise SACs² and were presented with the joint agency (excluding Scotland³) draft guidance for approval. CSG endorsed the recommended approach with a strong emphasis on adaptive management and the intention was to publish the guidance for use by regulatory authorities at that time.

Due to continuing concerns by the regulators at that time, publication was postponed while further commentary was received, and the regulators formed a pilot working group on matters of implementation. While points of detail have continued to be queried and addressed through SNCB inter-agency working mechanisms, the real crux of the problem has always been implementation of the approach by regulatory authorities. Implementation requires in-combination assessment and management across sectoral and regulatory boundaries (e.g. across renewable energy and oil & gas sectors). The primary activities of management concern outside of Scotland are pile driving, seismic exploration and UXO clearance operations, all of which create loud impulsive underwater noises.

An impasse has persisted which has been unsatisfactory for all stakeholders and the guidance has remained unpublished. In recent months DEFRA has stepped in to take a lead facilitation role, convening and chairing regulatory meetings and most recently a stakeholder workshop on 12 July 2019. The main objective of the stakeholder workshop was to give all stakeholders a chance to say their piece and to move the debate to a point where the guidance is accepted (in the absence of viable alternatives) and work can move forward to practical implementation.

The workshop was a significant step forward and practical points of implementation started to be seriously aired. While there are theoretically other approaches (e.g. statutory limits on sound levels propagated – currently advocated by the NGOs) no practical alternatives to the SNCB approach have been forthcoming.

As part of the overall re-invigoration process, JNCC has undertaken to provide further points of transparency and clarification to the stakeholder group. In addition, JNCC agreed to seek a re-affirmation from the inter-agency (SNCB) Chief Scientists Group of the time area threshold approach and associated guidance, given the elapsed time since last approval.

The draft final revised guidance document is provided as a separate Annex 1 document to this paper.

² CSG17_septNI_09_CONFIDENTIAL. *Decision on the Area Threshold Approach to Underwater Noise Assessment & Management in Harbour Porpoise SACs*

³ Primarily due to a different set of noise issues relevant to the Inner Hebrides & Minches SAC

2. Quick recap on the 2017 CSG agreement

The guidance is an aide to regulators in meeting the Article 6(3) habitats directive test for plans and projects – i.e. that plans and projects [meaning ‘human activities’] should not adversely affect the integrity of protected sites – in this case harbour porpoise SACs. Article 6(3) of the habitats directive requires (human) activities to undergo an assessment to determine whether or not they will have an adverse effect on site integrity. The focal issue here is underwater noise disturbance of harbour porpoise as relates to the disturbance attribute of the site conservation objectives – namely that there is no significant disturbance to the species.

The Conservation Objectives for the harbour porpoise sites (outside of Scotland) are:

To avoid deterioration of the habitats of the harbour porpoise or significant disturbance to the harbour porpoise, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for the UK harbour porpoise.

To ensure for harbour porpoise that, subject to natural change, the following attributes are maintained or restored in the long term:

1. The species is a viable component of the site.
2. There is no significant disturbance of the species.
3. The supporting habitats and processes relevant to harbour porpoises and their prey are maintained.

The SNCB approach to noise assessment is one of cumulative noise assessment across activities / industry sectors with the aim of assessing and managing the cumulative footprint of loud impulsive noise sources within a SAC boundary.

In September 2017, CSG endorsed the recommended 10% seasonal average disturbance threshold, meaning that porpoise can be ‘sonically excluded’ from up to 10% of the area of a SAC (averaged within a season) before a conclusion of adverse effect on site integrity is triggered. Put differently, this translates to 10% of the total SAC area (or habitat) being unavailable to harbour porpoise during the course of a season. Note that there is also an instantaneous (daily) limit of 20% of the area embedded within the approach – i.e. disturbance footprint should never exceed 20% of the SAC area (meaning that porpoise should never be excluded from more than 20% of the SAC area (or habitat) in any one day).

CSG also asked for strong emphasis that adaptive management is part of the approach.

3. What are the key maritime activities in focus

It is worth noting that seawater is a superb sound conducting medium, meaning that underwater noises radiate out considerable distances from a point source. The sound sources of primary concern in the UK Economic Exclusion Zone (EEZ), acknowledging the particular issues in Scotland which are not addressed here, relate to a small number of big industry activities:

3.1. *Pile driving*

Comes in various shapes and sizes but the primary concern is large steel monopiles for windfarm base installation. In essence a very large hammer is used to drive large diameter monopiles into the seabed. This is a high energy activity that creates very high peak level sound pulses underwater. Note that there are alternative foundation types for offshore windfarms – such as pin piles (lower energy), gravity bases and suction cups. The choice of method is usually determined by a combination of factors including geological conditions, ease of deployment and cost. Note that sound production is a by-product of piling activity and not the objective, meaning that noise abatement techniques are theoretically⁴ an option.

3.2. *Large scale seismic surveys*

Employ arrays of high-pressure air-guns towed behind ship to produce loud, repetitive underwater sound pulses. This technology is used for acoustic penetration of the seabed and sub-surface rock strata to visualise geological formations and search out potential oil and gas bearing structures over wide areas of sea. There can also be a temporal element to this at a reservoir scale, to re-examine the geological evolution of reservoirs during the production lifetime as hydrocarbons are extracted. There is currently no viable alternative to seismic survey for these purposes. Note that sound production is the objective of seismic surveys, meaning that noise abatement is extremely challenging.

3.3. *Unexploded ordnance clearance*

Is required for certain marine construction projects, including major infrastructure projects such as offshore windfarms and cable laying. The hotspot for UXO clearance is the southern North Sea, where returning WW2 bombers typically dumped unused ordnance because it would have been unsafe to land with the ordnance onboard. There are thousands of pieces of unexploded ordnance in the southern North Sea [see Annex 2] and projects in the area are usually accompanied by UXO clearance campaigns in the project footprint. UXO clearance is typically a case of controlled detonation, resulting in high energy impulsive underwater sound. Note that sound production is a by-product of UXO clearance, meaning that noise abatement, although challenging, could be an option⁵.

⁴ Developers have been reluctant to use noise abatement techniques in the UK for a number of reasons including cost, feasibility, maturity of technology and health & safety.

⁵ There is a slow burn technique for UXO clearance, but it does not currently have a foothold with UK offshore wind developments.

4. What are the key points of contention (and what has changed since 2017)

There have been a number of points of contention raised in relation to the SNCB approach since its inception, mainly driven by a limited set of empirical evidence.

4.1. *The choice of time/area thresholds*

The choice of threshold value is effectively arbitrary but there is a rationale for it.

The threshold approach to underwater noise disturbance was developed by the inter-agency marine mammal working group. The approach sets a cumulative impulsive noise footprint threshold – i.e. the proportion of the SAC habitat that is rendered unavailable due to acoustic disturbance. The threshold was developed in the context of the ASCOBANS⁶ conservation objective, which aims ‘to allow populations to recover to and/or maintain 80% of carrying capacity in the long term’. In the absence of other data/metrics to inform what would be a significant reduction in habitat, the SNCBs chose to use this objective to provide guidance on what magnitude of temporary habitat loss might be considered significant in SACs. This is based on the assumption that there is a directly proportional relationship between loss of access to habitat and carrying capacity and a further assumption that the distribution of porpoise density is uniform within the site⁷.

A 10% seasonal disturbance threshold was proposed for the SACs, meaning that porpoise can be excluded from up to 10% (on average within a season) of the area of a site before a conclusion of adverse effect on site integrity is triggered. Porpoise SACs were selected on the basis of persistently higher densities within them than surrounding areas. The threshold can be adapted in light of new evidence via the adaptive management approach (learning through experience with the cooperation of industry) – a point emphasised in the 2017 CSG decision. There is not currently an equivalent disturbance threshold approach for areas outside SACs, although several European countries are working together to develop thresholds of impulsive noise impact across regional seas.

The SNCB approach described here follows the logic of one of the elements of the German approach, which also uses spatio-temporal limits for the management of underwater noise in their SACs. The other element of the German approach is statutory limits on sound levels propagated. It is worth noting that the SNCB approach does encourage noise reduction through use of a threshold for cumulative noise footprint and there is greater flexibility in choice of mitigation than with a statutory limits approach.

4.1.1. *What has changed since 2017*

Essentially nothing. There is no new evidence on which to justify a change to the threshold, so the 10% seasonal threshold remains.

⁶ A regional agreement for the protection of small cetaceans under the Convention for Migratory Species - <https://www.ascobans.org/>

⁷ Tougaard et al 2012. http://randd.defra.gov.uk/Document.aspx?Document=13482_MB0138ExpertGroupreport_harbourporpoiseandpiledriving.pdf

There has however been the suggestion of a statutory noise limits approach by the NGOs. As far as can be determined this would be about mandating firm noise level limits in statute. Hard noise limits might further⁸ drive the introduction of sound level mitigation where this is feasible, but such an approach would be difficult to implement on both technological and cost grounds during the current phase of offshore wind deployment. In addition, because of the challenges associated with mitigating noise at source for seismic surveys, such limits would only be viable if they were either sectorally discriminatory, or if the UK government were willing to sacrifice oil & gas exploration and time lapse reservoir imaging in harbour porpoise SACs.

4.2. The effective deterrent radius (EDR)

The EDR of 26km has been contentious because it effectively sterilises 2,100 square kilometres around a noise point source. So, if a single point source (e.g. a large monopile) were operating in a SAC of 21,000 square kilometre area for a whole season then this one activity alone would utilise the available 10% seasonal threshold – i.e. allowing no other concurrent noise producing activity to take place.

For area comparisons, the following table provides the square kilometre area of each of the 5 porpoise SACs within scope of this approach – and where relevant also provides the summer and winter area (seasonal) figures.

SAC	Season	Area (Km2)
Southern North Sea	Summer	27028
	Winter	12696
West Wales Marine	Summer	7376
	Winter	1460
Bristol Channel Approaches	Winter	5850
North Anglesey Marine	Summer	3249
North Channel	Summer	1604

The 26km EDR is currently the precautionary distance applicable to large monopile foundations and explosives, the two most energetic sound sources that are likely to be encountered (i.e. a maximum). However, common sense and development specific information can be used if neither large monopiles nor underwater explosive campaigns are likely to be a feature of a plan or project. Large monopiles and UXO clearance campaigns are expected to feature in the current pipeline of southern North Sea offshore windfarm developments, therefore an EDR of 26km is appropriate to those developments in the absence of mitigation. This EDR is based upon current empirical data but could be subject to adjustment through the adaptive management approach (i.e. expanding the empirical data set through measurements during monopile installation campaigns).

However, not all windfarms will require large monopile installation. For example, pin piling is another technique used, which is much lower energy. Much reduced impact ranges (1.3—7.4km) have been observed in the Moray Firth in a recent study using this foundation technique. The significant of this difference can be better explained with the simplified example as above.

⁸ The SNCB approach will also encourage sound level mitigation where it is not otherwise possible for marine works to operate within threshold.

So, taking the hypothetical case of a 21,000 square kilometre SAC, the monopile disturbance area (2,100 square kilometres) would be 10% of the SAC area (hitting threshold) whereas the pin pile technique would be 0.03 – 0.8% of the area (well within threshold). Re-running the calculations with a hypothetical SAC area more representative of a west coast SAC, say 5,000 square kilometres, the large monopile disturbance would be 42% of the SAC area (exceeding threshold), whereas the pin pile technique would be 0.1 – 3.4% (well within threshold).

Information used should be site and project specific where possible, and ideally new technology would need testing to gain empirical data in terms of disturbance and EDR. The EDR for large scale seismic survey is currently set at 10km and there is scope for further validation here too. Running the seismic EDR for the hypothetical 5,000 square km SAC gives a disturbance area of 6.3% (within threshold), although further scenario development is needed for a moving point source.

4.2.2. What has changed since 2017

Flexibility has been introduced to the guidance with respect to the choice of EDR. It has been clarified in the guidance that there is scope for project specific information to be used in determining EDR. This should ideally be on the basis of validated evidence for a particular technology type. It is possible that clarification on this flexibility has not been made explicit enough in the guidance to date, so this is being rectified.

4.3. Implementation by Regulators

Note that in encompassing all maritime industries that produce loud impulsive underwater noise, the SNCB approach is intended to enable fair treatment of all industries – i.e. not singling out a particular industry type on the basis of regulatory jurisdiction. The benefit from a nature conservation perspective is that the approach requires active cross sectoral regulatory cooperation in managing in-combination activities. At the end of the day it is the impact of noise in terms of lost habitat availability (through disturbance) and site integrity that is the issue of concern for SNCBs. Practical implementation is not within the SNCBs gift to determine and is an aspect that government and regulators need to solve and there are signs of progress on that front.

4.3.3. What has changed since 2017

Defra have now taken the chairing role of a North Sea regulators group looking at implementation issues. This group has met roughly quarterly since late 2018 and part of their work has been considering potential tools to aid managing noise across sectors (such as regulator hosted marine works spreadsheets, or further development of the UK marine noise registry). The SNCBs have contributed to these discussions as far as has been possible when requested.

Defra also convened a stakeholder⁹ workshop (12 July 2019) to help move the debate beyond detailed critique of the rationale behind the SNCB guidance and onto matters of practical implementation. No alternatives to the SNCB approach were forthcoming from this workshop. JNCC agreed as part of this process to seek a re-affirmation from the inter-agency (SNCB) Chief Scientists

⁹ Stakeholders included NGO's, marine regulators, industry body representatives and SNCB's.

Group on the SNCB approach and to provide certain points of clarification for the wider stakeholder community (e.g. about how the approach was derived).

Following on from the workshop discussions, Defra are also considering a joint (Defra/BEIS) ministerial submission on the way forward.

5. Summary of implications for maritime activities

In some cases there may be no significant implications, particularly if mitigation is already embedded in a project or if there isn't a cumulative effects issue. In other cases there may be choices necessary with respect to marine works being restricted to less noisy options, applying noise abatement technologies, or making adjustments to marine works schedules to avoid 'over threshold' in-combination activities. The 26km EDR for windfarm installation is based on large monopiles as currently used in southern North Sea offshore wind farm installations. There are lower noise options, such as pin piles, gravity bases, floating turbines and suction cups. The guidance provides flexibility to assess case and site specific EDR based on evidence provided in Environmental Impact Assessments. So, for example, if a new windfarm were proposed in a west coast SAC using a pin pile installation technique it would be reasonable to look at the appropriate validated evidence for porpoise disturbance against such an installation method and the site-specific sound propagation characteristics. The one published disturbance study to date based on pin piling indicates a much reduced EDR would be appropriate.

In the case of seismic survey campaigns this is more difficult to mitigate since high source level noise production is the objective. Evidence to date suggests a smaller EDR (10km) but one which could still be quite challenging in terms of permitting within the smaller west coast sites. However, it is worth considering the realism of such campaigns being launched in the potentially sensitive west coast areas. Data from the UK marine noise registry from 2015-2018 indicates that these are relatively quiet areas [see Annex 3].

Most sites on the west coast were designated based on seasonal high densities, either summer (April to September) or winter (October to March) – [see Annex 4]. The exception to this is the West Wales Marine SAC, which has a smaller winter sub-area (which geographically coincides with Cardigan Bay SAC for bottlenose dolphins) embedded within the wider summer area. Therefore, for most of the west coast sites, the time / area threshold approach to noise management only applies for six months of the year, meaning seismic campaigns could take place unrestricted in 'non-designation' months. A fair proportion of seismic activity in the UK EEZ already takes place during winter months.

6. Expectation of stakeholders

The one expectation shared by all stakeholders is clarity and certainty on the process they should be following to assess noise. Industry have repeatedly asked for fair treatment across sectors and the renewables sector are clear that they do not want to be singled out. All stakeholders agree that the evidence base is not ideal and needs to be improved. Strategic enabling actions alongside targeted consent conditions may help with this.

Paper 3: Threshold Approach to Underwater Noise Assessment and Management in Harbour Porpoise SACs

BEIS Renewables and MMO are engaged and striving for successful implementation of the SNCB approach. They want to conclude on their Review of Consents and would ideally not wish to go against SNCB advice, but they are also cautious of other regulators not applying the approach.

BEIS OPRED¹⁰ would prefer a more business as usual approach, given that oil gas surveys have taken place in sites for years and they were designated with that baseline activity. Whilst that approach might work if activity levels were to remain constant or decrease, the reality is that noise levels in the southern North Sea SAC in particular are currently and for the foreseeable future increasing, due mainly to the installation of offshore wind farms. OPRED has been reluctant to sign up to the approach, in part due to the different time scales involved in the different sectoral consenting regimes. This could mean oil gas (seismic) surveys being excluded from sites (at least for 6 months of the year) if the noise 'quota' in the managed season has already been taken up by large monopile windfarm construction activity. Conversely the offshore wind sector feel vulnerable to oil & gas (seismic) consenting because this can be done on a much more rapid timescale than renewables consents – thereby 'cheating' them of noise quota if not managed in a fair and equitable way.

NGOs want windfarm construction to use noise abatement methods in all piling and explosive events. They seem less concerned with seismic noise at the moment, instead focussing on offshore windfarm construction and consistency with other European countries where noise abatement has been required¹¹.

The SNCBs would prefer noise to be managed in a reasonably precautionary and proportionate way that is fair across industries, so that these important habitats for harbour porpoise are protected. Given the protected status of these areas, and the likely increase in noisy activity for some areas, a business as usually approach is not acceptable.

7. The risks

An incoherent strategy for noise management in harbour porpoise SACs is a risk in itself. Aside from not affording the SACs the protection they need it introduces / perpetuates confusion and uncertainty for stakeholders.

The SNCB inter-agency staff have put a huge amount of work into developing and refining the guidance and threshold approach, including several years of interaction with stakeholders (government, regulators, NGOS and industry). The approach was endorsed by CSG in 2017 so the inter-agency groups have operated under the reasonable assumption that their actions carry senior level support.

It has been extremely challenging to get stakeholders onboard with the threshold approach, not least because of the new (and potentially positive) challenge this generates for cross regulatory working and compliance. This has come to a head recently with Defra stepping in to take a lead facilitation role and trying to move the stakeholders beyond technical critique and onto matters of practical implementation.

¹⁰ Offshore Petroleum Regulator for Environment & Decommissioning

¹¹ Noting that seismic surveying has not been permitted in German waters for the last few years, probably in part due to statutory limits.

Paper 3: Threshold Approach to Underwater Noise Assessment and Management in Harbour Porpoise SACs

If CSG does not re-affirm their support for the threshold approach and associated guidance we can expect reputational damage with all stakeholders involved in the process. In addition, stakeholders will quite reasonably expect an alternative strategy (which thus far has not been forthcoming from any quarter).

An incoherent strategy for noise management with different advice provided on a case by case, sector by sector basis with no over-arching framework may well lead to protracted application processes, increased drain on SNCB resources at a country level and more challenge on how decisions are made.

There could be challenge to the evidence for the SNCB threshold, but we have been transparent and clearly emphasised the need for an adaptive management approach. By taking collectively responsibility we strengthen the rationale for improving the evidence base through the adaptive approach while still enabling marine developments to proceed in a proportional manner. In other words, by taking collective responsibility we consolidate the imperative for industry as a whole to cooperate on the commissioning of strategic evidence / research to support the adaptive management approach.

Regulators should take account of SNCB advice but ultimately it is their decision whether to follow it or not. There is a general expectation that if regulators do not follow advice from their statutory advisors that they explain their rationale. The risk is effectively transferred to the regulator.

There is an additional dimension to advisory risk if CSG do not re-affirm their support. All of the porpoise SACs (except Scotland) are multi-jurisdictional in statutory advisory terms. Advisory jurisdictions are shown in the following table:

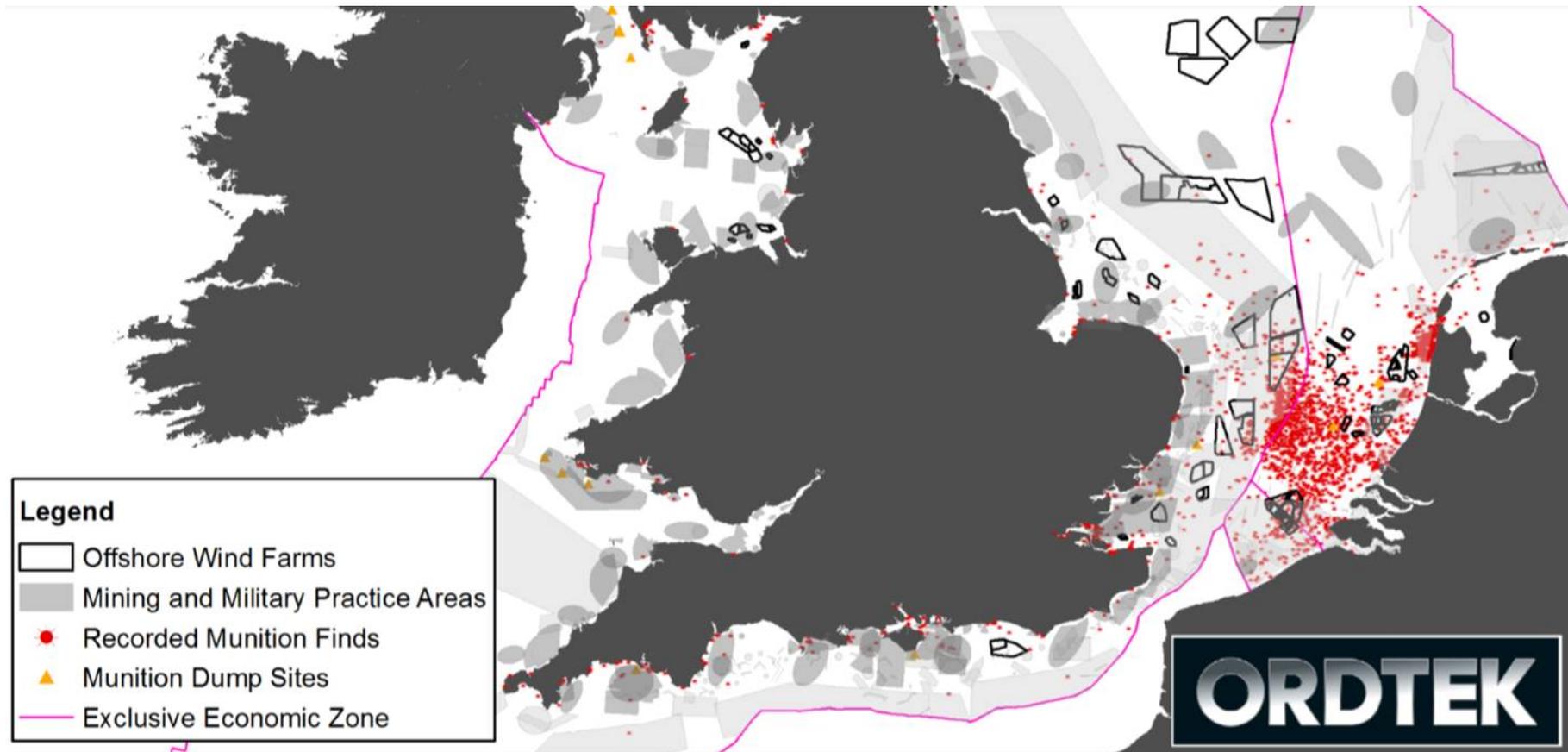
SAC	Advisory Jurisdiction
Southern North Sea	NE, JNCC (delegated)
West Wales Marine	NRW, JNCC
Bristol Channel Approaches	NE, NRW, JNCC
North Anglesey Marine	NRW, JNCC
North Channel	DAERA, JNCC

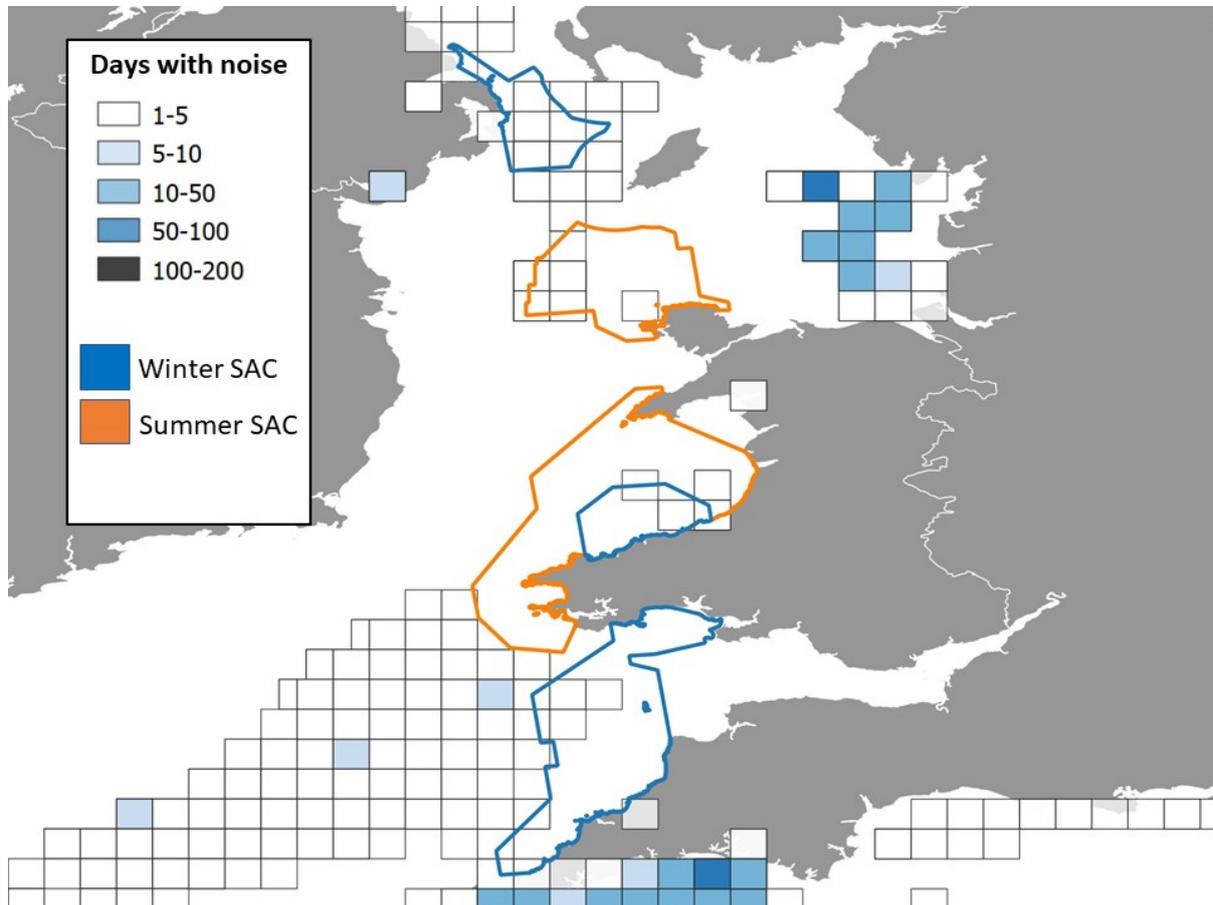
Non-reaffirmation of the approach would run the risk of incoherent advice to regulatory authorities and other stakeholders emerging from multi-jurisdictional casework.

**Annex 1: – Guidance for assessing the significance of noise disturbance against
Conservation Objectives of harbour porpoise SACs.**

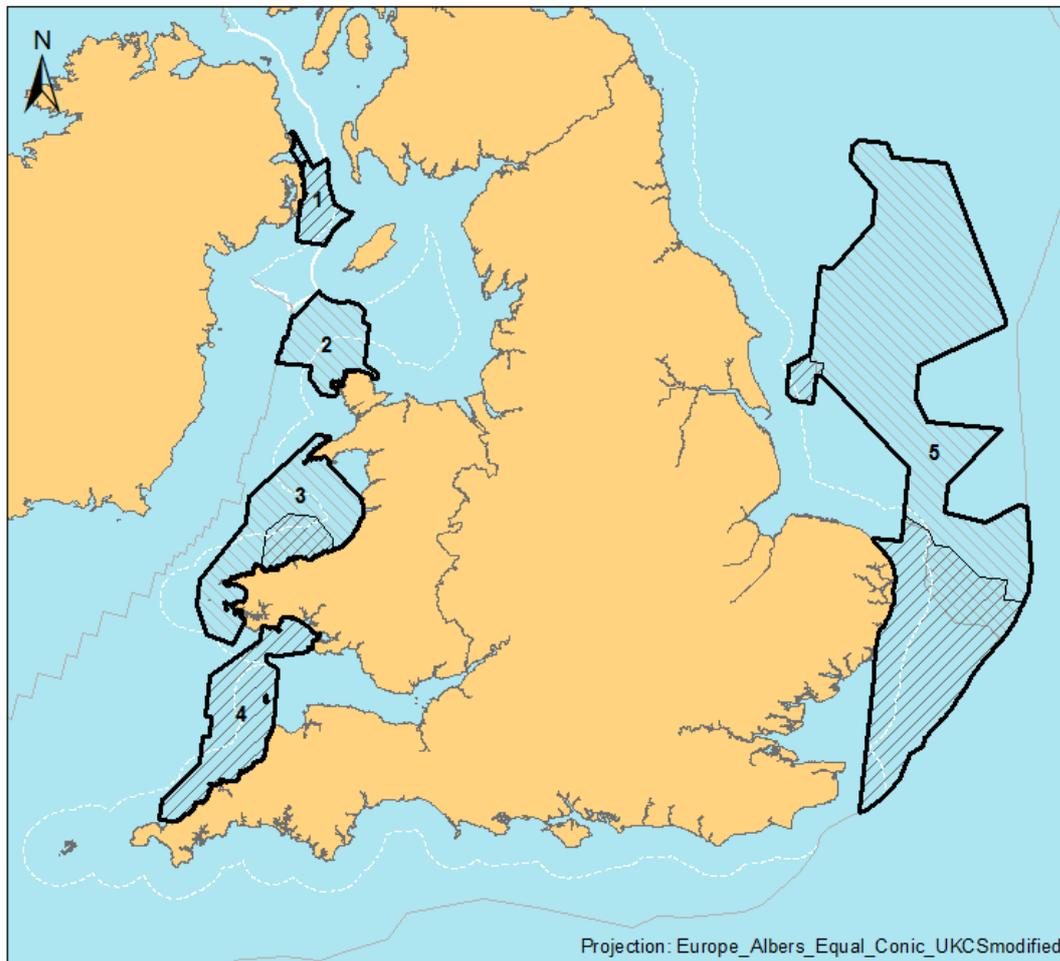
See separate Annex 1 document.

Annex 2: – Map of Unexploded Ordnance in UK waters



Annex 3: – Marine Noise Registry Output for the Irish Sea and South West Approaches based on all impulsive noise types in the period 2015-2018.

Annex 4: – Map of Harbour Porpoise SACs and their seasonality.



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|-------------------------------|--|
| SAC boundary | UK EEZ (Apr. 2014) |
| 1. North Channel | Northern Ireland Adjacent Water boundary (NI 2002) |
| 2. North Anglesey Marine | UK Territorial Seas |
| 3. West Wales Marine | Winter area |
| 4. Bristol Channel Approaches | Summer area |
| 5. Southern North Sea | |

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Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs.

(England, Wales & Northern Ireland)



Note to users

The advice provided in this guidance document applies to all UK Special Areas of Conservation (SACs) for harbour porpoise, except for those in Scottish waters. Scottish Natural Heritage and Marine Scotland will be developing separate advice for the Inner Hebrides and the Minches SAC.

1 Introduction

The harbour porpoise is listed on Annex II of the Habitats Directive, which means Special Areas of Conservation (SACs) need to be designated to protect particularly important habitats for the species and contribute to achieving/maintaining Favourable Conservation Status (FCS) of the species.

A suite of five harbour porpoise Special Areas of Conservation (SACs) in Welsh, Northern Ireland and English waters were designated in February 2019. There is a further SAC in Northern Ireland for which harbour porpoise is listed as a qualifying feature; Skerries and Causeway. Statutory Nature Conservation Bodies (SNCBs) have a statutory obligation to establish and advise on the conservation objectives (COs) for the sites as well as advise on those operations capable of adversely affecting site integrity. Under UK regulations¹, impacts on these SACs from plans or projects require formal consideration in Habitats Regulations Assessments.

The Conservation Objectives for these sites are:

To ensure that the integrity of the site is maintained and that it makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters

In the context of natural change, this will be achieved by ensuring that:

1. Harbour porpoise is a viable component of the site;
2. There is no significant disturbance of the species; and
3. The condition of supporting habitats and processes, and the availability of prey is maintained.

¹ The Conservation of Habitats and Species Regulations 2017; The Conservation of Offshore Marine Habitats and Species Regulation 2017

This document sets out the SNCBs' advice on assessing the risk of significant disturbance as a result of noise and consequently managing noise disturbance within harbour porpoise sites to avoid an adverse effect on site integrity. This advice should be considered by competent authorities when undertaking Habitats Regulations Assessments. The approach applies to all plans and projects within or affecting a site that could cause significant noise disturbance to harbour porpoise, alone or in combination with other plans or projects.

A number of noise generating activities can potentially result in disturbance and injury to harbour porpoise e.g. geophysical surveys for oil and gas exploration (Pirodda et al. 2014); unexploded ordnance (Benda-Beckman et al. 2015); Acoustic Deterrent Devices (Northridge et al. 2010) and pile driving undertaken for the installation of offshore wind turbines (e.g. Dähne et al 2013) or construction of harbours. Those undertaking such activities are required to mitigate against the risk of injury to marine mammals, typically by following the widely accepted JNCC guidelines/protocol². However, these mitigation protocols primarily address the reduction of the injury risk in close proximity to the noise source and not disturbance which can occur many kilometres from the noise source.

Activities with the potential to cause non-trivial disturbance (generally larger scale and longer-term plans/projects) are currently assessed by considering the potential impact on harbour porpoise at the population level by using the best available population estimate of the relevant Management Unit (IAMMWG, 2015). Such assessments are typically carried out as part of Strategic and Environmental Impact Assessments and in support of an application for a European Protected Species licence to derogate the risk of committing a disturbance (and/or injury) offence under The Conservation of Habitats and Species Regulations 2017 and Northern Ireland and offshore equivalents. With the designation of SACs for harbour porpoise, site-specific conservation objectives must ensure that significant disturbance of the species in the designated sites is avoided – thus implementing that required in UK regulations on the conservation of habitats and species.

The designation of harbour porpoise SACs will undoubtedly have consequences as to how some activities operate, and measures may need to be put in place to reduce disturbance of harbour porpoises to ensure that the animals' potential usage of the site is maintained. Implementation of any disturbance management is likely to be challenging given the complexity of marine activities, regulatory arrangements and scientific uncertainty surrounding the significance of noise impacts on harbour porpoise. The approach recommended by SNCBs should encourage best practice mitigation for noise reduction and is intended to be adaptive, i.e. can be updated as new evidence becomes available through monitoring.

²http://jncc.defra.gov.uk/pdf/jncc_guidelines_seismicsurvey_aug2017.pdf
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/50006/jncc-pprotocol.pdf

2 Definition of an adverse effect on site integrity in relation to noise disturbance

Noise disturbance within an SAC from a plan/project, individually or in combination, is significant if it excludes harbour porpoises from more than:

1. 20% of the relevant area³ of the site in any given day⁴, and
2. an average of 10% of the relevant area of the site over a season^{5,6}.

Any plan or project which, individually or in combination, could breach the area/time thresholds as set out above should be deemed to have an adverse effect on site integrity; noise management measures such as adjustment of activities schedule, the use of alternative methods and noise abatement mitigation need to be considered in those instances.

3 Noise management approach

3.1 Background and development

The European Commission provided guidance⁷ on what could constitute significant disturbance of a species in a Natura 2000 site: *'Any event, activity or process contributing to the long-term decline of the population of the species on the site can be regarded as a significant disturbance. (...) Any event, activity or process contributing to the reduction or to the risk of reduction of the range of the species within the site or to the reduction of the size of the available habitat of the species can be regarded as a significant disturbance.'* It also states that the intensity, duration and frequency of repetition of disturbance are important parameters.

The Habitats Directive (Article 3(1)) states that the "Natura 2000 network, composed of sites hosting ...habitats of the species listed on Annex II, shall enable the ...species' habitats concerned to be maintained or, where appropriate, restored at a ...at favourable conservation status in their natural range". The sites for harbour porpoises were identified based on habitat models (Heinänen and Skov, 2015) which predicted persistent, seasonal high-density areas of harbour porpoise based on 18 years of data (1994-2011), presumably because they offer good foraging opportunities or other environmental factors that are attractive to harbour porpoise. It is therefore important that harbour porpoise can access and utilise the habitats within the sites. However, as a mobile and wide-ranging species, density and abundance of harbour porpoise within the site varies considerably by season and year and it is therefore not appropriate or practical to aim to maintain a given harbour porpoise abundance in the site.

³ The relevant area is defined as that part of the SAC that was designated on the basis of higher persistent densities for that season (summer defined as April to September inclusive, winter as October to March inclusive).

⁴ To be considered within the Habitats Regulation Assessment and, if needed, licence conditions should ensure that daily thresholds are not exceeded. Day to day monitoring of compliance is not practicable and therefore retrospective compliance monitoring is required to test whether the licence conditions are being adhered to.

⁵ Summer defined as April to September inclusive, winter as October to March inclusive

⁶ For example, a daily footprint of 19% for 95 days would result in an average of $19 \times 95 / 183$ days (summer) = 9.86%
⁷http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_nov_2018_endocx.pdf

This guidance recommends that 'significant disturbance' should, therefore, be interpreted as a reduction of range of the species within the site or a reduction in access to available habitat. Given that disturbance, and therefore access to habitat is usually of a temporary nature⁸, management of noise in the sites should ensure that disturbance does not lead to the deterrence of harbour porpoise from a *significant portion* of the site for a *prescribed period of time* thus ensuring the species has sufficient access to important habitat within the sites.

3.2 Definition of 'significant portion of the site for a prescribed period of time'

One of the most likely impacts of disturbance on harbour porpoise is the loss of foraging opportunities (Nabe-Nielsen et al. 2017). Wisniewska et al. (2016) reported that tagged porpoises off Denmark foraged almost constantly, 24 hours a day, to meet their energy needs. Some evidence shows that the harbour porpoise has a high metabolic rate compared to terrestrial mammals of similar size (Rojano-Doñate et al. 2018). Failure to acquire sufficient energy may have fitness consequences, potentially giving them low resilience to disturbance (Wisniewska et al. 2016). The small size of the harbour porpoise limits the amount of stored energy it can carry, and it can only survive a few days without feeding (Kastelein et al. 1997).

The effects of displacement away from important habitats such as those within SACs are unknown. Animals may be displaced to potentially lower quality habitat, i.e. prey availability/quality encountered may be lower, the risk of predation and both intra- and inter-specific competition may be higher, all of which could have implications on their ability to survive and reproduce. The extent of habitat (for foraging and other activities) from which harbour porpoise have potentially been disturbed and displaced, i.e. 'gaps' in distribution caused by anthropogenic activity, can be translated into potential effects on population growth rates (Tougaard et al. 2013). In other words, displacement of harbour porpoise from parts of their habitat may result in the carrying capacity⁹ (K) of the wider area being reduced. A definition of '*significant portion*' at the site level can, therefore, be based on the effects of the 'loss' of area available to harbour porpoise and therefore the carrying capacity of the site. This could in turn impact the ability of the site to make a full contribution to achieving/maintaining FCS of the species. Long-term, permanent reduction in carrying capacity could manifest itself in population declines (Tougaard et al. 2013). The assumption in the proposed approach for noise management is, therefore, that disturbance of harbour porpoise will result in their deterrence from areas of habitat and consequently affect the carrying capacity of the site.

A small, temporary reduction in carrying capacity is unlikely to prevent the site from contributing to species FCS; however, persistent displacement affecting large areas of the site may do so. In developing this guidance, various approaches to defining acceptable limits of reduction in carrying capacity to marine mammal populations were considered (e.g. The International Whaling Commission and the US Marine Mammal Protection Act). SNCBs chose to use the ASCOBANS¹⁰ precautionary conservation objective for small cetacean populations, i.e. recovery to and/or maintaining $\geq 80\%$ of carrying capacity in the long term.

⁸ Taking pile driving as an example, it is assumed that harbour porpoise will be excluded from an area of habitat for the duration of pile driving and for a period of time after pile driving has ceased. The length of time it takes for porpoises to return after the cessation of pile driving varies: generally, between a few hours (Tougaard et al. 2009; Brandt et al. 2012; Dahne et al. 2013) and up to 3 days (Diederichs et al. 2009; Brandt et al. 2011).

⁹ The carrying capacity of a biological species in an environment is the maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water, and other necessities available in the environment.

¹⁰ <https://www.ascobans.org/en/species/threats/bycatch>

Whereas this objective was not developed to meet the requirements of the Habitats Directive, nor to be applied to specific locations within the species' range, it does provide an indication of what magnitude of temporary 'habitat loss' might be considered significant.

For current purposes, it is assumed that a directly proportional relationship exists between loss of access to habitat and carrying capacity. Under the assumption of even distribution of prey availability, if some disturbance creates a permanent habitat loss of 1% of the total area, the carrying capacity decreases by 1%. Over some years the population will thus also decrease by 1% (as per Tougaard et al. 2013). It is also assumed, for simplicity, that the distribution of porpoise density is approximately uniform within the site¹¹. Using harbour porpoise habitat as a proxy for carrying capacity the SNCBs suggest that the loss of access to habitat within a site should be no more than 20% (thus maintaining 80% carrying capacity). Therefore, the SNCBs advise that noise disturbance within the site does not exclude harbour porpoise from more than 20% of the site on any given day. However, over a season, SNCBs have determined that an average loss of access to more than 10% of the SAC would be considered significant, recognising that within the SAC the abundance of harbour porpoise per unit habitat is persistently higher than the equivalent sized habitat in the rest of the relevant Management Unit. Maintenance of the site's carrying capacity in the long term through management of temporary habitat 'loss' to below defined area/time thresholds is therefore designed to ensure that it continues to contribute in the best possible way to the maintenance of the species at FCS.

Three of the SACs have been identified based on elevated densities of harbour porpoise in either summer (April – September) or winter (October – March) (Heinänen and Skov, 2015, Table 1). The Southern North Sea SAC has both 'winter' and 'summer' areas with a small portion of it having been identified based on elevated densities all year round. The West Wales Marine SAC is mostly a 'summer' site with around a fifth of the site having been identified for year-round elevated densities. The timing of proposed plans or projects should therefore be taken into account when considering whether they could adversely affect the integrity of the site. Plans or projects potentially resulting in disturbance in the sites but operating outside of the season for which the site was identified will be unlikely to cause an adverse effect on site integrity and therefore the noise management approach in this guidance won't apply. This is also relevant in the estimation of the disturbance footprint in the two sites with both a summer and a winter/or year-round areas.

Table 1. Harbour porpoise SAC seasonal areas of elevated densities.

SAC	Season	Area (Km2)
Southern North Sea	Summer	27028
	Winter	12696
West Wales Marine	Summer	7376
	Winter	1460
Bristol Channel Approaches	Winter	5850
North Anglesey Marine	Summer	3249
North Channel	Summer	1604
Skerries and Causeway	Year round	108

¹¹ The variation in porpoise density within the sites is not well understood because of a lack of information on how they use the site. Future evidence gathering may help to better understand this variation.

3.3 Application of the approach in practice - two examples

The installation of offshore wind farms in the Southern North Sea SAC example

There are two main stages within the processes for development of an offshore wind farm where this approach should be applied:

1. Habitats Regulation Assessment (HRA) stage of an application prior to the project being given consent; and
2. during the construction phase of the project.

The HRA stage (stage 1) is carried out by the Regulator to rule out, or otherwise, that the plan/project will have an adverse effect on site integrity (alone or in combination). The HRA also considers whether mitigation/management is needed and can be put in place to prevent adverse effects. The implementation of the SNCBs' approach during the construction phase (stage 2) will provide the reassurance that the proposed disturbance area/time thresholds are not being exceeded (alone or in combination) and, therefore, that significant disturbance is not considered to be taking place.

The HRA stage (stage 1) of a project application will need to ascertain that noise disturbance within the site will not exclude harbour porpoise from more than 20% of the relevant area of the SAC on any given day or disturb porpoise from an average of more than 10% of the relevant area of the SAC over a season.

When considering impact pile driving in offshore wind farm construction, the assessment of the extent of noise disturbance, in this example, can be based on an *effective deterrent radius* (EDR) of 26km for a single monopile (Tougaard et al. 2013; Dähne et al. 2013). The area of harbour porpoise deterrence¹² therefore approximates to 2,124 km² during a single pile driving event. There may be several factors influencing the extent and duration of an animal's response; these can be related to the characteristics of the noise propagating from the source, environmental conditions, as well as to an individual harbour porpoise's motivation to stay or leave the area. It is therefore likely that deterrence distances will vary on a case by case basis. However, given the uncertainty around noise modelling predictions and the lack of a representative set of field observations that could be matched to each planned wind farm installation, the SNCBs' advice is to use 26km as a precautionary deterrent distance for pile driving associated with the installation of wind turbine foundations. The 26km EDR could also be used for other activities (e.g. UXOs) in the absence of alternative evidence. Different EDRs could be used, if well justified and ideally based on field observations and measurements. There will also be periodic review of the suitability of the 26km EDR for pile driving of wind farm foundations in light of new evidence.

Using pile driving in the Southern North Sea site as an example, two spatially separate pile driving events¹³ or two adjacent/concurrent events^{*14} plus one more distant event** wholly

¹² To note that whilst displacement is the response that can more easily be observed, there might be other effects of disturbance that are less obvious (e.g. changes in diving patterns).

¹³ An 'event' is the multiple hammer blows required to sink a single pile.

¹⁴ *Adjacent/concurrent piling events occur on the same day and have overlapping disturbance footprints (the effective deterrent radius far exceeds the distance between adjacent piles).

** a distant piling event would not have overlapping disturbance footprints with other events in the SAC.

within the summer Southern North Sea SAC area on one day could approach the maximum of 20% area of disturbance. In the (smaller) winter area, a maximum of two (if adjacent/concurrent) pile driving events wholly within the SAC could exceed the maximum of 20% disturbance (Figure 1).

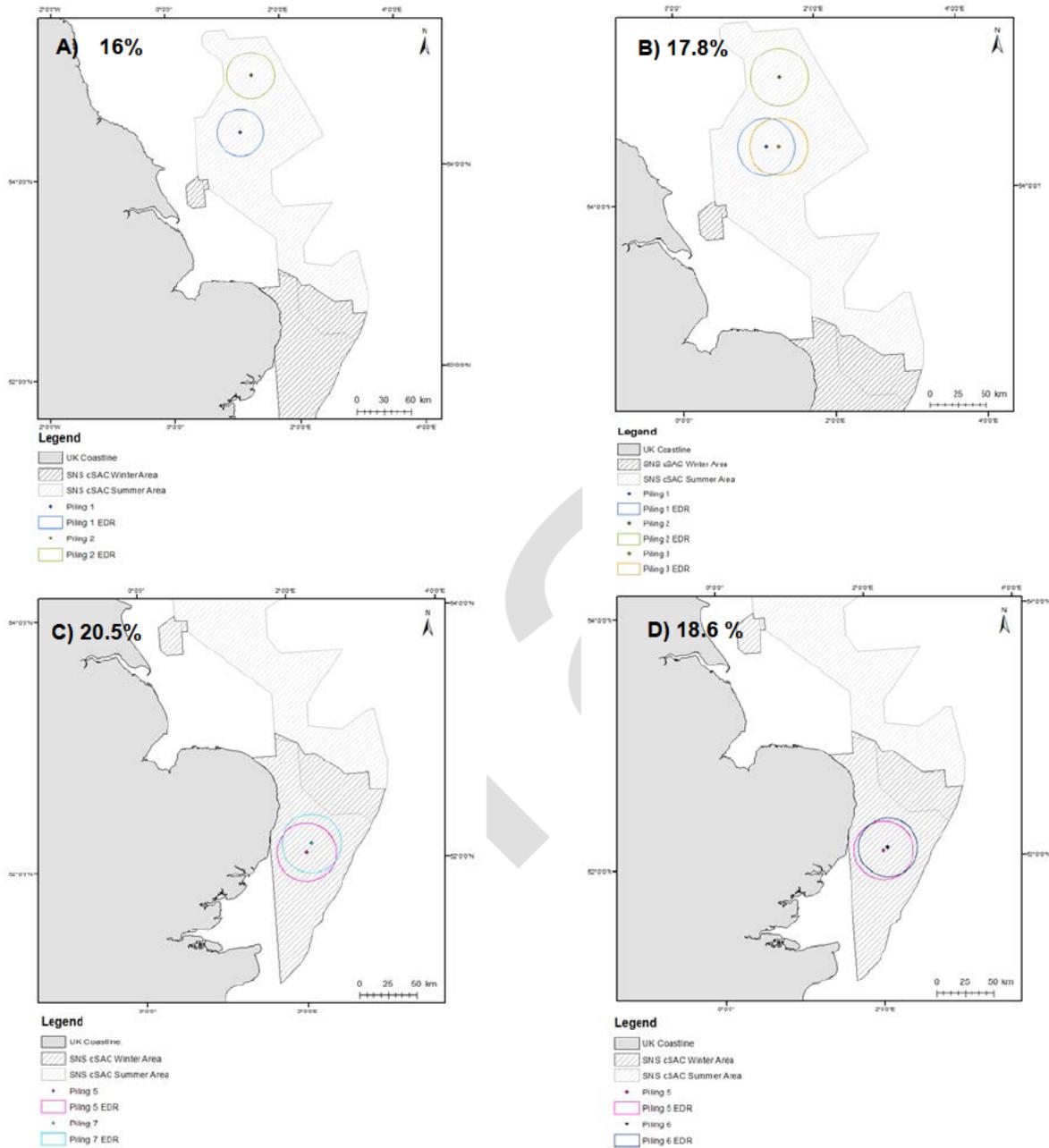


Figure 1: Daily piling scenarios and associated % disturbance for the seasonal areas (A & B = summer; C & D = winter) of the Southern North Sea harbour porpoise SAC. Piling events are separated in (A). The distance between overlapping events are 11km (B), 9km (C) and 5km (D)

Piling events at the edge (or in some cases beyond the edge) of the site will contribute less to the spatial disturbance footprint within the site. Similarly, EDRs from pile driving events planned near each other would overlap and reduce the spatial footprint, potentially enabling additional activities to take place within the site without causing an adverse effect.

The seasonal threshold, i.e. 10% average, needs to consider the daily activities but it would allow, for example, one pile driving event (or two adjacent) per day over the entire summer season (183 days) in the summer area. Alternatively, in the summer area there could be two distant pile driving events (as in Figure 1A) or two adjacent/concurrent events plus one distant event (as in Figure 1 B) for approximately half (91 days) of the summer season but with no further impulsive noise generated for the remaining 91 days.

When an HRA is carried out by the competent authority, many months before construction commences, there may be considerable uncertainty over project design, schedules and other planned developments. For this reason, a pre-construction condition should be attached to the project's Marine Licence¹⁵ requiring an assessment to be undertaken prior to initiating works to determine if the activities and schedules of this project and of others (relevant for the in-combination assessment) are still within the parameters used to reach the HRA conclusion. Further management and mitigation may be required to satisfy the authorities that the SAC will not be adversely affected. There should be sufficient time between the assessment and the start of construction to allow for the effective implementation of mitigation/management, which could include:

1. Careful spatial planning and phasing of noisy activities.
2. Use of alternative foundations that do not require pile driving (e.g. suction buckets, gravity bases), noting that these may have other impacts.
3. Use of alternative methods of installation (e.g. vibropiling) to reduce the noise footprint.
4. Use of technology to reduce the sound levels at source or to minimise sound propagation and reduce the noise footprint. The use of bubble curtains as mitigation in the installation of a wind farm in Germany has resulted in smaller deterrence ranges (e.g. up to 12 km in Dahne et al. 2017)¹⁶.

During the construction phase (stage 2), it is recognised that it is challenging for regulators or industry to monitor the daily threshold i.e. 20% limit per day, in 'real' time. Therefore, careful planning through the HRA process is essential. For example, if a plan or project has been consented which could cause noise disturbance up to the allowable maximum daily threshold, then no other noise disturbance should be allowed to take place unless they can be scheduled to occur during days when no other noisy activities are occurring, whilst also ensuring the seasonal threshold is not exceeded.

Geophysical surveys in the Southern North Sea SAC example

All activities likely to generate noise disturbance will need to be assessed in the same way as above, but the EDR is likely to be different. For this example, using seismic surveys, a minimum EDR of 10km is proposed. This is based on a single study on the porpoise deterrence radius observed around the operation of a 470 cubic inch capacity airgun array (Thompson et al 2013). It is possible that a different EDR could be used in other assessments,

¹⁵ For example paragraph 18.2 in: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/753026/RoC_SNS_cSAC_HRA_5.0.pdf

¹⁶ To note that a smaller EDR than the 26km would apply for turbine installations using such methods.

if well justified and ideally based on field observations and measurements. There will also be periodic review of the suitability of the 10km EDR in light of new evidence. Unlike a static pile-driving event, a geophysical source will move over several km in a day. Therefore, the daily disturbance footprint should be calculated using a buffer, e.g 10km, around the predicted survey line (s) that can be completed on a single day. For example, a single 16km line will result in ~634 km² of area.

Unlike piling during the installation of a wind farm that will last for several months/years, geophysical surveys are usually completed in a few weeks. High resolution surveys typically last one week, whilst larger regional surveys involving the use of airgun arrays may last for a month or occasionally more.

Discussions with industry will be needed to explore ways in which geophysical surveys could take place with as little disruption to windfarm installation operations as possible while in keeping within the advised area/time thresholds within the sites. For example, to assist in reducing the cumulative daily disturbance footprint, activities should be planned as much as possible not to overlap in time. If that is not possible, then protocols for communication between operators would need to be established to avoid multiple noisy activities on the same days. For sites where seasonal areas have been identified, the area/time threshold approach applies to activities occurring within an area and in the corresponding season. Therefore, an option might be to undertake a survey (or part of) in the months when the area/time threshold approach does not apply for that area, thus helping to reduce cumulative seasonal thresholds.

Retrospective compliance monitoring, making use of data in the Marine Noise Registry for example, should take place to assess whether the regulatory processes are being effective in keeping noise below the advised area/time thresholds. Lessons learned will be used to improve assessment and management practices in the context of adaptive management.

3.4 Adapting the Approach

To ensure that this approach advised by the SNCBs is reasonable and effective it should be periodically evaluated as more evidence becomes available. Industries with relevant plans or projects requiring HRA should be encouraged to contribute to evidence gathering to inform such evaluations. Conditions requiring environmental impact monitoring may be required in future consents where it meets a specific management purpose.

A strategic approach arising from the collaboration between industry, government (regulators and SNCBs), academia and NGOs that carefully considers the scale and nature of any impact monitoring, should better enable the success of the implementation and further development of this approach to noise management for harbour porpoise sites.

The advice presented in this document was developed over several years by SNCBs in consultation with industry, regulators and NGOs. During this time, no other approach was proposed that provided a satisfactory alternative to the assessment and management of noise disturbance within harbour porpoise SACs in England, Wales, Northern Ireland and respective offshore areas. It is recognised that the approach is based on assumptions and carries with it considerable uncertainty. It will be challenging to administer and will require close working between all stakeholders, particularly the different regulators. However, this threshold approach does provide clarity to industry as to the limits SNCBs advise they should work

within. The approach is thought to be simple and easy to calculate disturbance impacts. There may, however, be certain noisy activities in the future for which a different approach may be preferable. SNCBs intend to periodically review this advice to ensure it remains workable, effective and takes account of best available evidence.

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From: [Alex Turner](#)
To: [Liam Wright](#)
Cc: [Caroline Carter](#)
Subject: FW: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]
Date: 23 September 2019 16:51:11
Attachments: [image001.png](#)
[image002.png](#)
[AT comments on MOWI ADD deployment plan for Carradale \(and Sconser Quarry\) - 20190916_ADD Deployment Guidance_v6 - 23 September 2019.pdf](#)

Liam

I had a look at this in context of Sconser Quarry.

Main thing is it doesn't address our points re. 'Standard mode activated at one site at any given time' or 'ADD use across all of Sound of Raasay fish farms to decline over time' so we would need more than just this plan with the name at top changed. Might be worth stressing that point?

I also think some of the notes on the RH side of the document are confusing (see my notes on the attached version - they look speech bubbles). Also, I still don't like sections 5 & 6 – Liam, you will remind me (probably correctly) that this can be addressed at the annual review meeting – but it's still not well thought through in my opinion.

Alex

From: [REDACTED]@mowi.com]
Sent: 16 September 2019 17:19
To: Liam Wright
Cc: [REDACTED]; Alex Turner; [REDACTED]@argyll-bute.gov.uk); [REDACTED]
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Good afternoon Liam

Please find attached an amended copy of the Mowi ADD Deployment Plan for Carradale in support of our request to switch on the ADDs. We have taken into consideration your advice and amended the plan accordingly.

If the plan is acceptable to SNH, we will also resubmit the ADD Deployment Plan for Sconser Quarry with the same amendments so I have copied Alex as he has been dealing with that project.

We look forward to your response.

Best regards

[REDACTED]

[REDACTED] [REDACTED]

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From: [REDACTED]@argyll-bute.gov.uk
Sent: 12 September 2019 11:52
To: [REDACTED]@mowi.com>
Subject: FW: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

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Classification: OFFICIAL

Hi [REDACTED]

Please see the response from SNH below. Can you please have a look at this and give me your comments.

Regards

[REDACTED]

[REDACTED]
Team Leader – Major Applications Team
Development and Infrastructure Services
Argyll and Bute Council
T: 01436 6 [REDACTED]
[REDACTED]@argyll-bute.gov.uk



www.argyll-bute.gov.uk

From: Liam Wright [<mailto:Liam.Wright@nature.scot>]
Sent: 12 September 2019 11:33
To: [REDACTED]@argyll-bute.gov.uk>
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Hi [REDACTED]

Apologies for the delay.

I discussed this with the relevant advisor and their advice was that the continuous activation of ADDs (as set out in the current deployment plan) is not considered to be good practice and we would recommend the ADD deployment plan should be amended to take this in to account.

We would suggest that patrol mode should be activated in response to initial predation and thereafter could remain active for a specified number of days (e.g. in box 3). If Patrol Mode is effective in deterring seals this may be sufficient. If not, and predation continues, then use of Standard mode could be included as a later option (e.g. in box 4).

I hope this makes sense but I'm happy to discuss this further if required. Please feel free to forward any amended plan on to me in the first instance and I will discuss further with colleagues.

Regards,
Liam

From: [REDACTED]@argyll-bute.gov.uk]
Sent: 12 September 2019 11:04
To: Liam Wright
Subject: FW: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Classification: OFFICIAL

Hi Liam

Sorry to bother you but MOWI are chasing me up for a response on the ADD issue at Carradale. Do you know when SNH are likely to be in a position to respond?

Regards

[REDACTED]
[REDACTED]
Team Leader – Major Applications Team
Development and Infrastructure Services
Argyll and Bute Council
T: 01436 6 [REDACTED]
[REDACTED] [argyll-bute.gov.uk](mailto:[REDACTED]@argyll-bute.gov.uk)



www.argyll-bute.gov.uk

From: [REDACTED] [@mowi.com](mailto:[REDACTED]@mowi.com)
Sent: 12 September 2019 10:50
To: [REDACTED] [REDACTED] <[\[REDACTED\]@argyll-bute.gov.uk](mailto:[REDACTED]@argyll-bute.gov.uk)>
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Good morning [REDACTED]
Sorry to bother you. I know you must be very busy but I was wondering if you have any feedback regarding the ADD request at Carradale.
Best regards
[REDACTED]

From: [REDACTED] [REDACTED] [\[mailto:\[REDACTED\]@argyll-bute.gov.uk\]](mailto:[REDACTED]@argyll-bute.gov.uk)
Sent: 26 August 2019 10:13
To: [REDACTED] [@mowi.com](mailto:[REDACTED]@mowi.com)>
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

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Classification: OFFICIAL

Hi [REDACTED]

I was at committee on Wednesday and off on leave on Thurs and Friday. I will have a look at this issue just as soon as I can.

Regards

██████████
██████████ ██████████
Team Leader – Major Applications Team
Development and Infrastructure Services
Argyll and Bute Council
T: 01436 6 ██████████
██████████ argyll-bute.gov.uk



www.argyll-bute.gov.uk

From: ██████████ [@mowi.com](mailto:██████████@mowi.com)]

Sent: 20 August 2019 16:43

To: centralvalidationteam <centralvalidationteam@argyll-bute.gov.uk>; ██████████ ██████████
<██████████ [argyll-bute.gov.uk](mailto:██████████@argyll-bute.gov.uk)>

Subject: FW: 20190819_Mowi_Carradale_ADD_Request

Good afternoon ██████████

I am writing with regards to the planning permission conditions relating to the use of Acoustic Deterrent Devices (ADDs) at our Carradale North and Carradale South farm sites (condition number 6 in planning consent 15/01939/MFF and condition 7 in planning consent 15/03017/MFF).

We have encountered some seal predation at our Carradale sites and there are clear signs of seals present near to the pens. We are employing a range of predator mitigation options in order to try and deter seal interest, as outlined in our Predator Mitigation Plan for each site. These mitigation measures reflect ongoing site management and husbandry practices and are designed to remove the main incentive for potential predators to associate fish farm sites with a food source. These measures operate continually and are embedded within site management operations. However we now require to consider further mitigation including the use of ADD's. In accordance with our fish health and welfare obligations we therefore seek permission to deploy ADDs as soon as practically possible.

Please find attached a draft ADD Deployment Guidance flowchart which would be used to control and manage the use of the OTAQ SealFence system proposed for use at Carradale. The flowchart also defines responsibilities and reporting requirements. The modular system can be operated at a source output of 170db in patrol mode and 189db in standard mode with a frequency centred around 10Hz. Patrol mode operates with only 1 unit sounding for 1 second followed by a 10 second gap before the next unit sounds. Standard mode operates with all units

sounding for 3 seconds followed by a 3 to 9 second gap (at random intervals) before repeating. The attached ADD Plans shows the set-up of the system specific to the Carradale North and South sites.

The site manager will review and record mortality levels and seal activity on a daily basis and the situation discussed with the Farms Office at least weekly to determine whether the ADDs can be switched off or if any other management is required. The site manager will also keep a log of the ADD use for this temporary period.

As per the planning conditions for Carradale North and Carradale South Fish Farms, we request written approval to allow the proposed use of the ADD system as per the attached site specific ADD Deployment Guidance and ADD Plans. I would be grateful for your assistance with this as a matter of urgency.

Kind regards,

[Redacted]

[Redacted]

[Redacted]

Mowi Scotland Limited

Mobile: [Redacted]

DDI: (+44) 01397 [Redacted]

Mail: [Redacted]@mowi.com

Office: Mowi
Farms Office
Glen Nevis Business Park
Fort William
PH33 6RX



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CARRADALE SALMON FARM

ACOUSTIC DETERRENT DEVICE DEPLOYMENT GUIDANCE

Under the Regulation 39(2) of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), it is an offence to deliberately or recklessly disturb any dolphin, porpoise or whale (cetacean). Furthermore, the farm is located within the Inner Hebrides and Minches Special Area of Conservation (SAC) for the protection of harbour porpoise. Scottish Natural Heritage advise that the use of ADDs has the potential to lead to disturbance/habitat exclusion of harbour porpoise. The following deployment plan has been developed as a requirement of Scottish Natural Heritage to guide the efficient use of ADDs with due regard to the responsible management of fish welfare and protection given to seal species.

INITIAL PREDATOR CONTROL MEASURES	
<ul style="list-style-type: none"> • Top Nets • Seal Blinds 	<ul style="list-style-type: none"> • Tension Nets • Daily Stock Mortality Retrieval

Increased risk to stock identified (stock mortalities attributed to seals)		
Check initial control equipment & if appropriate carry out maintenance	Ensure daily mortalities are retrieved. Consider increasing frequency at which stock mortalities are retrieved	Review mortality data & cause of mortalities

Continued increase in stock mortalities attributed to seals
<p><u>Checks in boxes 1 & 2 have failed to reduce risk</u> ADD's switched on – Patrol Mode 170 dB <i>Notify Area Manager & in consultation consider additional control measure. Notify any relevant external party.</i> <i>Review period: Daily</i> <i>Max. duration: 2 weeks</i></p>

No further stock mortalities attributed to seals	Continued risk to stock
--	-------------------------

Continued increase in stock mortalities attributed to seals
<p><u>Patrol Mode 170 dB (box 3) has failed to reduce risk</u> Review other ADD operational modes - Standard Mode 189 dB <i>Notify Area Manager & in consultation consider additional control measure. Notify any relevant external party.</i> <i>Review period: Daily</i> <i>Max. duration: 2 weeks</i></p>

No further stock mortalities attributed to seals	Continued risk to stock
--	-------------------------

Consideration of alternative control measures
<p>Review effectiveness of ADDs</p>
<p>A 2 week review period is needed to assess ADD effect on seal behaviour. If significant mortalities continue following a review after 2 weeks, SNH has advised ADDs are no longer effective and ask the company to implement alternative methods and to switch off ADDs. Clear justification of need <u>and</u> effectiveness must be logged and approval provided by the area manager for the continued use of ADDs</p> <p><u>ADDs must be switched off if reasonable justification cannot be provided and if alternative controls are applied</u></p>
<p>Alternative mitigation measures to investigate site specific suitability:</p> <ul style="list-style-type: none"> • Alternative ADD models with different operational modes – during cycle • Secondary predator nets – during cycle • High density polyethylene seal nets – next cycle

No further stock mortalities attributed to seals	Continued risk to stock
--	-------------------------

Mowi Scotland Ltd and its site managers have a responsibility to maintain the welfare of its stock. The RSPCA welfare standard is based on 5 core freedoms covering the freedom from pain, injury, fear and distress. Sites are independently assessed by Freedom Foods and RSPA Officers prior certification to this standard

Key considerations:

Is there a licence condition or other mechanism which prevent the use of ADDs?

Are any external notifications required before or after use?

If yes, notification sent to, or permission sought from, relevant external party. If in doubt, please consult the Mowi Scotland Ltd Environmental Team

The **Site Manager** is responsible for:-

- maintaining a record of the deployment date, make & model of device, dates of use, settings used, the position of the transducers
- a daily review as to whether an increased risk is still present and whether the ADDs can be switched back to Patrol Mode 170 dB or if additional measures are required. Any changes to ADD use should be recorded, and
- a fortnightly review in conjunction with **Area Manager** as to whether the risk is still present and whether additional measures are required; actions and justification to be recorded in a log by the **Site Manager**.
- **Site and Area Manager** to review ADD use at the end of each cycle.

Marine (Scotland) Act - From the 31st January 2011, any fish farm in Scotland that requires to manage seals, at any time of year, will need an annual Seal Management Licence. Predator control at the salmon farm should be managed in a manner which is compliant with the conditions of its licence.

Prior to taking further steps, the Site Manager must ensure that the following documents have been completed and approval formally issued by the Seawater Production Manager:-

Authorisation to dispatch seal
 Contractor's guidelines – seal dispatch

Please refer to the Seal Protocol for further details or seek guidance from your Area Manager.

From: Alex Turner
To: [Liam Wright](#)
Cc: [Caroline Carter](#)
Subject: FW: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]
Date: 23 September 2019 16:51:00
Attachments: [image001.png](#)
[image002.png](#)
[AT comments on MOWI ADD deployment plan for Carradale \(and Sconser Quarry\) - 20190916_ADD Deployment Guidance_v6 - 23 September 2019.pdf](#)

Liam

I had a look at this in context of Sconser Quarry.

Main thing is it doesn't address our points re. 'Standard mode activated at one site at any given time' or 'ADD use across all of Sound of Raasay fish farms to decline over time' so we would need more than just this plan with the name at top changed. Might be worth stressing that point?

I also think some of the notes on the RH side of the document are confusing (see my notes on the attached version - they look speech bubbles). Also, I still don't like sections 5 & 6 – Liam, you will remind me (probably correctly) that this can be addressed at the annual review meeting – but it's still not well thought through in my opinion.

Alex

From: [REDACTED]@mowi.com]
Sent: 16 September 2019 17:19
To: Liam Wright
Cc: [REDACTED]; Alex Turner; [REDACTED]@argyll-bute.gov.uk); [REDACTED]
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Good afternoon Liam

Please find attached an amended copy of the Mowi ADD Deployment Plan for Carradale in support of our request to switch on the ADDs. We have taken into consideration your advice and amended the plan accordingly.

If the plan is acceptable to SNH, we will also resubmit the ADD Deployment Plan for Sconser Quarry with the same amendments so I have copied Alex as he has been dealing with that project.

We look forward to your response.

Best regards

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

Mowi Scotland Limited

Mobile: [REDACTED]
DDI: (+44) 01397 [REDACTED]
Mail: [REDACTED]@mowi.com

Office: Mowi
Farms Office
Glen Nevis Business Park
Fort William
PH33 6RX



From: [REDACTED] [mailto:[REDACTED]@argyll-bute.gov.uk]
Sent: 12 September 2019 11:52
To: [REDACTED]@mowi.com>
Subject: FW: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

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Hi [REDACTED]

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Regards

[REDACTED]

[REDACTED]
Team Leader – Major Applications Team
Development and Infrastructure Services
Argyll and Bute Council
T: 01436 [REDACTED]
[REDACTED]@argyll-bute.gov.uk



www.argyll-bute.gov.uk

From: Liam Wright [<mailto:Liam.Wright@nature.scot>]
Sent: 12 September 2019 11:33
To: [REDACTED]@argyll-bute.gov.uk>
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Hi [REDACTED]

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I discussed this with the relevant advisor and their advice was that the continuous activation of ADDs (as set out in the current deployment plan) is not considered to be good practice and we would recommend the ADD deployment plan should be amended to take this in to account.

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Liam

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Sent: 12 September 2019 11:04
To: Liam Wright
Subject: FW: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Classification: OFFICIAL

Hi Liam

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Team Leader – Major Applications Team
Development and Infrastructure Services
Argyll and Bute Council

T: 01436 [REDACTED]
[REDACTED]@argyll-bute.gov.uk



www.argyll-bute.gov.uk

From: [REDACTED]@mowi.com]
Sent: 12 September 2019 10:50
To: [REDACTED]@argyll-bute.gov.uk>
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

Good morning [REDACTED]
Sorry to bother you. I know you must be very busy but I was wondering if you have any feedback regarding the ADD request at Carradale.
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[REDACTED]

From: [REDACTED]@argyll-bute.gov.uk]
Sent: 26 August 2019 10:13
To: [REDACTED]@mowi.com>
Subject: RE: 20190819_Mowi_Carradale_ADD_Request [OFFICIAL]

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Development and Infrastructure Services
Argyll and Bute Council
T: 01436 ██████████
██████████ argyll-bute.gov.uk



www.argyll-bute.gov.uk

From: ██████████ [@mowi.com](mailto:██████████@mowi.com)
Sent: 20 August 2019 16:43
To: centralvalidationteam <centralvalidationteam@argyll-bute.gov.uk>; ██████████ ██████████
<██████████@argyll-bute.gov.uk>
Subject: FW: 20190819_Mowi_Carradale_ADD_Request

Good afternoon ██████████

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Kind regards,

[Redacted signature]

[Redacted name]

[Redacted name]
Mowi Scotland Limited

Mobile: [Redacted]
DDI: (+44) 01397 [Redacted]
Mail: [Redacted]@mowi.com

Office: Mowi
Farms Office
Glen Nevis Business Park
Fort William
PH33 6RX



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What to do if Union law has been breached?

If you are a national of a Member State of the European Union, or if you live in one of the Member States, or if you run a business in the European Union, Union law gives you a number of rights.

If you would like to know more, you can:

- [Ask a question about the EU \(Europe Direct\)](#)
- [Find out more about your EU rights when moving around in the EU \(Your Europe\)](#)
- [Ask a question about your rights in a situation you are facing in the EU \(Your Europe Advice\)](#).

If you feel that your rights under Union law have not been respected by the national authorities of a Member State, you should first of all take up the matter with national bodies or authorities. This will often be the quickest and most effective way to resolve the issue.

Available means of redress at national level

As stated in the Treaties, the public authorities and Member States' courts have the main responsibility for the application of Union law.

Therefore, it is in your interest to make use of all possible means of redress at national level (administrative and/or out-of-court mediation mechanisms).

Depending on the system of each Member State, you may also submit your file to the [national ombudsmen](#) or [regional ombudsmen](#).

Or you can bring your matter to the court of the Member State where the problem occurred. [Find out more about national judicial systems or going to court](#). If solving your problem requires the annulment of a national decision, be aware that only national courts can annul it. If you are seeking compensation for damage, only national courts have the power, where appropriate, to order national authorities to compensate individuals for losses they have suffered due to a breach of Union law.

Other problem-solving instruments

Alternatively, you may wish to:

- **contact SOLVIT**- SOLVIT is a service provided by the national administration, which deals with crossborder problems related to the misapplication of Union law by national public administrations in the Internal Market. There is a SOLVIT centre in every EU country, as well as in Norway, Iceland and Liechtenstein. Your Member State will try to solve the problem with the other Member State concerned. Going through SOLVIT might take less time than making a formal complaint to the European Commission and can solve your individual problem. If a problem goes unresolved, or you consider that the proposed solution is unacceptable, you can still pursue legal action through a national court or lodge a formal complaint with the European Commission. Please be aware that addressing the issue to SOLVIT does not suspend time limits before national courts.

[Submit your problem to SOLVIT](#)

- **contact European Consumer Centres** - there is a Europe-wide network of consumer centres, which cooperate to help settle disputes between consumers and traders based in different EU countries, as well as in Norway, Iceland and Liechtenstein.

[Submit your problem to European Consumer Centres](#)

- **contact FIN-Net** - which is a network for resolving financial disputes out of court in EU countries, as well as in Iceland, Liechtenstein and Norway. They are responsible for handling disputes between consumers and financial services providers.

[Submit your problem to FIN-Net](#)

Available actions at EU Level

Although you will usually be able to enforce your rights better in the country where you live, the European Union may also be able to help you:

- **The Committee on Petitions of the European Parliament**

You have the right ([Article 227 TFEU](#)) to submit a petition to the European Parliament about the application of Union law. You may submit your petition by post or online via the [European Parliament's website](#). You can find out more about petitions to the European Parliament on the [EU citizenship and free movement website](#).

- **The European Commission**

You can contact the European Commission about any measure (law, regulation or administrative action), absence of measure or practice by a Member State that you think is against Union law.

The European Commission can only take up your complaint if it is about a breach of Union law by authorities in an EU Member State. If your complaint is about the action of a private individual or body (unless you can show that national authorities are somehow involved), you have to try to solve it at the national level (courts or other ways of settling disputes). The European Commission cannot follow up matters that only involve private individuals or bodies, and that do not involve public authorities.

If you are not an expert in Union law, you may find it difficult to find out exactly which Union law you think has been breached. You can get advice quickly and informally from the Your Europe Advice service, in your own language.

- **The European Ombudsman**

If you consider that the European Commission has not dealt with your request properly, you may contact the [European Ombudsman](#) ([Articles 24 and 228 TFEU](#)).

How to submit a complaint to the European Commission

You must submit your complaint via the standard complaint form, which you can fill out in any [official EU language](#). Please make sure you include the following details:

- Describe exactly how you believe that national authorities have infringed Union law, and which is the Union law that you believe they have infringed.
- Give details of any steps you have already taken to obtain redress.

What does the European Commission do with your complaint?

- The European Commission will confirm to you that it has received your complaint within 15 working days.
- The European Commission will invite you to resubmit your complaint in case you have not used the standard complaint form.
- Within the following 12 months, the European Commission will assess your complaint and aim to decide whether to initiate the formal infringement procedure against the Member State in question. If the issue that you raise is especially complicated, or if the European Commission needs to ask you or others for more information or details, it may take longer than 12 months to reach a decision. You will be informed if the assessment takes longer than 12 months. If the European Commission decides that your complaint is founded and initiates the formal infringement procedure against the Member State in question, it will inform you and let you know how the case progresses.
- If the European Commission thinks that your problem could be solved more effectively by any of the available informal or out-of-court problem-solving services, it may propose to you

that your file be transferred to those services.

- If the Commission decides your problem does not involve a breach of Union law, it will inform you by letter before it closes your file.
- At any time, you may give the European Commission additional material about your complaint or ask to meet representatives of the European Commission.

Find out more about how the European Commission handles its relations with complainants: [Communication on the handling of relations with the complainant in respect of the application of Union law.](#)

There are two ways of submitting a complaint:

- **via internet:** SG-PLAINTES@ec.europa.eu
- **by post:**

European Commission Secretary-General
B-1049 Brussels BELGIUM

Or

[EU Commission office in your country](#)

Or

by fax: 3222964335

Complainants are an important source of information for detection of possible infringement cases. The Commission is not bound to open the formal infringement procedure, even in cases where a complaint reveals the presence of an infringement (indeed the Commission enjoys discretionary power in deciding if and when to commence infringement proceedings). Moreover, if the Commission takes a Member State to the Court of Justice and wins the case, the Member State will have to take all actions to remedy the violations. However, this does not mean that complainants are directly entitled to compensation or damages. To seek compensation, complainants must still take their case to a national court within the time limit set out in national law.

Multiple complaints

Where a number of complaints are lodged in relation to the same grievance, the Commission may register them under the same number.

Individual acknowledgements and letters may be replaced by a notice on the Europa website.

[Multiple complaints receipt confirmations](#)

[Decisions taken on multiple complaints](#)

Before filling in this form, please read 'How to submit a complaint to the European Commission':



EUROPEAN COMMISSION

Complaint – Infringement of EU law

https://ec.europa.eu/assets/sg/report-a-breach/complaints_en/

All fields with * are mandatory. Please be concise and if necessary continue on a separate page.

1. Identity & contact details

	Complainant*	Your representative (if applicable)
Title* Mr/Ms/Mrs		
First name*		
Surname*		
Organisation:		
Address*		
Town/City *		
Postcode*		
Country*	Scotland	
Telephone		
E-mail		
Language*	English	
Should we send correspondence to you or your representative*:	<input type="checkbox"/>	<input type="checkbox"/>

2. How has EU law been infringed?*

	Authority or body you are complaining about:
Name*	Scottish Ministers
Address	
Town/City	
Postcode	
EU Member State*	United Kingdom
Telephone	
Mobile	
E-mail	

2.1 Which **national measure(s)** do you think are in breach of EU law and why?*

We welcome the opportunity to bring this case to the European Commission. The UK's withdrawal from Europe, despite Scotland's vote to remain, brings an uncertain future for access to environmental justice. Scottish cetaceans are suffering illegal disturbance, habitat exclusion and possible hearing injury over large inshore areas important to wildlife tourism, because the EU and Scottish law is not being enforced. We hope that the Commission will take on this case and ask for the opinion of the EC on the following:

- Is the disturbance of cetaceans by salmon farm Acoustic Deterrent Devices (ADDs) an offence under the Conservation (Natural Habitats, &c.)**

Amendment (Scotland) Regulations 2007, Habitats Regulation 39(2)¹?

- 2. Is the disturbance of cetaceans by salmon farm ADDs an offence unless a European Protected Species (EPS) license is held?**
- 3. Is it an offence to disturb EPS with ADD(s) if a farm has a planning consent including ADD(s) as part of their predator control plan but no EPS licence?**
- 4. Should Art. 6(3) appropriate assessments have been carried out on the effect of ADDs on cetaceans on:**
 - (i) The Port na Cro Planning Application within the Inner Hebrides and Minches cSAC?**
 - (ii) All new consents within the Inner Hebrides and Minches cSAC?**
 - (iii) All existing consents within the Inner Hebrides and Minches cSAC?**
 - (iv) Should such Art. 6(3) appropriate assessments consider the cumulative effect of ADDs on cetaceans within the SAC?**

It is important that cetacean disturbance stops, however this must not lead to an increase in seal shooting. There will need to be a short but sufficient phase-in period for farms to fit alternative non-lethal methods of preventing seal predation such as anti-predator nets.

We think that the infringements to EU law are: -

(1) The failure to enforce Habitats Regulation 39(2)

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, the Habitats Directive, is transposed into Scottish Law as the Habitats Regulations. Under Habitats Regulation 39(2) as amended in Scotland² (Hab. Reg. 39(2)) it is an offence “*to deliberately or recklessly disturb **any** dolphin, porpoise or whale (cetacean).*”

It is also an offence under the Nature Conservation (Scotland) Act 2004 to “*intentionally or recklessly disturb a cetacean.*”

A jet skier was correctly prosecuted for reckless disturbance of dolphins³, no salmon farms using ADDs have ever been prosecuted despite the clear scientific evidence that ADDs disturb, exclude and can cause permanent hearing damage to cetaceans. The law should apply to industry and individual citizen alike.

The head of Policy and Advice of Scottish Natural Heritage advised Marine Scotland (MS) on 28/7/17:

1. “There is sufficient evidence, both empirical and modelled, to show that ADDs can

¹ www.legislation.gov.uk/ssi/2007/80/regulation/10/made (emphasis added)

² *Ibid*

³ <https://www.banffshire-journal.co.uk/Banff/Jetskier-who-disturbed-dolphins-is-fined-500-2165.htm>

cause disturbance and displacement of cetaceans.

2. *There is sound, scientific evidence to expect that hearing damage, stress and masking may also occur but these are difficult to demonstrate empirically and would require further assessment.”*

This SNH report is important and annexed to this complaint (annex 1). It summarises pertinent science and concludes:

“In summary, ADDs used in aquaculture are of the frequency range and level that has been shown to disturb and displace cetaceans in various scientific studies. SNH advises

⁴ Brandt, M. J., Höschle, C., Diederichs, K., Betke, K., Matuschek, R., Witte, S., Nehls, G. (2012c) Far-reaching effect of a seal scarer on harbor porpoises (*Phocoena phocoena*). *Aquatic Conservation: Marine and Freshwater Ecosystems: 1-11*

⁵ Ibid. see table in Results

⁶ Lepper, P. A., Gordon, J., Booth, C., Theobald, P., Robinson, S. P., Northridge, S. & Wang, L. (2014) Establishing the sensitivity of cetaceans and seals to acoustic deterrent devices in Scotland. *Scottish Natural Heritage Commissioned Report No. 517*.

⁷ FOI response from SNH 25/04/17

⁸ <https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing/species-licensing-z-guide/licensing-dolphins-whales-and-porpoises>

⁹ Our FOI questions to MS 19/1/18 and MS response

¹⁰ ORJIP Project 4, Phase 1 Use of Deterrent Devices - Carbon Trust <https://www.carbontrust.com/media/.../orjip-project-4-phase-1-summary-report.pdf>

¹¹ <http://ec.europa.eu/environment/nature/natura2000/management/docs/Aqua-N2000%20guide.pdf> at page 69

¹² <http://ec.europa.eu/environment/nature/natura2000/management/docs/Aqua-N2000%20guide.pdf>

¹³ SNH Publication, EPS Licensing Guidance – Test 2 (2011) 2.3

¹⁴ MS Seal Shooting Licence Application form.

¹⁵ D. Pemberton and P. Shaughnessy 1993 Interaction between seals and marine fish-farms in Tasmania

¹⁶ Lepper, P. A., Gordon, J., Booth, C., Theobald, P., Robinson, S. P., Northridge, S. & Wang, L. (2014) Establishing the sensitivity of cetaceans and seals to acoustic deterrent devices in Scotland. *Scottish Natural Heritage Commissioned Report No. 517*.

¹⁷ Marine Harvest (2011) Marine Harvest Canada Takes Immediate Action to Reduce Seal and Sea Lion Kills

¹⁸ Güçlüsoy, H., Savas, Y. (2003) Interaction between Monk seals *Monachus monachus* (Hermann, 1779) and marine fish farms in the Turkish Aegean and the management of the problem. *Aquaculture Research* 34:777-783

¹⁹ Pemberton, D, Shaughnessy, P. D. (1993) Interaction between seals and marine fish-farms in Tasmania, and management of the problem. *Aquatic Conservation* 3:149-158

²⁰ SMRU advice to SASWG Members.

²¹ Iwama, G., Nichol, L., Ford, J. (1997) *Salmon Aquaculture Review: Aquatic Mammals and Other Species*, Vancouver.

²² Our FOI questions to MS 19/1/18 and MS response

²³ SNH FOI reply 25/04/17

²⁴ http://www.parliament.scot/S5_Environment/Inquiries/20180305_GD_to_Rec_salmon_farming.pdf

²⁵ Northridge, S., Coram, A. & Gordon, J (2013). *Investigations on seal depredation at Scottish fish farms*. Edinburgh: Scottish Government

²⁶ <https://vimeo.com/home/myvideos/page:1/sort:plays/format:video> (see video)

²⁷ Coram, A., Gordon, J., Thompson, D., Northridge, S (2014) Evaluating and assessing the relative effectiveness of non-lethal measures, including Acoustic Deterrent Devices, on marine mammals. Scottish Government.

²⁸ Coram, A., Gordon, J., Thompson, D., Northridge, S (2014) Evaluating and assessing the relative effectiveness of non-lethal measures, including Acoustic Deterrent Devices, on marine mammals. Scottish Government.

²⁹ FOI response from SNH 25/04/17

³⁰ *The protection of Marine European Protected Species from injury and disturbance, Guidance for Scottish Inshore Waters*, March 2014 paragraph 1.2.3 on page 9 (emphasis added).

³¹ Argyll and Bute Council Planning dept. Application 16/03407/MFF.

³² Sweetman and others. CURIA C-258/11

³³ SNH FOI reply 25/04/17

³⁴ SNH FOI reply to D&J Ainsley question 13. 08/3/18

³⁵ http://www.parliament.scot/S5_Environment/Inquiries/20180305_GD_to_Rec_salmon_farming.pdf submission by SNH to ECCLR committee and SNH FOI reply

³⁶ *Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw, Natuurbeheer en Visserij (2004) Case C-127/02*

³⁷ http://www.parliament.scot/S5_Environment/Inquiries/20180305_GD_to_Rec_salmon_farming.pdf

³⁸ <https://theferret.scot/45-lochs-polluted-fish-farm-pesticides/>

⁴⁰ https://www.salmon-trout.org/2017/11/20/worst-lice-offenders-full-farm-list/?mc_cid=baa4450b8d&mc_eid=c839e4ea0e

that the potential for these impacts is real and therefore the requirements for protection conferred upon these species through the Habitats Regulations need to be considered”

We discuss the science in section 2.3: one of the studies involved an aerial survey by Brandt et al (2012)⁴ using a single ADD. They recorded a “*significant decrease in porpoise density from 2.4 before to 0.3 porpoises per square kilometre during ADD operation within the 990 km² survey area*”, i.e. a single ADD excluded 87.5% of porpoises from a 990 km² area. The same survey recorded 96% exclusion of porpoises at stations 7.5 km from the ADD.⁵ There was no evidence that disturbance did not happen at greater distances.

The SNH commissioned report Lepper et al 2014⁶ states “*the risk that ADDs at Scottish aquaculture sites is causing permanent hearing damage to marine mammals cannot be discounted*”. Echo-locating cetaceans rely on their sensitive hearing to forage and hearing injury could result in early death.

The 28/7/17 report from the head of Policy and Advice of Scottish Natural Heritage to Marine Scotland (MS) (annex 1) represents a welcome change of attitude by SNH. We hope that this report will be translated into action to correctly interpret European and Scottish law.

The reply from MS to the report from SNH (31/10/17 annex 1) ignores advice from their statutory conservation adviser that there is sufficient evidence for disturbance, which is all that is required to enforce Hab. Reg. 39(2). There may be an innocent explanation, but if you also consider the minutes of the SNH / MS discussion on ADDs and EPS 8/10/16⁷ (annex 1 and discussed in part 3 of this section), it appears that MS who have for years failed in their statutory duty to protect cetaceans by enforcing Hab. Regs. 39 and 44 are ignoring the precautionary principle and calling for even more science as a delaying tactic.

In summary: the use of ADDs by salmon farms in areas where they could disturb cetaceans is an offence under Hab.Reg. 39(2), we ask for this legislation to be enforced.

(2) The failure to enforce EPS licensing requirements

Under Regulation 44 of the Habitats Regulations, disturbance to cetaceans, which are European Protected Species (EPS), can only take place if a EPS licence is granted.⁸

SNH’s ‘Marine mammals and licencing’ paper offers further guidance, stating that, ‘*if injury or disturbance [to cetaceans] were likely... to result from the activity a EPS licence would be required in order for that activity to be carried out legally.*’

No fish farms in Scotland hold EPS licenses.⁹ The 118 which use ADDs may have Planning consents which include ADDs.

It is ironic that a scientific study on ADDs requires an EPS licence¹⁰ however salmon farm

ADDs disturb cetaceans over large areas without EPS licenses.

Three tests must all be passed for an EPS licence to be granted. It is our contention that that the use of ADDs by fish farms fails not one, but all of these tests.

Test 1: Licensable Purpose

The first part of the test is that a ‘licensable purpose’ is required. This must relate to one of the purposes enumerated in Habitats Regulation 44(2). Because the Inner Hebrides and the Minches cSAC is designated for harbour porpoise, a priority species (no. 1351), the EC advises that the conditions of overriding public interest are particularly strict¹¹ : the only licensable purposes which could apply are: (a) human health and public safety; (b) overriding beneficial consequences for the environment; or (c) for other imperative reasons if the opinion of the European Commission has been given.

Test 2: No satisfactory alternatives to the use of ADDs

EC Guidance states ‘Where another solution exists any argument that it is not “satisfactory” will need to be strong and robust’^{12 13}. ADDs fail this test, as there are satisfactory alternatives to their use.

The issue of satisfactory alternatives to the use of ADDs is also pertinent to the ongoing shooting of seals by salmon farmers. The shooting of seals is licenced under the Marine (Scotland) 2010 Act. Guidelines to the Act, and seal shooting license conditions, state that seals can only be shot ‘as a last resort’¹⁴.

To a reasonable person the requirement that a seal can only be shot ‘as a last resort’ means that **all** other non-lethal methods of deterring seal attack have been tried. ADDs are not fully effective at deterring seals^{15 16}. Anti-predator nets have been found to be the only fully effective solution negating the use of ADDs and shooting of seals. These nets are being used successfully in Canada¹⁷, Turkey¹⁸ and Tasmania¹⁹. Closed circulation also provides effective separation of seals and farmed salmon and solves most of the environmental impacts of the industry.

Seals shot on farms which do not use the best technology are **not** being shot ‘as a last resort’ and thus farms relying on ADDs, rather than more efficient technology to prevent seal predation are failing to comply with their seal shooting license conditions. The salmon farm companies who shot most seals in 2015, Marine Harvest and Scottish Seafarms both rely on ADDs²⁰.

MS has never taken action against a salmon farm for a breach of the seal shooting license conditions.

Iwama et al (1997) concluded that ADD effectiveness diminished with time and that pinniped attacks continued to occur, even when ADDs were present. They recommended the prohibition of ADDs and the Canadian Department of Fisheries and Oceans for the British Columbia aquaculture industry are no longer issuing the letters of authority required for installation of an ADD²¹.

A FOI reply from MS²² reveals that of 172 Scottish fish farms, 121 use ADDs. Airmar

ADDs are used at 62 farms, Ace Aquateq ADDs at 17 farms and Terecos are used at 39 farms. Only 6 farms use just 1 single ADD, whilst 84 farms (nearly 70%) use 4 ADDs or more. In some cases, up to 20 Airmar ADDs are being used at a single farm.

Hjaltland Seafarms Ltd use **no** ADDs on their 25 farms and Cooke Aquaculture only use ADDs on 3 of their 22 farms. Fifty-one farms do not use ADDs, 8 of which do so to comply with the Wholefoods accreditation scheme, demonstrating that farms can operate without ADDs . There are alternatives to ADDs which do not harm cetaceans.

The RSPCA “Freedom Foods” (FF) accreditation requires that accredited farms operate ADDs continuously. The biggest individual seal shooting companies in 2015, Marine Harvest and Scottish Seafarms were both RSPCA – FF accredited salmon farms. In 2014 almost 70% of seals reported as shot were at FF accredited sites²³ which must use ADDs. SNH cites as justification for not objecting to the use of ADDs on Planning consents that they will not be used continuously. The farms which are supposed to use ADDs intermittently and are FF accredited must be breaking one or other condition.

The Aquaculture Stewardship Council requires that certified farms worldwide comply with strict requirements for responsible farming. Certified farms cannot use ADDs or kill marine mammals. In Norway, a total of 115 salmon farms are certified, including 49 Marine Harvest farms whereas in Scotland only 2 are certified, one of which is in freshwater where there are no seals. We welcome the recommendation of the ECCLR committee that Scottish farms should be certified²⁴.

The industry maintains that anti-predator nets trap wildlife: this might be the case if large mesh monofilament nets for example were used but this is not a problem in Canada where suitable mesh size and type is used. Anti-predator nets may reduce water flow a little, this is an economic issue and therefore not a consideration where a European Protected Species is concerned.

The use of single nylon nets is widespread in Scotland, this is the lowest cost of construction, but even when tensioned, nylon is more flexible than stronger net materials and seals can bite into a salmon through the mesh, in most cases without breaking the net²⁵. Dead fish (morts) accumulate at the cage bottom (see video²⁶) and if these are not regularly removed, seals are encouraged by an easy meal. Many farms using these cheaper nets shoot seals and use ADDs²⁷.

In summary: no salmon farm could pass this test: there are satisfactory alternatives.

Test 3: Favourable conservation status

The third and final stage of the test requires that the ‘actions authorised will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in their natural range.’

We discuss Hab. Dir. Art 6 in section 4 and maintain that this test could not be passed.

We are concerned that the proposed Marine Scotland EPS Guidance²⁸ review could result in reduction of protection to cetaceans in order to allow salmon farms to obtain EPS

licenses. We ask the Commission to intervene if EPS licensing conditions are to be relaxed.

The minutes of the SNH / MS discussion on ADDs and EPS 8/10/16²⁹ are very pertinent to this complaint, and raise concerns that MS intend to reduce the protection EU law affords to cetaceans. We summarise key points: -

- SNH asks MS “*for a clear and formal policy statement that sets out the government position, especially where this seems to diverge from published guidelines*”
- MS seeks to define ‘reckless’ in a way that ADD use by the aquaculture industry would not be an offence under Hab. Reg. 39(2). However, their legal advice is that it would be difficult to infer recklessness “unless there was an identified negative impact of ADDs used in aquaculture upon EPS species.”
- SNH question MS interpretation, the purpose of EPS legislation is to avoid disturbance and harm to EPS species. Disturbance through ADD use (irrespective of the sector employing it) falls within this scope.
- SNH propose a compromise EPS process which would allow disturbance by ADDs in all but the most sensitive areas. We maintain that this would not comply with EU or Scottish law.
- According to MS “The Marine EPS Guidance would need to be updated, in relation to its description of Reg. 39(2)”. We take this as an indication that MS are reluctant to comply with their statutory duty to enforce Hab. Reg. 39(2)
- It was emphasised that planning legislation cannot be used to address and manage impacts covered by other regulatory regimes (such as EPS legislation)

We submit that peer-reviewed science *does* show an identified negative impact (ADDs disturb cetaceans). The term “deliberate or reckless disturbance” in Hab.Reg. 39(2) is described by MS themselves³⁰ as a “*catch-all disturbance offence*” which a reasonable person would understand to mean that “deliberate or reckless” is intended to be interpreted in the widest possible sense.

Article 12(1)(b) of the Habitats Directive has been considered by the European Court of Justice. The Commission Guidance (paragraph 33) therefore proposes the following definition:

‘Deliberate’ actions are to be understood as actions by a person who knows, in light of the relevant legislation that applies to the species involved, and the general information delivered to the public, that his action will most likely lead to an offence against a species, but intends this offence or, if not, consciously accepts the foreseeable results of his action.

We maintain that fish farm companies using ADDs consciously accept the foreseeable results of using ADDs: that cetaceans will be disturbed. Accordingly, the use of ADDs where there are cetaceans constitutes deliberate disturbance.

The test of recklessness in Scots law comes from the case of *Allan v Patterson* 1980 JC 57 for the majority of statutory offences. It is the following:

[Performing the activity in a way] which demonstrates a gross degree of carelessness in

the face of evident dangers.' (per Lord Justice-General Emslie at 59)

The legal paper "Recklessness in Scots criminal law" gives the following definition: -

"The mens rea of recklessness is generally defined either subjectively or objectively. A subjective approach says a person is reckless where he takes an unjustified risk of which he was actually aware. An objective approach says a person is reckless where he takes an unjustified risk of which he either was aware or ought to have been aware. He "ought" to have been aware of the risk where the reasonable person would have been aware of it."

The paper concludes that Scots law has always viewed objective recklessness as the basis for criminal liability, the ignorance of the risk to cetaceans would be no excuse for disturbing cetaceans. In just one case the subjective approach was taken, thus there is a small chance that on a first offence a salmon farm might be acquitted on a charge of reckless disturbance under Hab. Reg, 39(2) in the unlikely event they could prove that they were unaware that ADDs disturb cetaceans. However, even if acquitted they would have to stop using ADDs as they would then be aware of the risk.

In summary: even though a farm may have ADDs on its Planning Permission, it is unlawful to use ADDs in an area where there is potential to disturb cetaceans unless an EPS licence is held.

If the use of ADDs in areas where they could disturb cetaceans is discontinued because it is an offence under Hab. Reg. 39(2) and the Nature Conservation (Scotland) Act 2004, there is no need to consider the further legal protection afforded by Article 6(3) of the Habitats Directive.

(3) The failure to carry out Habitats Directive Art.6(3) Appropriate Assessments

ADDs disturb cetaceans over large areas. Art. 6(3) appropriate assessments (section 2.2) should have been carried out on the impacts of ADDs on cetaceans in the Inner Hebrides and Minches cSAC both for existing farms and new applications. The cSAC, designated for harbour porpoise, is also important to minke whales and two well-studied populations of bottlenose dolphins. No appropriate assessments have been carried out on any salmon farms within the cSAC.

In 2017 Argyll and Bute Council granted a planning consent to the Marine Harvest Port na Cro farm³¹, located within the cSAC. The application included 4 ADDs as part of the predator control plan.

Science based objections were lodged to the application by Scottish Environment LINK, Whale and Dolphin Conservation, Hebridean Whale and Dolphin Trust and ourselves, however a local SNH officer advised that Art. 6(3) appropriate assessments were not necessary (see section 2.3). We submit that this advice did not correctly interpret the applicable science or law and failed to apply the precautionary principle.

We discuss this case in section 2.3, it is a test case for the recently designated cSAC. It

also sheds light on why the regulatory and consenting systems are failing to enforce the law.

Regulators have also failed to carry out Art.6(3) appropriate assessment on the *cumulative impact* of ADDs within the Inner Hebrides and Minches cSAC.

Scientific studies, discussed later, find that porpoise and other cetaceans are disturbed and excluded at great distances from active ADDs. However, even if the area of disturbance was deemed to be minor, the ruling of the European Court of Justice case *Sweetman*, which found that it would be an offence for a member state to allow even a small part of an SAC to be damaged³² must be taken into account.

SNH's interpretation of the science is the opposite of precautionary, understating the adverse effects on cetaceans of ADD use, perhaps in order to justify their decision not to carry out Art. 6(3) appropriate assessments. Information provided under FOI/EIR suggests a worrying attitude amongst some MS and SNH officers, that they are more concerned at what the industry will accept than they are about their duty to enforce the law. For example, a SNH spokesperson at the Salmon and Aquaculture and Seals Working Group meeting 6/4/16 was asked if porpoise SACs will prevent the use of ADDs. The minuted reply was "They (SNH) believe that there is no need to alter the status quo in any significant manner".³³

SNH contend³⁴ that the cSAC was designated at favourable conservation status (FCS) with an existing level of ADD use and, assuming this level does not increase, FCS will be maintained. This argument ignores FOI evidence from SNH³⁵ that the use of ADDs is increasing. It also fails to recognise that disturbance by ADDs is an offence under Hab. Reg 39(2). Moreover, it fails to recognise that fish farms are "plans or projects" and therefore must comply with Art.6(3) as well as the non-deterioration obligation of Art.6(2).

Art.6(3) requires demonstration beyond all reasonable scientific doubt³⁶ that the use of ADDs on any farm, in combination with all other ADDs within or close to the cSAC will not adversely affect the integrity of the site.

The same local SNH officers used a similar argument in 2006; that the Firth of Lorn SAC had been designated with a certain level of scallop dredging, and if this did not increase FCS would be maintained. The officers also maintained that Art. 6(3) appropriate assessment was not needed for scallop dredging. The EC disagreed and ruled that Art.6(3) appropriate assessment should have been carried out. Following this ruling the Firth of Lorn SAC was closed to scallop dredging. The officers who had wrongly advised that scallop dredging did not require appropriate assessment in 2006 also advised that appropriate assessment was not necessary for Port na Cro in 2017.

We welcome the 05/03/18 Environment, Climate Change and Land Reform Committee: Report on the environmental impacts on salmon farming³⁷, which calls for a precautionary approach and a resolution of the environmental problems and states that they are '*not convinced the sector is being regulated sufficiently or regulated sufficiently effectively. This needs to be addressed urgently because further expansion must be on an*

environmentally sustainable basis.’ ‘The status quo is not an option.’

We append questions to MS and SNH. MS answered only one of our questions. SNH also avoided direct answers to simple questions on EPS legislation. The paucity of response and our reading of other FOI answers suggest that if MS and SNH have valid reasons for failing to enforce Hab. Reg. 39(2) and 44, the requirement for EPS licences, they are reluctant to share them with the public.

The salmon farming industry has a history of poor regulation. We discuss the Port na Cro Planning application as a test case in section 2.3. Emamectin Benzoate (a toxic sealice medicine) levels of 3.04 µg/kg were reported in seabed samples near the farm in 2016 (the failure level is 0.763 µg/kg)³⁸. It's neighbour Shuna SW breached sealice trigger levels between November 2016 and August 2017.³⁹

We append FOI/EIR responses which support the view that the regulatory system is ineffective (appendix 2). There have been many breaches of regulations by salmon farms, however there have only been 2 fines or prosecutions since 2006, which were for discharges of effluent and diesel into rivers in 2007 and 2008. There have been no prosecutions or fines since the Wildlife and environmental Crime unit started operating in August 2011.

2.2 Which is the **EU law** in question?

Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, the ‘Habitats Directive’, Articles 12, 16 and 6

- 1. Article 12 of the Habitats Directive** is transposed into Scottish law as the conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007, the ‘Habitats Regulations’.

Regulation 39(2) states that, *‘it is an offence to deliberately or recklessly disturb **any** dolphin, porpoise or whale (cetacean).’*⁴⁰

It is also an offence under the Nature Conservation (Scotland) Act 2004 to *‘intentionally or recklessly disturb a cetacean’*.

Marine Scotland’s publication ‘The Protection of Marine European Protected Species from injury and disturbance’ offers: *‘Regulation 39(2) [...] provides further protection to cetaceans through an additional catch-all disturbance offence [...] The purpose of this regulation is to provide cetaceans with protection at all times regardless of the circumstances of the mammal at the time of the disturbance in question[.]’*⁴¹

⁴⁰ www.legislation.gov.uk/ssi/2007/80/regulation/10/made

⁴¹ *The protection of Marine European Protected Species from injury and disturbance, Guidance for Scottish Inshore Waters*, March 2014 paragraph 1.2.3 (emphasis added).

SNH provides further clarification:⁴² *'In Scottish inshore waters, it is an offence to intentionally or recklessly kill, injure, capture, disturb or harass a cetacean.'*

The Scottish Marine Wildlife Watching Code states, *'it is an offence to deliberately or recklessly disturb or harass any whale, dolphin, porpoise, marine turtle or otter[.]'*⁴³

When read with the precautionary principle, it is evident from the above that the Habitats Regulations and Nature Conservation (Scotland) Act 2004 create a comprehensive offence, aimed at tackling cetacean disturbance at the individual level. We submit that the wording of the laws (intentional, deliberate or reckless) is a catch-all to indicate that it is the disturbance that is illegal every time disturbance is caused, however that disturbance is caused.

2. Article 16 of the Habitats Directive states:

Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Article 12, 13, 14 and 15 (a) and (b):

Art 16 lists 5 situations where Member States may derogate from the provisions of Article 12, one of which is pertinent to this case:

(c) in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

Article 16 of the Habitats Directive is transposed into Scottish Law as Habitats Regulation 44. Regulation 44 allows disturbance of EPS under an EPS licence which can only be issued if all 3 conditions discussed in section 2.1 of this complaint are met.

If ADD use by salmon farms is banned as an offence under Hab Regs 39 and 44, further legal arguments are unnecessary. If not, protection is also offered by Article 6 of the Habitats Directive

3. Article 6 of the Habitats Directive

Article 6(3) applies in the Inner Hebrides and Minches cSAC, designated for harbour porpoise, it states:

*'Any plan or project likely to have a significant effect on a [...] site, either individually or in combination with other plans or projects, shall undergo an **Appropriate Assessment** to determine its implications for the site. **The competent authorities shall only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site concerned.***⁴⁴

⁴²<https://www.snh.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/species-z-guide/protected-species-dolphins-whales-and-protected->

⁴³ *The Scottish Marine Wildlife Watching Code, 2016 page 19 (emphasis added).*

⁴⁴ <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A31992L0043>

⁴⁵ *Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw, Natuurbeheer en Visserij (2004) Case C-127/02, at 44.*

⁴⁶ *Ibid*

⁴⁷ *Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw, Natuurbeheer en Visserij (2004) Case C-127/02, at 59.*

⁴⁸ *Ibid*, at 44

⁴⁹ *Ibid*, at 57

⁵⁰ <https://www.clientearth.org/reports/natura-2000-site-integrity-briefing.pdf>

⁵¹ www.richardbuxton.co.uk/sites/default/files/.../Akester%20-%20Wightlink.doc

⁵² Sweetman and others. CURIA C-258/11

Because case law refers to Art. 6 of the Habitats Directive, we will use the Directive, rather than the corresponding Regulations. Member states have a duty to accurately transpose regulations into national law. Some documents refer to Habitats Regulation Assessment, which is equivalent to Art. 6(3) appropriate assessment.

The European Court of Justice *Waddenzee* case clarifies that the precautionary principle is one of the foundations of the European Community's policy on the environment, and environmental law must be read in the light of it.⁴⁵ A risk to the environment exists if it *'cannot be excluded on the basis of objective information that the plan or project will have significant effects on the site concerned.'*⁴⁶

In accordance with *Waddenzee*, and the precautionary principle, Article 6(3) should be interpreted as requiring an appropriate assessment unless no reasonable scientific doubt remains as to the absence of such effects.⁴⁷ The *Waddenzee* judgment states:

*'in case of doubt as to the absence of significant effects such an assessment must be carried out'⁴⁸ ... 'So, where doubt remains as to the absence of adverse effects on the integrity of the site linked to the plan or project being considered, the competent authority will have to refuse authorisation.'*⁴⁹

Client Earth provides further clarification: *'Member States must only permit/allow the continuation of an activity within the Natura 2000 network if they have made certain that it will not adversely affect the integrity of that site.'*⁵⁰

The court ruling *Akester*⁵¹, determined that Art. 6(3) appropriate assessment should be carried out even if the adverse effects were deemed to be minor. ADDs have been well-studied and demonstrated to have far-reaching effects as discussed in sec 2.3.

Even if the area of disturbance was deemed to be small, the ruling of the European Court of Justice case *Sweetman*, which found that it would be an offence for a member state to allow even a small part of an SAC to be damaged⁵² must be taken into account. Several peer-reviewed studies demonstrate that cetaceans are disturbed from large areas of important habitat by ADDs.

In advising that appropriate assessments are not necessary for existing and new consents for the use of ADDs within the Inner Hebrides and Minches cSAC SNH have failed to adopt a precautionary approach, no reasonable interpretation of the science would lead to the conclusion that no *"doubt remains as to the absence of adverse effects on the integrity of the"* Inner Hebrides and Minches cSAC, designated for harbour porpoise.

Art.6(3) Appropriate Assessments should be carried out on existing and new consents which use ADDs in SACs where there are cetaceans.

4. The Marine Strategy Framework Directive also requires controls on underwater noise.

2.3 Describe the problem, providing facts and reasons for your complaint* (max. 7000 characters):

Salmon farm ADDs disturb, exclude and can cause hearing injury to cetaceans over large areas of Scottish inshore waters.

Disturbance and injury to cetaceans is an offence under EC and Scottish law, but the regulators are not enforcing the law.

ADD use within SACs can only be allowed if Hab. Dir Art 6(3) appropriate assessment demonstrates beyond reasonable scientific doubt that ADDs will not adversely affect the integrity of the site.

Port na Cro was one of the first farms to apply for planning consent after the Inner Hebrides and Minches cSAC was designated. We consider this as a test case and challenge SNH officer's advice that Hab. Dir Art 6(3) appropriate assessment was not necessary. We also challenge the advice that Shuna Sound would not be acoustically blocked by 4 Terecos ADDs. We also demonstrate that SNH sound maps based on an unvalidated model underestimate the areas of disturbance reported in peer-reviewed scientific studies based on field measurements.

We welcome the recent report from the Head of Policy and Advice of SNH to MS (annex 1) which recognises that ADDs disturb, displace and injure cetaceans and that the protection for cetaceans under the Habitats Regulations must be considered. The reply from MS calling for even more science appears to be a tactic to delay compliance with their duty to enforce the laws protecting cetaceans. It ignores the conclusion of common sense and comprehensive scientific studies that loud noises are harmful to cetaceans. It also ignores the precautionary principle and the reversal of the normal burden of proof under Art 6(3): the duty to prove no adverse effects if ADDs are to be allowed.

There are clearly inconsistencies between the advice to planners given by local SNH officers, the answers given to FOI requests, the sound maps produced by SNH which seek to underestimate the adverse effects of ADDs and the report from the Head of Policy and Advice of SNH to Marine Scotland in annex1.

Because ADDs are not always effective at deterring seal attack, farms which use ADDs also shoot seals. US policy is to stop importing farmed salmon unless all aquaculture operations are prohibited from killing or serious injury of marine mammals.

The US Department of Commerce's National Oceanic and Atmospheric Administration has issued guidance regarding this policy to the European Union, stating that 'the harvesting nation must demonstrate that all aquaculture operations.... sited in marine mammal habitat are prohibited from intentional killing or serious injury of marine mammals.' If valuable exports of Scottish farmed salmon to the US are to continue, seal shooting and hearing injury to cetaceans will have to stop by 1 January 2020..

There are alternatives to the use of ADDs which do not involve harming cetaceans or shooting seals.

Scientific studies on disturbance, exclusion and hearing damage to cetaceans by ADDs

Disturbance of any cetacean, at any distance from an ADD is an offence under Hab. Reg. 39(2). Unless the EC rules that the regulation does not apply, the use of ADDs must stop in areas where there are cetaceans. In this case there is no need to consider Hab. Dir Art. 6(3).

If it is ruled Hab. Reg. 39(2) does not apply, the best available scientific estimates of the distances at which disturbance, exclusion and hearing injury can occur would be required to inform Art. 6(3) appropriate assessments.

Recent studies have concluded that harbour porpoises are particularly sensitive to sound and that disturbance occurs at lower sound pressure levels (SPL) than previously accepted. Kok et al., (2017)⁵³ recorded disturbance to captive porpoises, which chose to swim from a noisy pool to a quiet pool at 100 dB re 1 μ Pa (RMS). In their estimation of the area in which porpoise within the cSAC are disturbed by ADDs, however, SNH use the dated USA NOAA estimate that disturbance to small cetaceans (not specific to the sensitive porpoise) occurs at 120 dB re 1 μ Pa (RMS).

Brandt et al., (2012)⁵⁴ recorded **exclusion** of 97.66% and 94.25% of porpoise at 2 stations ~7.5km from a single active Lofitech ADD (see table 2 in her results): the SPL at this distance was 113 dB re 1 μ Pa (RMS). She also found by aerial survey that ~85% of porpoises were excluded from an area of 990km² by the ADD.

Olesiuk (2002) found that around 90% of porpoises were excluded within a range of 3.5 km of an active ADD (the maximum distance observed in this study).⁵⁵ Neither Brandt nor Olesiuk measured porpoise numbers at distances greater than 3.5 km or 7.5 km from the ADD, however it is probable that porpoises are excluded at greater distances.

Brandt et al (2012 b) stated that a loud ADD could be audible to harbour porpoise at a range greater than 20km.⁵⁶ Signals from an Airmar ADD were audible in the Sound of Mull at more than 16km (Calderan et al 2007)⁵⁷, and such a device could theoretically be heard at 20.2km⁵⁸. ADDs are audible to hydrophones at up to 30 km in the cSAC⁵⁹. We accept that audibility is not the same as disturbance, but submit that the 10 km zone of disturbance plotted on fig.3, the Corram report to MS is significantly less than field observations.

Killer whales in British Columbia were excluded from a 10km radius of an Airmar ADD.⁶⁰ Two further surveys in BC concluded that ADDs disturb and displace harbour porpoise from their traditional feeding areas.^{61 62} Minke whales show pronounced avoidance to ADDs at considerable ranges (McGary et al., 2017)⁶³.

Lucke et al., (2009)⁶⁴ found that porpoises are vulnerable to temporary threshold shift (TTS) hearing injury (which can become permanent on short exposure to loud or longer exposure to moderate noise) at a sound pressure level (SPL) of 164.3 dB re 1 μ Pa (RMS)⁶⁵. The output of ADDs used by salmon farms range from Terecos at 178 dB re 1 μ Pa (RMS)⁶⁶, measured at 184 dB re 1 μ Pa by Oelisk⁶⁷, Lofitech at 189 dB re 1 μ Pa (RMS) to Airmar dB plus 11 at 197 dB re 1 μ Pa (RMS).

Scottish studies by Northridge et al⁶⁸ and Booth⁶⁹ found that ADDs disturb and exclude porpoise over wide areas and may block channels to porpoises. Booth produced a sound map of the Sound of Mull from field measurements (Figure 6.8 below). Almost all of the surveyed areas had SPL above Kok's disturbance threshold of 100 dB re 1 μ Pa (RMS) and large areas had sound levels above Brandt's 113 dB re 1 μ Pa (RMS) exclusion threshold and the NOAA estimate of 120 dB re 1 μ Pa (RMS) for disturbance used by SNH.

Figure 6.9 shows Booth's measured sound levels at given distances from ADDs. A quick survey of the graphs indicates that 5 km from the ADD on sites (a) and (c) ~90% of Booth's sound measurements were above 100 dB re 1 μ Pa (RMS), ~45% were above 113 dB re 1 μ Pa (RMS) and ~25% above 120 dB re 1 μ Pa (RMS). The range of values was ~100 to 118 dB re 1 μ Pa (RMS) 7.5 km from the ADD on site (b) and 100-125 dB re 1 μ Pa (RMS) at 1200m on site (c), possibly due to the topography of L. Sunart, at the north of Fig.6.9. Sites (a),(b) and (c) were in the same ballpark as Brandt's measured value of 113 dB re 1 μ Pa (RMS) at 7.5km from the ADD.

Booth's soundmap Fig. 6.8 below shows that all surveyed areas in the sound of Mull were subject to SPLs above Kok's 100 re 1 μ Pa (RMS). The SE end of the sound is 15km from 3 ADDs and has received levels of 105 to 110 re 1 μ Pa (RMS). The islands 8km north of the southernmost ADD had a SPL of 115 re 1 μ Pa (RMS), consistent with

Brandt's measured 113 re 1 μ Pa (RMS) at 7.5 km. There were 9 farms with ADDs in Booth's 2010 study, now there are thirteen farms with ADDs in the same area.

In determining the zone of disturbance to porpoise to inform an Art.6(3) appropriate assessment, the best available evidence needs to be used, so field measurements would carry far more weight than a model (which would only be robust if validated by field measurements). In the light of the ECJ Waddensea ruling, an appropriate assessment would need to prove *beyond reasonable scientific doubt* that ADDs do not adversely affect the integrity of the site before those ADDs could be allowed.

A reasonable scientist would take account of Kok's disturbance threshold of 100 dB re 1 μ Pa (RMS), it is clear that the disturbance threshold lies below 113 dB re 1 μ Pa (RMS) at which 96% of porpoise were excluded.

Although there is little evidence for the distance at which porpoise are not disturbed, there is good evidence from Brandt and Booth that the SPL attenuates to ~113dB around 7.5 to 8 kms from a Lofitech or Airmar ADD at which level ~96% of porpoise are excluded. The zone of disturbance must be greater than this for a typical farm and ideally should be measured as the values are site specific.

SNH use the dated non-precautionary 120 dB re 1 μ Pa (RMS), and base their predictions on a mathematical model, it is not clear if their inputs to the model have been validated by field measurements. Their predictions that the zone of disturbance for an Airmar ADD is 2.5 Kms and for a Terecos is 50metres are not precautionary and an Art 6(3) appropriate assessment based on these predictions would not have proven beyond reasonable scientific doubt that ADDs do not adversely affect the integrity of the cSAC.

We asked SNH why they do not use Kok's threshold for disturbance. They replied that they will not accept data from captive animals, which is strange because the Sea Mammal Research Unit works with ADDs on captive seals. They also said that Kok's threshold was too low because of background noise. Background noise in most sealochs (at Port na Cro for example) will be low with little traffic or wave action. Any argument that 100 dB re 1 μ Pa (RMS) would be too low because of background levels would need to be supported by robust science and proof that the background noise is of similar frequency to the ADDs.

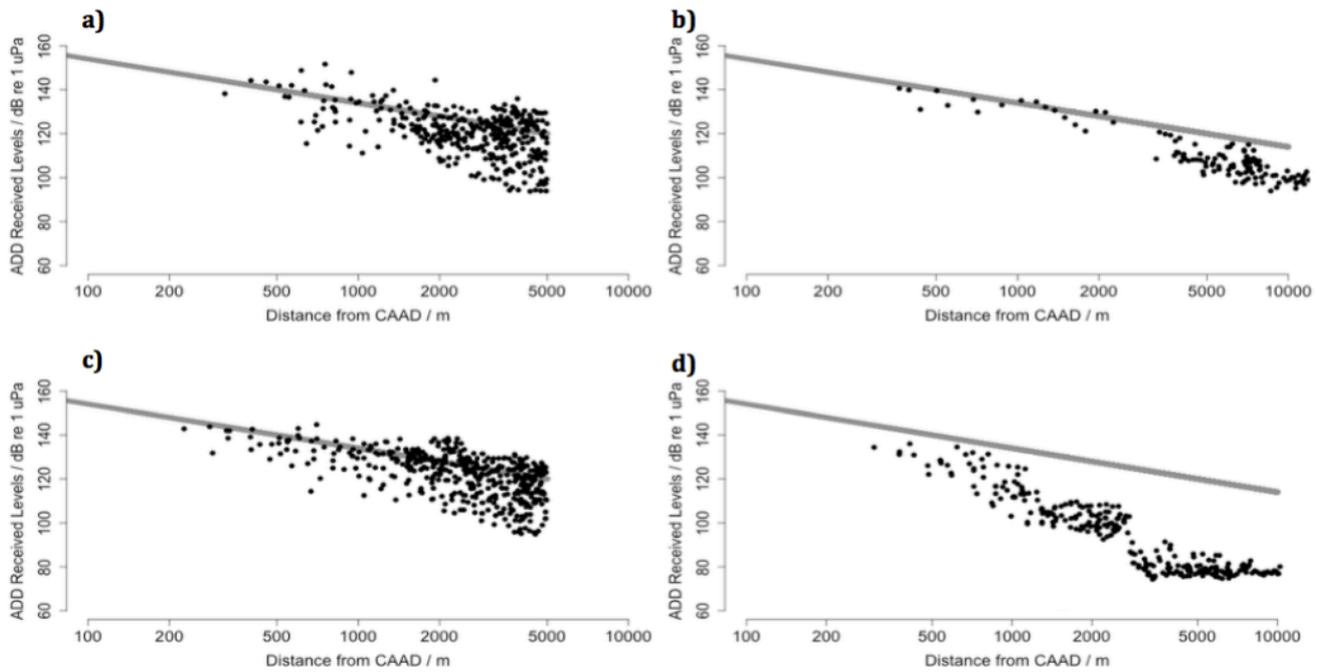


Figure 6.9 – The relationship between Received Level (RL) and distance from the active CAADs for four sites in the Inner Hebrides: (a) Fishnish B (in the Sound of Mull); (b) Kerrera; (c) Fiunary (in the Sound of Mull) and (d) Loch Sunart. The received levels of CAAD signals are represented by the black dots and the expected propagation loss under a spherical spreading model (from a source level of 194 dB re 1 μ Pa) is shown by the grey line.

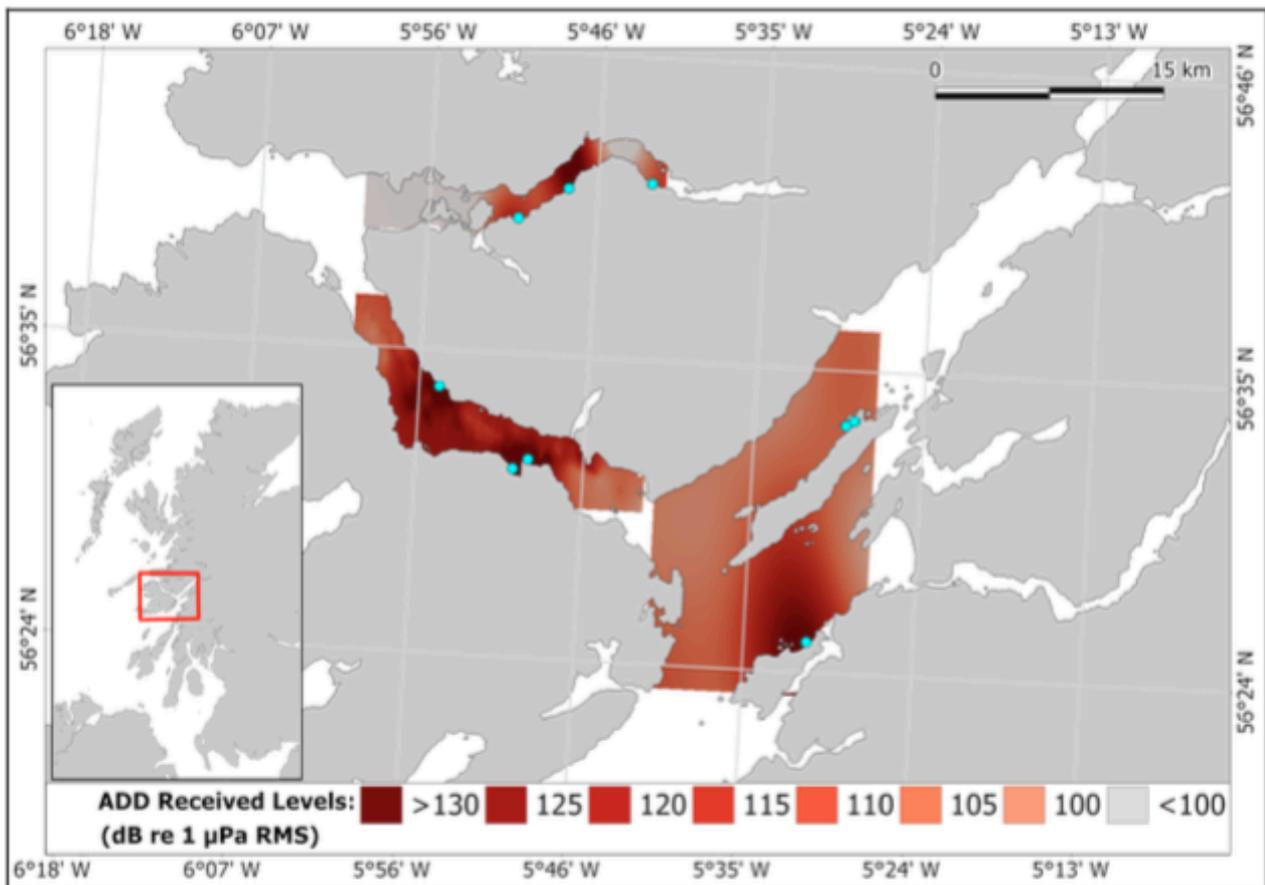


Figure 6.8 - Interpolated sound fields of the main cluster of CAADs observed on the west coast of Scotland. Light blue dots show the position of the CAAD sites. Received level legend and scale bar are shown. Airmar CAAD Source Level: 194 dB re 1 μ Pa (RMS).

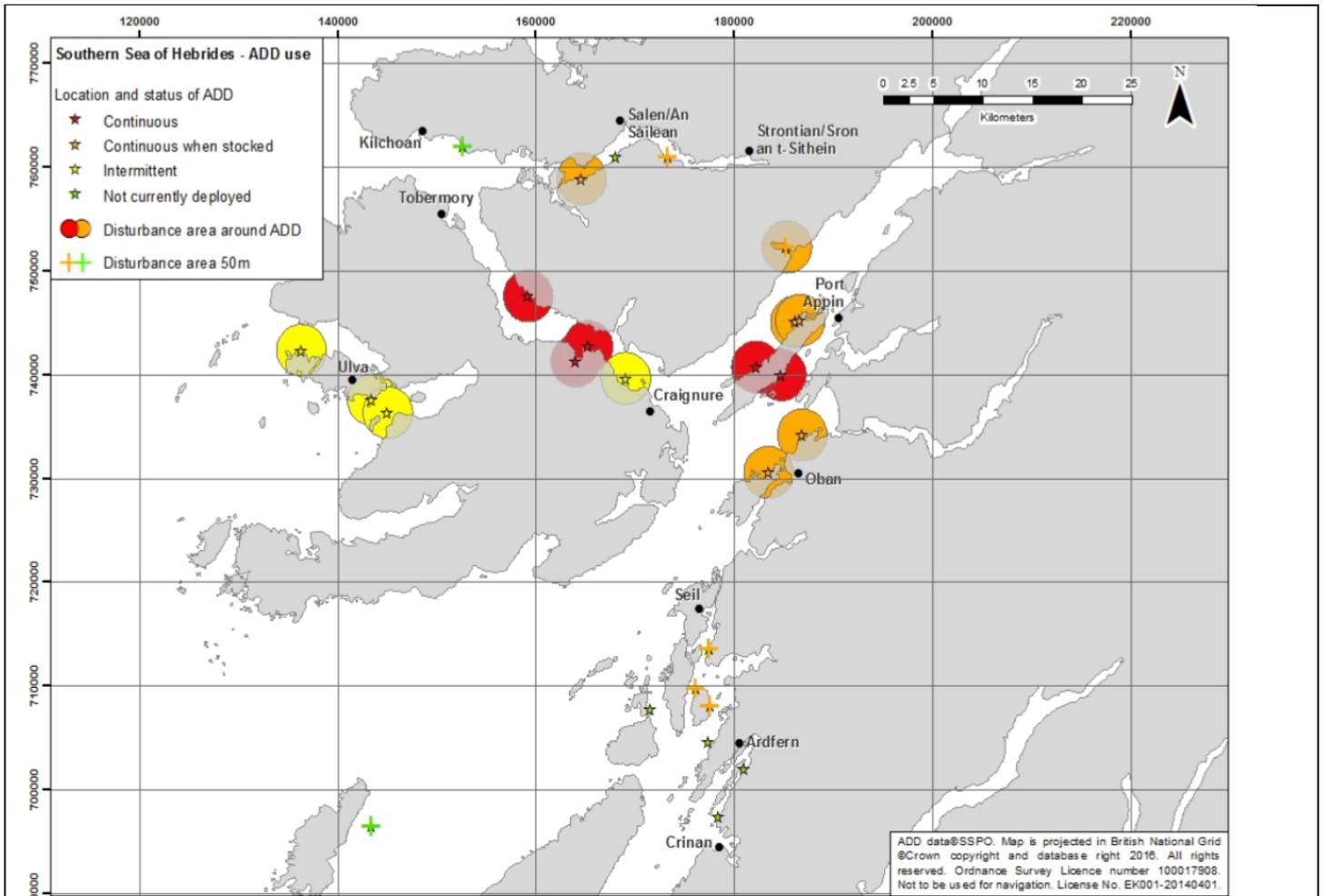


Fig 1. SNH map showing zones of disturbance of 2.5 km for Airmar ADDs and 50m for Terecos ADDs

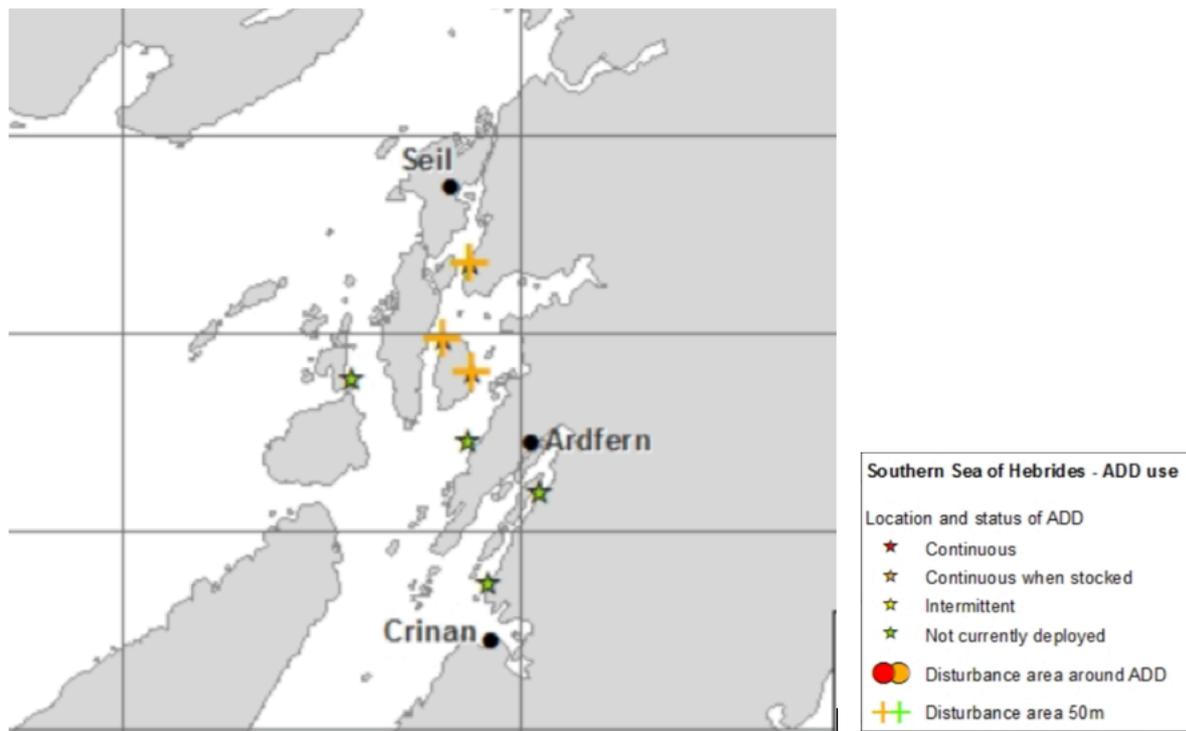


Fig 2. Extract from Fig 1. Showing ADDs around Shuna island, with Port na Cro the central yellow cross. The crosses indicate SNHs view that 4 Terecos ADDs have a disturbance area of 50m.

Fig.1 and fig 2. "Southern sea of Hebrides" sound maps provided under FOI by SNH show their estimates of the areas of disturbance by ADDs, based on their view that disturbance occurs at up to 2.5 Kms from Airmar ADDs (note the disparity between Booth's and Brandt's measured levels and SNH modelled levels). The crosses around Shuna on the smaller map show SNH's view that 4 Terecos ADDs only disturb porpoises at 50mtrs from source. Port na Cro is the westernmost yellow cross.

Given that Brandt's Lofitech attenuated from 189 dB re 1 μ Pa (RMS), to 113 dB re 1 μ Pa (RMS), in 7.5 km, we struggle to understand how SNH predict that the 197 dB re 1 μ Pa (RMS), Airmar ADD range of disturbance is 2.5km. We find it even more difficult to understand the SNH prediction that 4 Terecos ADDs which each output 178 dB re 1 μ Pa (RMS), (or 185 dB re 1 μ Pa (RMS), measured by Oelisk) could only disturb porpoise to a distance of 50m. We asked SNH to supply the figures input into their model, they supplied the formulae, but not the input figures.

The distance at which the noise produced by a single Terecos ADD with an output of 178dB re 1 μ Pa rms will fall below injurious or disturbance levels depends on the propagation conditions of the site. A textbook⁷⁰ calculation suggests that propagation loss could range between 20 Log (range) in open water and 10 Log (range) in a perfectly ducted situation. Propagation loss in Scottish coastal waters is around Log15 (range).

The ranges for 178dB to fall to 120dB are;
For 20LogR prop loss range to 120dB is 0.794km
For 15LogR prop loss range to 120dB is 7.35km
For 10Log R prop loss range to 120dB is 63km

The ranges for 178dB to fall to 113dB (Brandt's threshold for exclusion of ~96% of porpoise) are;
For 20LogR prop loss range to 113dB is 1.778km
For 15LogR prop loss range to 113dB is 21.5km
For 10Log R prop loss range to 113dB is 316km

Brandt's disturbance threshold of 113 dB re 1 μ Pa (RMS)⁷¹ corresponds to a calculated distance of 21.5kms for a *single* Terecos ADD using 15LogR prop loss. Even using the 20LogR prop loss for open water and the non-precautionary 120dB these figures do not support the SNH officer's claim that the .6 Km wide Shuna Sound would not be acoustically blocked by the 4 Terecos ADDs.

A mathematical model such as the one used by SNH to estimate the range of disturbance for ADDs can provide a wide range of answers depending on the inputs used and is worthless unless validated by field measurements.

Fig 3 shows the sound map from Corram's report to MS. Corram identified a zone of audibility at 10km. As discussed, other studies show the zone of audibility can be as high as 30m depending on propagation conditions. However, the green zone represents a realistic estimate of the zone of disturbance, based on Brandt and Booth's field measurements, which must be greater than Brandt's 7.5km exclusion. This and Booth's map would be more realistic sound maps to inform an Appropriate Assessment of the cumulative impact of ADDs on the cSAC, than the maps so far produced by SNH (fig 1,2 & 4).

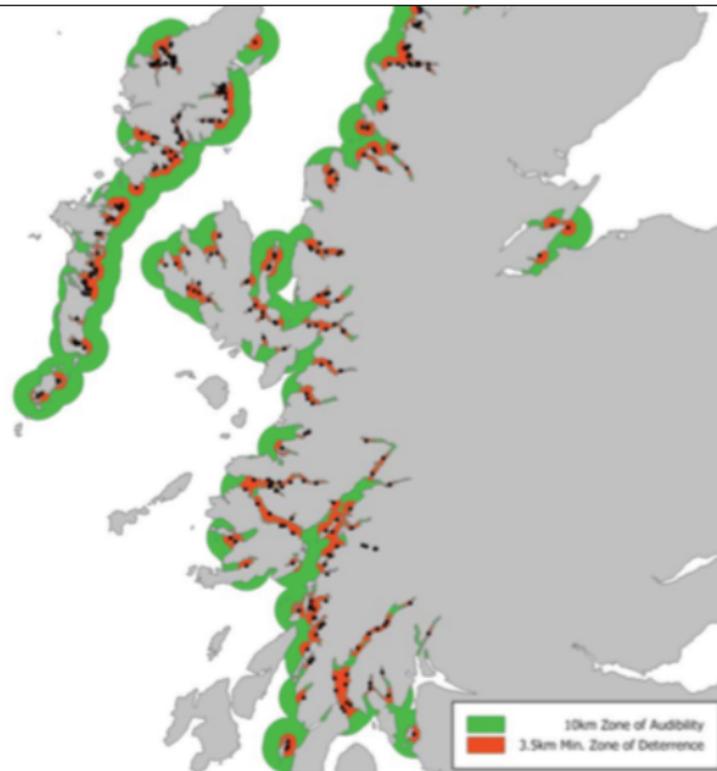


Fig 3. Map from Corram et al., (2014) Report to Marine Scotland showing zone of deterrence at 3.5km and zone of audibility at 10km.

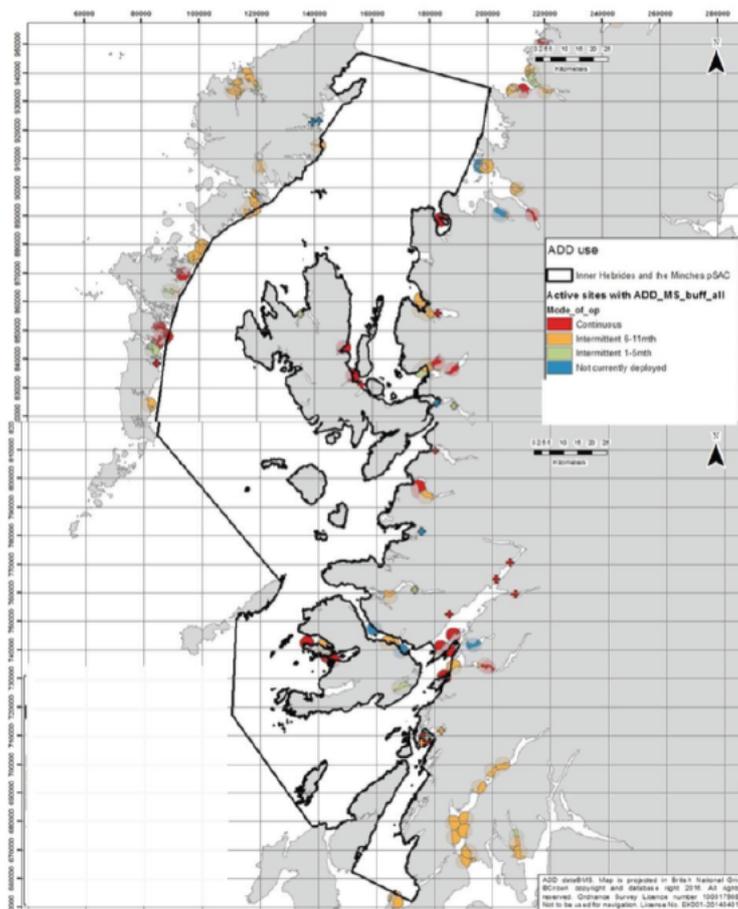


Fig 4. The sound map supplied by SNH under FOI showing the cSAC boundary and the disputed SHN estimate of the zones of disturbance of ADDs.

The potential for hearing injury

SNH's commissioned report by Lepper et al 2014⁷² addresses the evidence of porpoise disturbance, exclusion and potential for hearing damage by ADDs. The final summary point of that paper states that:

*'Modelling of the exposure time to exceed injury criteria for seals and porpoises at given ranges from active ADDs suggest that there is a credible risk of exceeding injury criteria for both seals and porpoises. Thus, **the risk that ADDs at Scottish aquaculture sites is causing permanent hearing damage to marine mammals cannot be discounted.**'*

The report explains that auditory systems can be damaged both by instantaneous exposure to loud sounds and by cumulative exposure over a period of time. The report predicts the time to reach the threshold for temporary hearing injury, which can become permanent if exposure continues, would be 2.5 hours a porpoise stayed at 100m from a single Terecos device and that the safe range for 24-hour exposure would be beyond 500m.

The study also predicts that the time to reach threshold for hearing injury decreases pro rata with the number of devices deployed. For example, at 500m the injury threshold is reached after 5.5 hours for a single Airmar ADD, 2.75 hours for 2 ADDs and 1.8 hours for a farm with 3 ADDs. Some farms have up to 20 Airmar ADDs.

There is currently no ADD type used on Scottish Farms that do not disturb porpoise. There was one small study as part of a larger report that suggested that Terecos might disturb less than other makes⁷³, however the scientists who carried out the study put in a caveat to their report which stated that further work would have to be done to ascertain whether the results which were accurate. The instruments used had proved to be malfunctioning and they had not had an opportunity to repeat their experiments. Because of the malfunction the scientists had no way of knowing if the ADD was working at the times it was supposed to be turned on.

An ADD aimed at disturbing seals but causing less disturbance to porpoise may become available. The low frequency may be less audible to porpoise but can still cause hearing damage, which is particularly dangerous if it does not disturb porpoise from the vicinity of the ADD. It would still disturb dolphins.

We disagree with SNH's view that Art. 6(3) appropriate assessments were not required for existing or new farms within the cSAC and contend that this opinion was not based on robust science and did not embrace the precautionary principle. We welcome the information⁷⁴ that SNH's developing guidance on the use of ADDs within the cSAC will require Habitats Regulation Assessment (HRA) (Art. 6(3) appropriate assessment is transposed into Scottish law as HRA) for future applications. We hope that these appropriate assessments will be carried out with scientific rigour and that Art. 6(3) appropriate assessments will also be carried on existing ADD use on individual farms and on the cumulative effect within the cSAC.

We call for SNH and the Planners to fulfil their statutory duties to enforce Hab. Reg. 39(2) unless a court decision states it is not applicable to Salmon farm ADDs, in which case Art. 6(3) appropriate assessments must be carried out within SACs.

Port na Cro Planning Application⁷⁵ within the Inner Hebrides and Minches Porpoise cSAC

Given that the Inner Hebrides and the Minches cSAC is designated to protect harbour porpoise, it must be conceded that this is an important area for their conservation. There is a wealth of data testifying to the importance of the cSAC and particularly of the part of the SAC where our test example Port na Cro is situated to porpoise conservation, including that summarised in SNH's consultation document on the cSAC, stating that:

'The western side of Cuan Sound and the approaches to it, along with the area around the islands of Torsa and to the south, were identified in the West Scotland Shelf model as being in the top 10% persistent high-density areas [for porpoise].'

Studies by Booth⁷⁶ and Gil Molinero⁷⁷ also demonstrate that the area affected by ADDs from Shuna Sound is one of the most important for porpoises in Europe.

Marine Harvest applied to Argyll and Bute Planners for new cages and 4 Terecos ADDs at Port na Cro in Shuna Sound on 19/2/2016. This was the first planning consent after the cSAC was designated. There are 5 salmon farms within 2 miles of Port na Cro, its immediate neighbours Shuna SW and Ardmaddy hold CAR licences for 2500 tonne biomass. Shuna SW has a condition on its planning consent prohibiting the use of ADDs

In their original letter to the Planning Department⁷⁸, SNH objected to the proposed use of ADDs at Port na Cro, stating that, *'in our view, this proposal is likely to have a significant effect on the harbour porpoise of the Inner Hebrides and the Minches cSAC.'*⁷⁹ This objection was later withdrawn by a local officer.⁸⁰ who advised that an Art 6(3) appropriate assessment was not necessary, claiming that Shuna Sound (which is ~600m) wide would not be 'acoustically blocked' by the use of ADDs at the farm.

One of the reasons given to support the SNH officer's withdrawal of their objection was that the farm had made a commitment that 'the devices would not be activated continuously, but only in response to a predation threat'⁸¹. SNH do not monitor or enforce compliance with such commitments. The controversial RSPCA Freedom Foods accreditation⁸² requires that the ADDs are operated continuously.

The report to MS by Corram et al., 2016⁸³ states *'ADD usage is largely unregulated, including no monitoring of the effectiveness of the devices or the impact on other species'* SNH state in their submission to the ECCLR Committee *"There is evidence of an increase in the extent of marine acoustic pollution in areas of Scottish waters important to cetaceans [] we have concerns about the lack of a consistent approach to the monitoring and management of ADD usage"*

Following objections to the application, including Whale and Dolphin Conservation⁸⁴, Scottish Environment Link⁸⁵ (on behalf of Hebridean Whale and Dolphin Trust, National Trust for Scotland, Marine Conservation Society and Scottish Wildlife Trust), ourselves as affected wildlife tourism operators⁸⁶, Richard Kerr of the Planning Department emailed⁸⁷ the SNH officer. Mr Kerr pointed out that the neighbouring farm at SW Shuna had a planning condition precluding the use of ADDs and requiring seal blinds to be fitted to the nets, suggesting that the same condition should apply at Port na Cro. The SNH officer promptly replied, "We stand by our original response"⁸⁸

The advice of the SNH officer to the Planning Department failed to fulfil SNH's statutory obligations, as read in the light of the precautionary principle, both under the Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007⁸⁹ (the "**Habitats Regulations**") reg.39(2), and Council Directive 92/43/EEC (the "**Habitats Directive**") Art.6(3). The SNH officer failed to inform the Planners of the requirement to enforce Habitats Reg. 39(2). She also stated that Hab.Dir. Art.6(3) appropriate assessment was not necessary for the 4 ADDs.

As previously discussed, we dispute the SHN claim that the cumulative impact of 4 Terecos ADDs would not disturb porpoise further than 50 mtrs, (or 100m as stated in answer to our FOI question). Because this figure is very different to field measurements on other ADDs we asked under FOI for the input values to SNH's calculations: we have not been provided with these values. However, the acceptance by SNH that disturbance does occur confirms that the use of these ADDs is an offence under Habitats Regulation 39(2) and the Nature Conservation (Scotland) Act 2004.

We also dispute SNH's decision to use the least precautionary NOAA 120 dB re 1 µPa (RMS) sound level for disturbance of porpoise, ignoring more recent work which indicates as the figure could be as low as 100 dB re 1 µPa (RMS) and would certainly be below Brandt's threshold of 113 dB re 1 µPa (RMS) at which 96% of porpoise were excluded.

The ECCLR Committee concluded *"there appears to have been too little focus on the application of the precautionary principle in the development and expansion of the sector"* and *"the current consenting and regulatory framework,*

including the approach to sanctions and enforcement is inadequate to address the environmental issues". We submit that SNH advice for this planning consent and their responses to our questions support the Committee's conclusions.

The Aquaculture Stewardship Council requires that certified farms worldwide comply with strict requirements for responsible farming. Certified farms cannot use ADDs or kill marine mammals. In Norway, a total of 115 salmon farms are certified, including 49 Marine Harvest farms whereas in Scotland only 2 are certified, one of which is in freshwater where there are no seals. We welcome the recommendation of the ECCLR committee that Scottish farms should be certified⁹⁰.

Nearly all Marine Harvest Scottish farms use ADDs and they shot more seals than any other fish farm company in 2015.

SNH maintain that Planners are responsible for planning decisions and the Planners say that their decisions are based on advice from SNH who are their advisers on conservation. The Akester⁹¹ ruling states: "*For the purposes of the appropriate assessment the competent authority shall consult the appropriate nature conservation body, in this case Natural England, and shall have regard to any representations made by it*"

The SNH advice was clearly incorrect, and they are deemed to be the experts. It is not clear which body was responsible for an incorrect planning decision or how the environmental damage from a wrong decision should be redressed. This case illustrates how the current regulatory system for salmon farming is failing and this needs to be addressed by Scottish Government.

We believe that the planning permission for ADDs at Port na Cro should not have been granted.

- **SNH accept that there is disturbance but failed to inform the Planners that *any* disturbance is an offence under Habitats Regulation 39 (2).**
- **The farm has no EPS License, an offence under Habitats Regulation 44⁹². We maintain that a planning consent alone is not permission to disturb an EPS species, and that the farm would not pass the 3 tests required for an EPS license.**
- **An Article 6(3) appropriate assessment was not carried out to demonstrate beyond all reasonable scientific doubt that the ADDs on this farm, in combination with the ADDs at neighbouring farms would not adversely affect the integrity of the cSAC.**

We thank you for your interest and hope that the EC will call for enforcement of the laws protecting cetaceans. We would welcome the opportunity to comment on input from Scottish authorities.

2.4 Does the Member State concerned receive (or could it receive in future) EU funding relating to the subject of your complaint?

Yes, please specify below No I don't know

2.5 Does your complaint relate to a breach of the EU Charter of Fundamental Rights?

The Commission can only investigate such cases if the breach is due to national implementation of EU law.

Yes, please specify below No I don't know

3. Previous action taken to solve the problem*

Have you already taken any action in the Member State in question to solve the problem?*

IF YES, was it: Administrative Legal ?

3.1 Please describe: (a) the body/authority/court that was involved and the type of decision that resulted; (b) any other action you are aware of.

-We submitted objection to Port na Cro planning application with follow up correspondence between ourselves and SNH.
-We submitted to the ECCLR Committee Inquiry. Report issued 05/03/2018.
-We have requested information under FOI from SNH, Marine Scotland and the Argyll and Bute and Highland Councils.

3.2 Was your complaint settled by the body/authority/court or is it still pending? If pending, when can a decision be expected?*

The complaint has not been settled and Marine Scotland, in particular, has refused to answer most of our questions. This is why we are seeking assistance from Europe.

IF NOT please specify below as appropriate

- Another case on the same issue is pending before a national or EU Court
- No remedy is available for the problem
- A remedy exists, but is too costly
- Time limit for action has expired
- No legal standing (not legally entitled to bring an action before the Court) please indicate why:

- No legal aid/no lawyer
- I do not know which remedies are available for the problem
- Other – specify

4. If you have already contacted any of the EU institutions dealing with problems of this type, please give the reference for your file/correspondence:

- Petition to the European Parliament – Ref:.....
- European Commission – Ref:.....
- European Ombudsman – Ref:.....
- Other – name the institution or body you contacted and the reference for your complaint (e.g. SOLVIT, FIN-Net, European Consumer Centres)

5. List any supporting documents/evidence which you could – if requested – send to the Commission.

⚠ Don't enclose any documents at this stage.

⚠ We can send:

- All communications between ourselves, SNH, Marine Scotland, Argyll and Bute and Highland Councils.
- All information obtained under FOI and our submission to the ECCLR committee.
- All legal references and all scientific references where copyright allows.

6. Personal data*

Do you authorise the Commission to disclose your identity in its contacts with the authorities you are lodging a complaint against?

Yes No

⚠ *In some cases, disclosing your identity may make it easier for us to deal with your complaint.*

From: [CB Registry Dingwall](#)
To: [Catriona Laird](#)
Subject: CAR/L/1004226 - BDNC
Date: 12 November 2019 13:26:15
Attachments: [CAR-L-1004226 - Draft Variation.pdf](#)
[CAR-L-1004226-PSWP-V3-Bagh Dail Nan Ceann MPFF - DRAFT.pdf](#)
[CAR-L-1004226-SWMP-V1-Bagh Dail Nan Ceann MPFF - DRAFT.pdf](#)
[CAR-L-1004226 - 21 Day Notice Letter - BDNC MCFE - SNH.pdf](#)

Dear Sir/Madam

Further to your communication with SEPA, please find attached a 21 day notice letter and draft licence documents.

Please accept our apologies in the delay in getting this letter to you.

Kind regards

██████████

██████████

Scottish Environment Protection Agency
Graesser House, Fodderty Way, Dingwall Business Park, Dingwall, IV15 9XB
t: 01349 862021 email: registrydingwall@sepa.org.uk
web: www.sepa.org.uk

██

The information contained in this response relates to only information held on SEPA's Public Register as required by the relevant Legislation.

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Sent by email to:

catriona.laird@nature.scot

7 November 2019

Dear Sir/Madam

**WATER ENVIRONMENT (CONTROLLED ACTIVITIES) (SCOTLAND) REGULATIONS 2011
("THE REGULATIONS")**

NOTIFICATION OF PROPOSED DETERMINATION OF APPLICATION

APPLICATION FOR VARIATION OF AUTHORISATION

REFERENCE NUMBER: CAR/L/1004226

**LOCATION OF ACTIVITY: BAGH DAIL NAN CEANN MARINE PEN FISH FARM, LOCH
SHUNA**

Thank you for your written representation to the Scottish Environment Protection Agency (SEPA) regarding the above application under the Regulations to vary the above licence authorising the carrying on of a controlled activity or activities, namely a discharge into Loch Shuna.

SEPA has considered the application and is now ready to make its determination, but you now have the opportunity to object to the proposed determination, if you so wish.

In reaching this determination, we considered all duly made written representations (including yours) and other information. We took them into account as described in the Appendix to this letter.

SEPA now hereby gives you notice that it proposes to grant the application. Please find enclosed a copy of the draft schedule to SEPA's proposed notice of variation.

If you object to SEPA's proposed determination, you may, within the period of 21 days beginning with the date you receive this notice, notify the Scottish Ministers in writing of your objection. If you or anyone else does so, the Scottish Ministers may direct SEPA to refer the application to them for



Chairman
Bob Downes

Chief Executive
Terry A'Hearn

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their own determination (or “call in” the application), provided certain criteria are met. You must send a copy of that notification (or “call-in request”) to SEPA within the same 21-day period¹.

The address for notifying Scottish Ministers is as follows:

**Scottish Ministers, Scottish Government, Environment and Forestry Directorate,
Environmental Quality Division, Area 1-D (North), Victoria Quay, Edinburgh EH6 6QQ**

Or by email: EQCAT@gov.scot

The address for sending copy notification to SEPA is as follows:

**The Registry, Scottish Environment Protection Agency, Graesser House, Fodderty
Way, Dingwall, IV15 9XB**

Email: registrydingwall@sepa.org.uk

If within that 21-day period no such notification is made to Scottish Ministers, or if SEPA receives no copy notification, SEPA will proceed with its determination and issue the final notice of variation to the applicant.

If any such notification is duly made to Scottish Ministers and copied to SEPA, SEPA may not proceed with its determination until either:

- we have received written notice from Scottish Ministers confirming that they do not intend to call in the application; or
- we have received no written notice from the Scottish Ministers, and a period of 63 days, beginning with the date of service of this notice, has expired

Please remember that, if you object, and notify Scottish Ministers accordingly, but fail to copy your notification to SEPA within the 21-day period provided, SEPA may proceed with its determination irrespective of your objection. It is therefore important to copy any such notification to SEPA within that period.

If you do not object to SEPA’s proposed determination, you do not need to take any further action.

If you have any questions regarding this letter please contact Ross Hall at SEPA’s Western isles office, 2 James Square, James Street, Stornoway, isle of Lewis, HS1 2QN or telephone 01851 70 [REDACTED]

Yours faithfully

[REDACTED]
[REDACTED]
Senior Registry Officer

Enc

¹ see regulation 16(4)

APPENDIX 1

SEPA'S CONSIDERATION OF THIRD PARTY REPRESENTATIONS

Advertising response assessment is undertaken in accordance with [SEPA Regulatory Method \(WAT-RM-20\), Advertising and Consultation](#) (see step 9, page 23). SEPA considers any response received on time and decides if it is a 'third party representation' or just provides information. SEPA have summarised what it considers are 'third party representations' (significant issues raised), in the consultation responses. The issues raised and SEPA's response to them have been grouped by topic below and SEPA's. Although you, as a third party making a representation may not have raised some of these issues, they are included here in a single document for completeness.

Benthic impacts

The most recent benthic survey (undertaken 20 December 2017) was classified as Borderline under the existing aquaculture regulatory framework. The classification score was, and has always, been decided upon by SEPA only. A Borderline result is considered a pass by SEPA, but is an indication that the site is operating near the assimilative capacity of the environment. The survey found an impoverished community at one of the 2 cage edge stations sampled, indicating that the under cage intensity at this site is already around the maximum sustainable to ensure compliance with the cage edge standards. Modelling of the application proposal has indicated that the seabed under the cages may be at risk due to a disproportionate increase in stocking density i.e. a 40% increase in biomass coupled with a more modest 20% increase in cage surface area. A proposed maximum biomass of 3500 tonnes in 12 cages is predicted to increase the mean deposition over the mixing zone in comparison to the existing farm of 2500 tonnes in 10 cages. SEPA has investigated that there would be a decrease in predicted mean deposition if the application was reduced an increase to 3000 tonnes in 12 cages (see table below). SEPA therefore proposed to Mowi that 3000 tonnes in 12 cages is a more sustainable way forward at this site. Mowi agreed to the proposal.

BDNC Biomass (Tonnes)	Mean Total Solids Deposition over mixing zone (g/m²)
2500 (existing)	2127
3500 (Mowi proposed)	2546
3000 (SEPA proposed)	1832

Cumulative Impacts

Screening modelling for solids indicated that the Bagh Dail nan Ceann fish farm is isolated from the other farms in the water body so cumulative impacts from the proposal are likely to be low. Any deposition likely to occur out with the immediate footprint, is predicted to be between Eilean Ona (to the south) and Croabh Haven (to the north), but at low levels only. Screening modelling for bath treatments indicated impacts from the proposal are likely to be low also.

SEPA carried out a wide scale survey of the Sound of Shuna in 2018, with samples collected from 25 stations throughout the sound. With the exception of one station classified as Moderate (in Seil Sound), all stations were Good/High status. The IQI scores of the faunal communities were found to range between 0.63 – 0.91. The stations closest to the BDnC fish farm had scores between 0.67 and 0.87.

Designated Areas

The site lies within or within 3km of the following designated areas:

- Loch Sunart to the Sound of Jura Marine Protected Area (MPA). The protected biodiversity feature is Common Skate (*Dipturus batis*)
- Inner Hebrides and the Minches candidate Special Area of Conservation (cSAC). The qualifying feature is Harbour Porpoise (*Phocoena phocoena*)
- Firth of Lorn Special Area of conservation (SAC). The qualifying interests of which are reefs.

Habitats of the following Priority Marine Features (PMFs) are also known to be present within 3 km of the site:

- Kelp and seaweed communities
- Burrowed mud

SNH, in response to consultation on this application, concluded that “*the risk of this proposal being capable of affecting, other than insignificantly, the protected features of Loch Sunart to the Sound of Jura MPA is low*”. SNH did not raise any concerns regarding the Firth of Lorn SAC or the Inner Hebrides and Minches candidate SAC with regard to the CAR licence.

Whilst PMFs were identified within the vicinity of the proposal, and may be affected, they were not deemed to be populations of national significance.

SEPA has completed a Habitats Risk Assessment (HRA) and assessed that by means of enforceable conditions attached to the CAR Licence, it is our view that the controlled activity will not have a likely significant effect on the qualifying interest of the SAC, the cSAC or significantly hinder the achievement of the objectives of the MPA.

Sea Louse Treatment Impacts on the Receiving Environment

The applied for sea louse treatment chemicals relating to this application are authorised fish medicines, having been through a rigorous assessment by the Veterinary Medicines Directorate (VMD) of its general safety, (including consumer, environment and operator safety) and its efficacy as a sea louse treatment. The manufacturer is obliged to carry out a full eco-toxicological risk assessment and submit a detailed safety case demonstrating compliance with all aspects before a marketing authorisation is issued.

In general, Environmental Quality Standards (EQSs) are derived to ensure the adequate protection of marine life that may be potentially exposed to each substance. Understanding of the mode of action and the toxicology of each substance to various marine taxa is considered during the setting of limits for each substance, as well as the longevity and fate within the various sections of the marine environment (e.g. sediment, water column). Where new data and or methodologies for setting a standard becomes available standards will be reviewed.

The modified licence will limit discharges of sea louse treatment chemicals to the respective EQS are maintained as follows:

Emamectin Benzoate

The application included an increase in the quantity of emamectin benzoate. SEPA has requested that the UK Technical Advisory Group (UKTAG) consider all the available scientific evidence and make recommendations to Scottish Government on new environmental standards for emamectin benzoate. UKTAG is in the process of developing these recommendations. After UKTAG makes its recommendations to the Scottish Government, they will then consult on draft directions requiring us to apply the standards when carrying out our regulatory functions. Whilst this process is

ongoing, SEPA has put in place an interim revised position and standards for the licensing of releases of emamectin benzoate from fish farm premises (WAT-PS-17-03 – “Interim Position Statement for Protecting the Water Environment Until Such Time as a Direction is Issued on an EQS in Relation to Emamectin Benzoate in Finfish Farm Regulation”). SEPA has applied this interim position statement in setting the use and discharge of emamectin benzoate from this site. As a result, the emamectin benzoate maximum treatment quantity (MTQ) / maximum environmental quantity (MEQ) for a single treatment has decreased and the total allowable quantity (TAQ) remains what was previously licenced as follows:

Emamectin benzoate	Old (g)	New (g)
MTQ	875	682.1
TAQ	945	945

Azamethiphos

It is accepted that the approach to authorisation of azamethiphos will lead to concentration of these substances above a safe environmental standard in the vicinity of the fish farm during the immediate post-release period. In that time residues of azamethiphos may impact upon zooplankton, but given the short duration of this exposure period it is not anticipated that such releases will have a significant effect on the environment. The updated modelling predicts a new 3hr azamethiphos release limit and an increase to the 24hr release limit as follows:

Azamethiphos	Old (g)	New (g)
3hr release limit	n/a	299.6
24hr release limit	229.2	435.5

Deltamethrin

It is accepted that the approach to authorisation of deltamethrin will lead to concentration of these substances above a safe environmental standard in the vicinity of the fish farm during the immediate post-release period. In that time residues of deltamethrin may impact upon zooplankton, but given the short duration of this exposure period it is not anticipated that such releases will have a significant effect on the environment. The updated modelling predicts a small decrease to the 3hr deltamethrin release limit as follows:

Deltamethrin	Old (g)	New (g)
3hr release limit	22	20.3

Cypermethrin

SEPA decided to include Excis in permits for marine pen fish farms setting the limits on use based upon the environmental quality standard set out in Table 4 of the 2014 [Scottish Ministers' Standards Direction](#) which set out the environmental standards which SEPA must use for a range of pollutants and other water quality parameters. The standard in the Direction is tighter than the previous regulatory standard used by SEPA.

This means that the modelled licence limits for Excis in new or varied licences will be tighter than they would be when using the old standard. Existing licences will continue to include limits derived against the old standard until such time that the conditions relating to Excis are varied, or SEPA is

in a position to remove a reference to Excis from fish farm permits. The updated modelling predicts a significant decrease to the 3hr cypermethrin release limit as follows:

Cypermethrin	Old (g)	New (g)
3hr release limit	58.8	0.2

Fish Health, Welfare & Disease

Fish health, welfare and disease at a marine fish farm is a matter considered and advised on by Marine Scotland, as part of its functions under the Aquatic Animal Health (Scotland) Regulations 2009 and the Aquaculture and Fisheries (Scotland) Act 2007, as amended by the Aquaculture and Fisheries (Scotland) Act 2013.

Fish Mortality Disposal

During site inspections, SEPA officer checks routinely include requesting the production of waste transfer notes for proof appropriate disposal of dead fish or 'mortalities' as they are known in the industry. No issues have been identified with mortality disposal at Bagh Dail nan Ceann. If mortalities were being disposed of at sea, it is very likely that they would be appearing on the shorelines in the vicinity of the disposal location and been reported to SEPA. SEPA is not aware of any such incidents.

Sea Louse Impacts on Wild Salmonid Populations

Sea louse levels at a marine fish farm is a matter considered and advised on by Marine Scotland, as part of its functions under the Aquatic Animal Health (Scotland) Regulations 2009 and the Aquaculture and Fisheries (Scotland) Act 2007, as amended by the Aquaculture and Fisheries (Scotland) Act 2013. Under existing coordinated working arrangements for statutory consultees to the planning system, Marine Scotland provides responses to the local planning authorities with respect to these matters. Where Scottish Natural Heritage (SNH) has concerns over wild fish impacts, it liaises with Marine Scotland prior to responding to such consultations.

Working with Marine Scotland and SNH, SEPA is in the process of exploring how it can contribute to strengthening the protection of wild salmonid fish. This includes reviewing how the different policy and regulatory frameworks can be used to best effect. Should this work result in any changes to the way SEPA regulates marine cage fish farms, it will work with the operators of existing licenced sites to ensure that any changes which may be necessary and appropriate to secure the protection of the water environment, are implemented.

Farmed Salmon Escapes

SEPA's statutory regulatory remit under the provisions of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 does not extend to escape prevention, associated with either the proposed site or associated ancillary operations. This issue principally falls to be regulated by Marine Scotland in regard to their respective regulatory remit.

Plastic Wastes

The CAR licence doesn't cover the issue of controlled waste disposal such as waste plastics from a farm. This issue principally falls to be regulated by Marine Scotland in regard to their respective regulatory remit. However, all fish farm operators as waste producers have a Duty of Care under the Waste Management Licensing (Scotland) Regulations 2011 to dispose of controlled wastes

appropriately. During site inspections, SEPA officer checks routinely include requesting the production of waste transfer notes for proof appropriate disposal.

Environment Impact Assessment (EIA)

SEPA's statutory regulatory remit under the provisions of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 does not extend to the decision making with regard to the requirement of an EIA. The Local Authority, in this case the Argyll & Bute Council, are the principal decision makers. Whether an EIA is required or not, SEPA have a minimum requirement of supporting information to support a CAR application. Such requirement was met in this instance.

Acoustic Deterrent Devices (ADDs)

SEPA's statutory regulatory remit under the provisions of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 does not extend to the regulation of Acoustic Deterrent Devices use. The use of these devices principally fall to be regulated by the Local Authority and/or Marine Scotland in regard to their respective regulatory remits.

Water Column Nutrient / Dissolved Nutrients

In assessing water column nutrients, SEPA consults with Marine Scotland who undertake hydrographic modelling on our behalf. The degree of enhancement of nutrient concentrations in the water column is predicted to be low. The site lies in an uncategorised area with regard to Marine Scotland locational guidelines.

Visual Amenity, Smell and Noise

SEPA's statutory regulatory remit under the provisions of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 does not extend to consideration of impacts to the visual landscape, nuisance smells or noise associated with either the proposed site or associated ancillary operations. These issues principally fall to be regulated by the Local Authority in regard to their respective regulatory remit.

SCHEDULE TO NOTICE OF VARIATION UNDER REGULATION 24(4)

The Authorisation has been varied by amending, adding or deleting conditions or other provisions, as follows:

1. The 'Contents' page, the 'Interpretation of Terms' pages, Schedules 1 to 6 and Appendices have been deleted and replaced with a new 'Contents' page and Schedules 1 to 8 as attached to this Schedule.

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Schedule 1: The Authorised Person and Activity

The purpose of Schedule 1: This section set outs what the authorised activity is and places responsibility on the Authorised Person for ensuring compliance with the permit conditions.

1.1 Authorised Activity

1.1.1 The Authorised Activity is the discharge to the water environment of fish excreta, uneaten food and other substances as listed in this permit resulting from the operation of a marine pen fish farm.

1.2 Duty of Authorised Person

1.2.1 The Authorised Person is the Responsible Person referred to on the first page of this permit.

1.2.2 The Authorised Person must ensure compliance with all the conditions of the permit.

Schedule 2: Marine Pen Fish Farm Description

The purpose of Schedule 2: To limit the scale of the impact from the activity by controlling the maximum weight of fish, fallow periods and the specific location and layout of the fish farm.

2.1 Fish Species

2.1.1 Only Atlantic Salmon (*Salmo salar*) may be farmed at the site.

2.2 Maximum Weight of Fish

2.2.1 The maximum weight of Atlantic Salmon held on site at any one time must not exceed 3,000 tonnes.

2.3 Fallow Period

2.3.1 There must be a minimum period of 42 consecutive days between every production cycle during which no Atlantic Salmon shall be kept on site.

2.3.2 SEPA must be notified in writing within 14 days of the site being stocked.

2.3.3 SEPA must be notified in writing within 14 days of the site being fallowed.

2.4 Pen Configuration

2.4.1 The fish pens must be configured as set out in Table 1.

Table 1 Pen Configuration

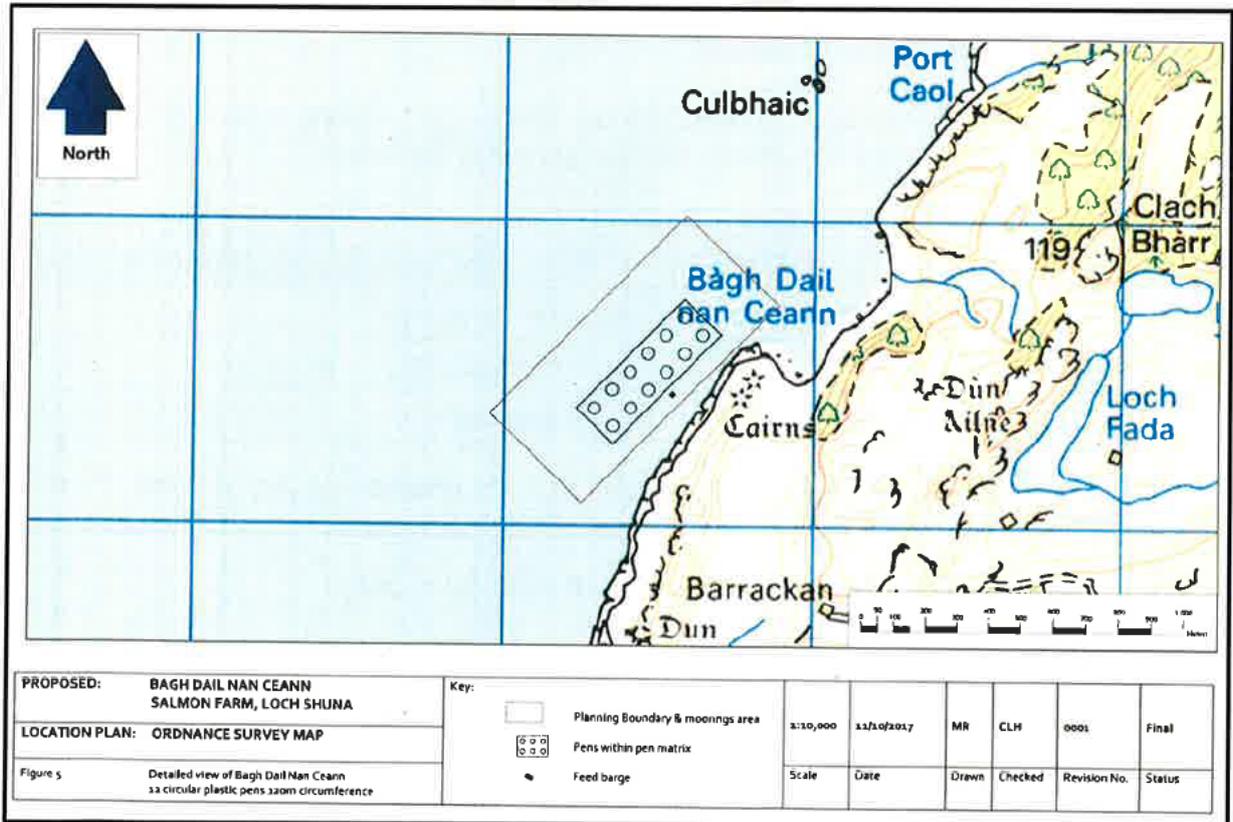
Number of pens	12
Circumference of pens	120m
Depth of nets	16m
Number of different pens groups	1
Number of pens in each group	12
Number of pens in row 1	6
Number of pens in row 2	6

2.4.2 The Authorised Location of the fish pen group is within an area delineated by the black line in Figure 1 and bounded by the pen corner buoys located at the following National Grid References (NGRs):

- 1) NM 7758 0475 (N)
- 2) NM 7737 0431 (S)
- 3) NM 7770 0465 (E)
- 4) NM 7725 0443 (W)

2.4.3 The corner buoys must not be located at a distance greater than 50 metres in any direction from the NGRs listed in 2.4.2.

Figure 1 Fish Pen Location



Schedule 3: Medicine Use

The purpose of Schedule 3: SEPA expects the Authorised Person to manage their site in such a way that it minimises the discharge of medicines into the water environment. Where it is necessary to use medicines the conditions control their use to meet environmental standards.

3.1 Medicine Minimisation

3.1.1 All reasonable steps must be taken to minimise the discharge of medicines and medicine residues.

3.2 Medicines and Chemical Use

3.2.1 Only those medicines and chemicals specifically authorised in this Permit or in the Permitted Substance Working Plan (PSWP) PSWP/CAR/L/1004226, Version 3 dated 30 September 2019 may be discharged to the water environment.

3.3 Permitted Substance Working Plan

3.3.1 All medicines and chemicals named in the Permitted Substances Working Plan (PSWP) PSWP/CAR/L/1004226, Version 3, dated 30 September 2019 must be used in accordance with the limits specified in the PSWP.

3.4 Bath Sea Lice Medicines

3.4.1 The medicines in Table 2 must only be discharged following treatment of the fish within an enclosure fully separated from the water environment.

Table 2 Permitted Medicine - Bath

Medicine name	Active ingredient
Salmosan, Salmosan Vet or Azasure	Azamethiphos
AMX or ALPHAMAX	Deltamethrin
Excis	Cypermethrin

3.4.2 The enclosure in which fish are treated with the chemicals listed in Table 2 above must be no more than 30% of the full pen volume.

3.4.3 The quantity of medicines in Table 2 used must not exceed:

- a) 435.5g of azamethiphos in any 24 hour period.
- b) 299.6g of azamethiphos in any 3 hour period.
- c) 20.3g of deltamethrin in any 3 hour period.
- d) 0.2g of cypermethrin in any 3 hour period.

3.4.4 The medicines in Table 2 must not be combined with each other or with any other substance or compound during any treatment in a single pen.

- 3.4.5 When multiple pens are being treated at the same time, only one of the medicines in Table 2 may be used at the site.
- 3.4.6 The medicines in Table 2 must not be discharged within 24 hours of the discharge of any bath treatment medicine from a wellboat at the site.

3.5 In-feed Sea Lice Medicines

Table 3 Permitted Medicine – in-feed

Medicine name	Active ingredient
Slice or Quinafish	Emamectin benzoate

- 3.5.1 Any treatment with the medicine in Table 3 must be carried out over a 7-day period.
- 3.5.2 Subject to 3.5.3 and 3.5.4, the total quantity of the medicine in Table 3 used in any treatment must not exceed 50 micrograms per kilogram of Atlantic Salmon treated per day.
- 3.5.3 Subject to 3.5.4, the total quantity of the medicine in Table 3 which may be used in any treatment may be increased to a maximum of 60 micrograms per kilogram of Atlantic Salmon treated per day, where it has been authorised in writing by a registered veterinarian.
- 3.5.4 Any treatment of the medicine in Table 3 must not exceed the maximum environmental quantity of 682.1g.

3.6 Notification of Medicines Use

- 3.6.1 SEPA must be given the information required in Table 4 no fewer than 2 working days before using any medicine in Table 2.

Table 4 Bath Medicine Notifications

Medicine type	Information required
Bath medicines	Amount of medicine to be used
	Amount of active ingredient to be used
	Number of pens to be treated
	Proposed start and end date of treatment

- 3.6.2 SEPA must be given the information required in Table 5 no fewer than 5 working days before using any medicine in Table 3.

Table 5 In-Feed Medicine Notifications

Medicine type	Information required
In-feed medicines	Biomass at start of treatment
	Biomass at end of treatment
	Amount of medicine to be used
	Amount of active ingredient to be used
	Proposed start and end date of treatment
	Veterinary authorisation, if applicable

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Schedule 4: Seabed Standards

The purpose of Schedule 4: This section details the minimum environmental standards that must be met.

4.1 Biological Seabed Standards

- 4.1.1 The seabed at any point immediately under the outer edge of any pen must contain a minimum of 2 species of re-worker polychaete worms with a combined abundance of more than 1,000 individuals per square metre.
- 4.1.2 The seabed around the fish farm at the boundary of an area of 186,406m² (the "mixing zone") must meet as a minimum an Ecological Quality Ratio (EQR) of 0.64 IQI at any time.

4.2 Chemical Seabed Standards

- 4.2.1 Emamectin benzoate concentrations must not exceed 0.763ug/kg (wet weight) in the seabed at any point 100 metres from the outer edge of any pen.

Schedule 5: Environmental Monitoring

The purpose of Schedule 5: This schedule requires fish farm operators to carry out environmental monitoring in line with SEPA guidance.

5.1 Seabed and Water Monitoring Plan

5.1.1 Monitoring must be carried out in accordance with the Seabed and Water Monitoring Plan (SWMP) SWMP/CAR/L/1004226, Version 1, dated 28 October 2019.

5.1.2 SEPA must be notified no fewer than 14 days before monitoring is undertaken.

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Schedule 6: Environmental Events

The purpose of Schedule 6: This section requires the cessation, prevention and reporting of any potentially polluting event and/or breach of permit condition that may arise on the site.

6.1 Notification of SEPA

6.1.1 SEPA must be notified via its pollution hotline contact telephone number as soon as reasonably practicable, and in any case within 24 hours of identification of the event, of the following:

- a) any event which has caused or could cause adverse impact to the water environment or harm to human health;
- b) any event that results or could result in an emission to the water environment that is not authorised by this permit;
- c) a breach of any condition of this permit.

6.2 Management of the Event

6.2.1 All measures that are reasonably practicable must be taken to stop an event, as described in 6.1.1, and to minimise and/or mitigate its effect on the environment.

6.3 Report of the Event

6.3.1 Within 14 days of an event as described in 6.1.1, a report must be submitted to SEPA detailing:

- a) the reason(s) for the event;
- b) the action(s) taken to stop the event and minimise and/or mitigate its impacts;
- c) the action(s) taken to prevent the event from recurring.

Schedule 7: Record Keeping and Data Submission

The purpose of Schedule 7: This schedule requires the Authorised Person to keep records of specific activities carried out on site and to provide SEPA with specified information at regular intervals, or upon request.

7.1 Data Recording

7.1.1 All information recorded, kept, or submitted to SEPA in accordance with a condition of this Permit must be true and accurate.

7.1.2 Records must be kept of the following:

- a) all medicine use notifications;
- b) start and finish dates of each sea lice medicine treatment;
- c) quantities of medicine used during each sea lice medicine treatment (grams);
- d) weight of Atlantic Salmon at end of each sea lice medicine treatment (tonnes);
- e) veterinary prescription for each sea lice medicine treatment;
- f) veterinary authorisations in accordance with Condition 3.5.3;
- g) total weight of Atlantic Salmon harvested per month (tonnes).

7.1.3 Records must be kept for a minimum of 6 years and must be provided to SEPA upon request.

7.2 Data Reporting

7.2.1 The information specified in Table 6 must be submitted on a quarterly basis no later than the relevant submission deadline in Table 7 of every calendar year during which the site is operational.

Table 6 Data Reporting Requirements

Requirement number	Information to be Submitted
1	Maximum weight of Atlantic Salmon held on site during each month (tonnes)
2	Total amount of feed used per month (tonnes)
3	Total Salmosan and/or Salmosan Vet and/or Azasure use each month (g)
4	Total AMX and/or ALPHAMAX use each month (litres)
5	Total Slice and/or Quinafish use each month (g)
6	Total Excis use each month (litres)
7	Total azamethiphos use each month (g)
8	Total deltamethrin use each month (g)
9	Total cypermethrin use each month (g)
10	Total emamectin benzoate use each month (g)
11	Total use of each anti-parasiticide listed in the PSWP each month (g)
12	Total use of each anti-microbial listed in the PSWP each month (g)
13	Total weight of mortalities of Atlantic Salmon each month (kg)

Table 7 Data Reporting Submission Deadline

Quarter	Reporting Period	Submission Deadline
1	1 January – 31 March	28 April
2	1 April – 30 June	28 July
3	1 July – 30 September	28 October
4	1 October – 31 December	28 January

- 7.2.2 Results from the analysis of all samples collected in accordance with the SWMP SWMP/CAR/L/1004226, Version 1, dated 28 October 2019 must be submitted to SEPA no later than 16 weeks from the final date of each survey period.
- 7.2.3 Within 4 weeks of the end of each growth cycle a description of each of the steps taken in accordance with 3.1.1 and the dates and/or time period(s) over which they were implemented must be submitted to SEPA.
- 7.2.4 The information must be submitted via email, in the Excel Spreadsheet supplied by SEPA, to ffbiomass@sepa.org.uk.

Schedule 8: Interpretation of Terms

For the purposes of this Permit, and unless the context requires otherwise, the following definitions shall apply.

Term	Definition
authorised activity	Means the controlled activity which is authorised under this permit and subject to the conditions of this permit.
authorised location	Means the geographic location or locations at which the Authorised Activity is carried on.
authorised person	Means the person who is responsible for securing compliance with the terms of this permit and has been identified as such by SEPA in accordance with regulations 8(6) of the Regulations.
controlled activity	Means an activity to which the regulations apply, in accordance with regulation 3(1) of the Regulations
environmental harm	Means: <ul style="list-style-type: none"> (a) Harm to the health of human beings or other living organisms, (b) Harm to the quality of the water environment, including: <ul style="list-style-type: none"> (i) harm to the quality of the water environment taken as a whole (ii) other impairment of, or interference with, the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems, (c) offence to the sense of human beings, (d) damage to property, or (e) impairment of, or any interference with, amenities or other legitimate uses of the water environment.
maximum environmental quantity	Means the maximum environmental quantity is the maximum residual quantity of Emamectin Benzoate in the environment at any one time taking into account excretion and decay of all previous treatments which if complied with will meet the environmental quantity standard at the edge of the mixing zone.
mixing zone	Means the area of seabed, as defined by SEPA, immediately under and extending outwards from a fish farm in which the discharge from the fish farm is likely to have an adverse impact on the environment.
pen	Means an enclosed cage, net or other structure in which fish are kept.
permit	Means an authorisation under regulation 8 of the Water Environment (Controlled Activities) (Scotland) Regulations 2011.

production cycle	Means the period of time that fish are on-grown in pens at sea, from juveniles until they are removed for transfer and/or slaughter.
SEPA Officer	Means any person who is authorised by SEPA under regulation 31(4) of the Regulations to exercise the powers specified in Part 1 of Schedule 6 of the Regulations for the purposes specified in Regulation 31(5) of the Regulations.
SEPA	Means the Scottish Environment Protection Agency
the water environment	Means all Surface Water, groundwater and wetlands
weight of fish	Means the weight of fish including stomach contents and body fluids. This shall not be after any period of starvation.

Except where specified otherwise, any reference to an enactment or statutory instrument includes a reference to it as amended (whether before or after the date of the permit) and to any other enactment, which may after the date of the permit replace or amend it.



PERMITTED SUBSTANCES WORKING PLAN

PSWP/CAR/L/1004226

FOR

LICENCE REFERENCE NUMBER: CAR/L/1004226

ADDRESS OF PREMISES: Bagh Dail Nan Ceann Marine Pen Fish Farm
Loch Shuna

The Permitted Substances Working Plan may be modified only with the written agreement of SEPA. The modified Permitted Substances Working Plan must be dated and shall clearly state that it replaces and supersedes the previous version.

Version 3 [This version supersedes Version 2, dated July 2015]

Dated: 30 September 2019

Permitted Substances Working Plan

The substances set out in column 1 and 2 may be used and discharged at any time provided they are administered in accordance with the condition(s) set out in column 4. The use of the product shall be recorded as required by the relevant conditions of the authorisation under the Water Environment (Controlled Activities)(Scotland) Regulations 2011 for the fish farm site detailed on the front cover of this Permitted Substances Working Plan.

1. Product name	2. Active Ingredient	3. Concentration of active ingredient	4. Method of administration
Anti-foulants			
Aqua-Net	Copper Oxide	As per manufacturers data sheet	Oil and water based antifoulant paints are applied to nets in accordance with the manufacturer's instructions at the point of manufacture or servicing. Methods of application, drying, storage, transport and installation should minimise loss to the receiving environment
Netguard	Copper Oxide		
Netrex AF	Copper Oxide		
NetWax	Copper Oxide		
Anaesthetics			
Benzocaine	Ethyl-aminobenzoate	100%	Product to be diluted as recommended by the manufacturer and used as an anaesthetic to address welfare issues during operations such as sample weighing and sea lice counting.
2-Phenoxyethanol	2-Phenoxyethanol		
MS-222	Tricaine Methyl Sulphonate	100%	No more than 200 litres of dilute product to be discharged from a premise in any 24 hour period
Acetone	2-Propanone	100%	Product to be used in the dilution of benzocaine. No More than 1 litre to be discharged from a premises in any 24 hour period.
Anti-microbials			
			All antimicrobial products

Vetremox	Amoxicillin trihydrate	100%	shall be administered to fish in a manner that minimises waste feed. All antimicrobials shall be administered to fish following instruction from a veterinary surgeon. SEPA shall be notified prior to the commencement of treatment with the number of fish to be treated, quantity of active ingredient used, and method of administration and duration of treatment.
Branzil	Oxolinic acid		
Aquatet	Oxytetracycline Hydrochloride	100%	
Tribrissen	Sulphadiazine and Trimethoprim		
Florocol	Florfenicol	60%	These medicines are intended for oral delivery. The product is mixed with feed at a calculated rate and the feed is sprayed with fish oil to make the particles adhere. To be mixed by feed manufacturer only. Feed is delivered to the fish in the usual way as a rate calculated to deliver the correct dose of medicine to the population. The duration of treatment is variable depending on the conditions being treated and the clinical response but is typically 7 - 14 days.
Anti-parasitics			
Paramove	Hydrogen Peroxide	49.5%	Intended for use in sea lice treatments and also for AGD treatment at concentrations to be recommended by the Regional Health Manager. Used according to standard bath treatment protocol with particular regard to safety and staff and stock wellbeing.
Asperix Vet	Hydrogen Peroxide	49.5%	
Disinfectants			
Buffodine	Iodine	<5%	Product is diluted as per manufacturer's instructions and used as required for cleaning and disinfection according to FRS aquaculture disinfection protocols.
FAM 30	Iodine		
Iodet	Iodine		
Iodophor	Iodine		
Tegodyne	Iodine		
Divosan XT (Formerly TEGO 2000)	1-alkyl-1,5-diazapentane		

SOMPLEX Fatsolve	1-alkyl-1,5-diazapentane	
F-23 Foamer	Sodium Hypochlorite	
Tego Hypochlorite	Sodium Hypochlorite	15 – 30%
Virkon S for Aquaculture	Pentapotassium bis(peroxymonosulphate) bis(sulphate)	<50%
	Sulphamidic acid	5-10%
	Sodium dodecylbenzenesulfonate	5-15%
	Dipotassium peroxodisulphate	<2%
Virasure	Potassium monopersulphate	<60%
	Sulphamic acid	<10%
	Sodium alkyl benzene sulphonate	<15%
	Sodium Chloride	<10%
Aqua Des	Peracetic Acid	~5%
	Hydrogen peroxide	<25%
	Acetic Acid	~10%

Marine Aquaculture Site

Bagh Dail Nan Ceann

CAR/L/1004226

SEABED AND WATER QUALITY MONITORING PLAN

Benthic – Site Specific

Mowi Scotland Limited

Seabed and Water Quality Monitoring Plan, BENTHIC – SITE SPECIFIC

SWMP/CAR/L/1004226

FOR

LICENCE REFERENCE NUMBER:

CAR/L/1004226

ADDRESS OF PREMISES:

Bagh Dail Nan Ceann Marine Cage Fish Farm
Loch Shuna

The responsible person (Mowi Scotland Limited), as named in the licence, will carry out monitoring at the premises as specified in the protocol below.

The Seabed and Water Quality Monitoring Plan (SWMP) will be modified, in agreement with SEPA should it be deemed necessary. The modified SWMP will be dated and will clearly state that it replaces and supersedes the previous version.

Version: 1 [This version supercedes MPS/CAR/L/1004226 Version 3, dated 18 June 2015]

Dated: 28 October 2019

Seabed and Water Quality Monitoring Plan Objective

The SWMP has been developed to provide sufficient information to calculate a 100m mixing zone ellipse for the site, based upon the Newdepomod modelling footprint at an IQI value of 0.64. The compliance boundary parameter for the sampling produced ellipse will be 0.64 IQI.

Monitoring Plan

The pen configuration for the site is twelve 120m circumference pens, which are held within a square pen moorings grid. The pen moorings grid is made up of a 75m square matrix and the grid is arranged in a 6 x 2 configuration, a 120m circumference pen is secured within each grid square.

The species to be farmed onsite is the Atlantic Salmon (*Salmo salar*) at a Maximum Standing Biomass of 3000T. The permitted medicines on site are;

- SLICE or Quinafish (Emmamectin Benzoate)
- Salmosan, Salmosan Vet or Azasure (Azamethiphos)
- Excis (Cypermethrin)
- AMX™ or ALPHAMAX™ (Deltamethrin)

The allowable 100m mixing zone area for the site has been calculated as 186,406m².

This has been based upon the SEPA Finfish Aquaculture Sector Plan; Annex 1 (published November 2018) proposed mixing zone. To calculate the area, we took a 100m distance from the circular pen edge of a 120m circumference pen (i.e. 119.1m radius from the pen centre coordinate). The pens were laid out spatially at 75m intervals, in a 6 by 2 pen arrangement, to represent the pen mooring grid. A 119.1m radius circle was calculated around each pen centre. These 12 mixing zones are merged into a single vector shape and its area, not including mixing zone overlaps, was used to produce the allowable 100m mixing zone area.

Locations of the proposed monitoring transects, superimposed on the modelled (screening run) output for benthic solids, using the 250gm⁻² contour which relates to 0.64 IQI are shown in Figure 1.

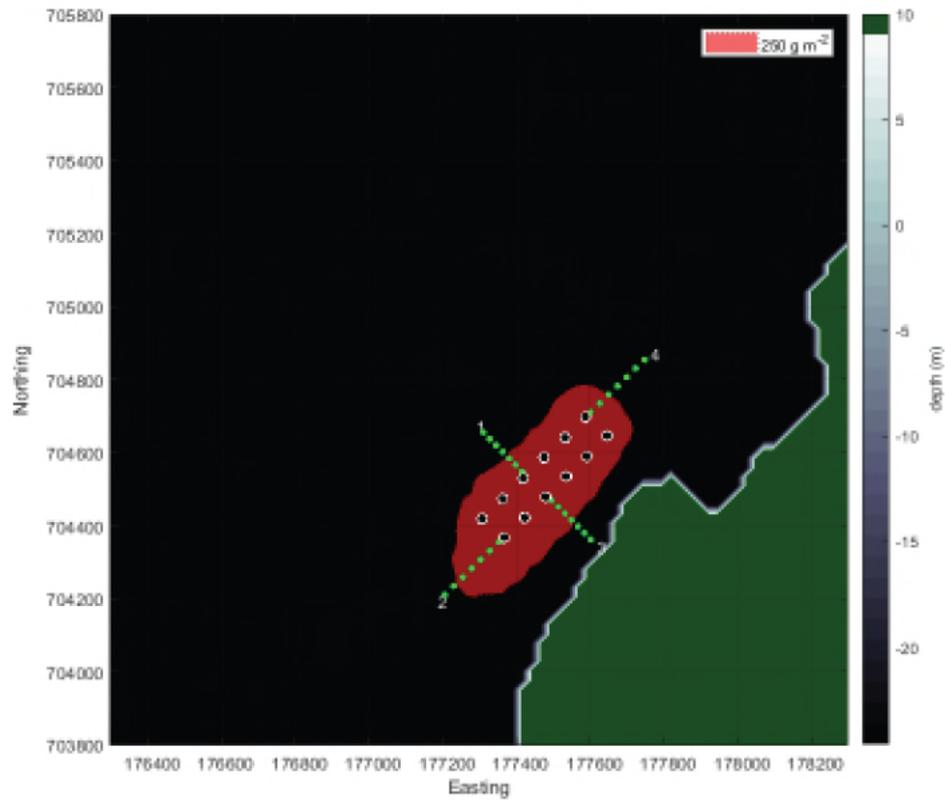


Figure 1.

Table A: Locations of the proposed benthic monitoring stations

Transect	Bearing	Distance	Easting	Northing	Latitude	Longitude
1	315°	0m	177416	704549	56° 10.883'	- 5° 35.283'
1	315°	25m	177398	704567	56° 10.891'	- 5° 35.301'
1	315°	50m	177381	704585	56° 10.902'	- 5° 35.319'
1	315°	75m	177363	704603	56° 10.911'	- 5° 35.337'
1	315°	100m	177346	704621	56° 10.921'	- 5° 35.354'
1	315°	125m	177328	704638	56° 10.929'	- 5° 35.372'
1	315°	150m	177311	704656	56° 10.938'	- 5° 35.390'
2	225°	0m	177353	704356	56° 10.778'	- 5° 35.334'
2	225°	34m	177328	704332	56° 10.765'	- 5° 35.357'
2	225°	68m	177304	704308	56° 10.751'	- 5° 35.379'
2	225°	103m	177279	704284	56° 10.737'	- 5° 35.402'
2	225°	137m	177255	704260	56° 10.724'	- 5° 35.424'
2	225°	171m	177231	704236	56° 10.710'	- 5° 35.446'
2	225°	205m	177206	704212	56° 10.697'	- 5° 35.469'
3	135°	0m	177497	704470	56° 10.844'	- 5° 35.201'
3	135°	25m	177514	704452	56° 10.834'	- 5° 35.184'
3	135°	50m	177532	704434	56° 10.825'	- 5° 35.165'
3	135°	75m	177549	704416	56° 10.816'	- 5° 35.148'
3	135°	100m	177567	704399	56° 10.807'	- 5° 35.130'
3	135°	125m	177584	704381	56° 10.798'	- 5° 35.113'
3	135°	150m	177602	704363	56° 10.789'	- 5° 35.094'
4	045°	0m	177602	704711	56° 10.976'	- 5° 35.112'
4	045°	34m	177626	704735	56° 10.990'	- 5° 35.090'
4	045°	68m	177650	704759	56° 11.003'	- 5° 35.068'
4	045°	103m	177675	704783	56° 11.017'	- 5° 35.045'
4	045°	137m	177699	704807	56° 11.030'	- 5° 35.023'
4	045°	171m	177724	704831	56° 11.044'	- 5° 35.000'
4	045°	205m	177748	704855	56° 11.058'	- 5° 34.978'

Table B: Locations of the proposed in-feed medicine monitoring stations

Transect	Bearing	Distance	Easting	Northing	Latitude	Longitude
1	225°	0m	177353	704356	56° 10.778'	- 5° 35.334'
1	225°	100m	177281	704286	56° 10.739'	- 5° 35.400'
1*	225°	650m	176889	703900	56° 10.520'	- 5° 35.759'

* = trigger station (new EQS)

DRAFT

Sampling Plans and Protocol

Two sampling plans are addressed as part of this licence:

- A. Benthic Survey - IQI multiple transect 100m mixing zone
- B. In-feed Treatment Residues - 100m far field

Any changes to this proposed sampling programme will be agreed with SEPA prior to fieldwork commencing.

A. Benthic Survey Plan

The responsible person will carry out the described monitoring strategy during the period as defined in the **Finfish Aquaculture Sector Baseline survey & seabed and water quality monitoring plan; Interim performance standard MACS-FFA-01. Version 0.1 June 2019.**

Samples will be obtained along multiple transects. These transects will provide even coverage around the site. Transects will be arranged orthogonally, however site specific variations will apply. A minimum of four transects originating at the pen edges are required, with two oriented along the major axis of the allowable mixing zone and two along the minor axis.

Modified transect arrangements may be required in certain circumstances (e.g. due to areas of hard substrate), and additional transects may be required where the allowable mixing zone is not generally ellipsoidal in shape. Such arrangements will be agreed in consultation with SEPA.

In any given direction, where feasible for obtaining samples, the minimum transect length will equal the greater value of either:

- the extent of the allowable mixing zone plus 50 metres;
- or
- 150 metres from the pen edge.

Sampling stations will be located along each transect as detailed in Table A, unless otherwise agreed with SEPA. Of these:

- one sampling station will be located at the pen edge;
- one will be located at the edge of the allowable mixing zone;
- at least two will be located beyond the edge of the allowable mixing zone.

Sampling stations are sufficiently spaced to allow a gradient or trend of impact to be determined along a transect.

Where feasible for obtaining samples and in the absence of existing sampling data, dependent on model predicted deposition, standard survey design places consecutive sampling stations at a minimum of 10 metres apart, with optimal spacing at 25 metre intervals where suitable.

Where model predicted deposition indicates total transect length exceeding 150m, stations are positioned at varying distances best suited to the site.

Potential suitable stations are provided within **Table A: Locations of the proposed benthic monitoring stations**, on page 4.

These stations provide a basis to begin survey work, however total scope of work will maintain flexibility to ensure adequate proportionate coverage is achieved. Variation to the outlined stations during field work could be caused by several variables including but not limited to, hard substrates, obstacles and changes in the levels of visible enrichment. Given the extent of the transects reference stations are not required.

Samples will be analysed for benthic infauna and the following physico-chemical parameters:

- Organic carbon
- Particle size analysis (PSA)

Field notes on sampling, include any observations on weather conditions, position fixing problems, etc will be included as appropriate in the final report. A visual description of the sediments will also be made, including the presence of fungus within the samples, anoxic sediments, etc.

Sampling and analyses will be carried out by a “Qualified Expert” (with the necessary knowledge and training) on behalf of the Responsible Person (Mowi Scotland Limited). Quality assurance and Analytical Quality Control procedures are detailed in SEPA Sampling of Soft-Substrate; Interim performance standard MACS-FFA-02 Version 0.1.

B. In-feed Treatment Residues Survey Plan

If the in-feed sea lice treatment Slice is included in the licence, and the product has been used, then sediment samples will be collected and analysed for this compound.

If Slice has not been used within 24months (or current growing cycle), this survey need not be carried out.

The residues survey will take place between 80 and 169 days after the cessation of the last Emamectin benzoate treatment in the production cycle; and requires samples to be collected at specific sampling stations.

A total of 3 stations are required for the residue survey. These stations will be;

- One pen edge station corresponding to the benthic survey Transect 1 pen edge location;
- One Slice AZE station along the major axis of the AZE at 100m on Transect 1; and
- One reference station beyond the Slice AZE along the major axis of Transect 1.

Where the period of highest predicted concentration of Emamectin benzoate corresponds to the timing of the benthic survey detailed above then the two surveys will be carried out at the same time.

If the period when the highest predicted concentration of Emamectin benzoate does not correspond to the timing of the benthic survey detailed above, then a separate survey for medicine residues will be carried out.

Additional samples for residues analysis may be requested.

Table B: Locations of the in-feed monitoring stations gives in-feed sampling locations, on page 4.

Benthic Survey / In Feed Residues: Sampling Protocols

All sampling requirements including, position fixing, sample collection, sample labelling, visual assessment characterisation, chemical assessment characterisation, sample preparation and recording of data will be carried out in accordance with the standards and obligations detailed within SEPA Sampling of Soft-Substrate; Interim performance standard MACS-FFA-02 Version 0.1.

Reporting

Completed benthic survey reports will be submitted to SEPA within 16 weeks. Should additional surveys be required e.g. seabed video, the submission period is 12 weeks following the request for additional data.

If difficulty in achieving this is experienced, then the local SEPA team will be notified as soon as possible.

DRAFT

From: Ruari Dunsmuir
To: [REDACTED]@gov.scot"
Subject: 06185V - The Scottish Salmon Company - Marine farm - Loch Na Keal - Consultation
Date: 22 November 2019 16:07:00
Attachments: [Geasgill Fish Farm Extension - SNH Response - 24 July 2019.pdf](#)

Dear Sir/Madam,

Marine (Scotland) Act 2010, Part 4 Marine Licensing

Thank you for your recent consultation.

In so far as our remit is concerned the issues raised by this proposal are fully addressed through the planning process. We therefore do not intend to offer further detailed comment on this specific application. We attach a copy of advice to Argyll and Bute Planning Authority.

In most cases planning permission will be granted prior to Marine License applications being submitted. In some cases the associated planning permission may have conditions attached to it which are relevant to the Marine Licence.

MS-LOT is required to consider the potential for proposals to impact upon the protected features of protected areas (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) and Nature Conservation Marine Protected Areas (NC MPAs). You can use our [interactive mapping tool](#) to find out where these are and what they have been designated to protect. The legislative requirements of these sites can also be found on our [website](#).

In most instances the planning authority will have already undertaken the relevant assessments. Should you agree with the conclusions, you may wish to adopt any existing designated site assessments before determining the application.

We recommend that you consult with the planning authority in order to:

- 1) ensure that the information supplied by the applicant is accurate and conforms to the most up-to-date planning permission
- 2) confirm that you are content with planning authority's assessment of any effects on SACs and SPAs, where this is relevant
- 3) confirm that you are content with planning authority's assessment of any effects on NC MPAs, where this is relevant.

Yours sincerely

Ruari

Ruari Dunsmuir | Operations Officer

Scottish Natural Heritage | 7 Alexandra Parade | Dunoon | Argyll | PA23 8AB | t: 0131 314 [REDACTED] m:

[REDACTED]
Dualchas Nàdair na h-Alba | 7 Pairèid Alexandra | Dùn Omhain | Earra Ghàidheal | PA23 8AB
[nature.scot](#) – Connecting People and Nature in Scotland – [@nature_scot](#)



Scottish Natural Heritage
Dualchas Nàdair na h-Alba
nature.scot

By email to: planning.olandi@argyll-bute.gov.uk

24 July 2019

Your ref: 19/01293/MFF

Our ref: CDM155997

Dear Sir/Madam,

**TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997
PROPOSAL: MODIFICATION OF SALMON FARM COMPRISING THE ADDITION OF TWO X 100
METRE CIRCUMFERENCE CAGES AND INCREASE OF BIOMASS FROM 2091 TONNES TO
2500 TONNES
LOCATION: GEASGILL, LOCH NA KEAL, ISLE OF MULL**

Thank you for consulting Scottish Natural Heritage (SNH) on the above development proposal.

Summary

The proposed development is located within the boundaries of the Inner Hebrides and Minches Special Area of Conservation (SAC) and is close to the Sea of the Hebrides possible Marine Protected Area (pMPA). Additionally, the proposed development is located within the Loch na Keal, Isle of Mull National Scenic Area (NSA).

- In our view, based on the information provided, we consider that this proposal is unlikely to result in an adverse impact on the site integrity of the SAC. It should be noted that our advice is based on the ADD Deployment Plan provided with the application.
- The proposal will not have an adverse effect on the integrity of the NSA or the qualities for which it has been designated.
- We recommend that you consider whether conditions are required to ensure the development is implemented as proposed.

Assessment of the Impacts on the Natural Heritage

1. Inner Hebrides and Minches Special Area of Conservation (SAC)

This proposal is located within the Inner Hebrides and the Minches SAC, designated for its population of harbour porpoise. The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") apply. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the SAC before it can be consented (commonly known as Habitats Regulations Appraisal). The SNH website has a summary of the legislative requirements: <https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra/habitats-regulations-appraisal-hra>.

Scottish Natural Heritage, 7 Alexandra Parade, Dunoon, Argyll, PA23 8AB
Tel: 0131 314 4167 www.nature.scot

Dualchas Nàdair na h-Alba, 7 Pairèid Alexandra, Dùn Obhainn, Earra-Ghàidheal, PA23 8AB
Fòn: 0131 314 4167 www.nature.scot

In our view, this proposal is likely to have a significant effect on harbour porpoise within Inner Hebrides and the Minches SAC because the predator control plan includes the use of acoustic deterrent devices (ADDs). Consequently, Argyll and Bute Council is required to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interest. To help you do this, we advise that in our view, on the basis of the information provided and the appraisal carried out to date, it will not adversely affect the integrity of the site. The advice from our appraisal is as follows:

- The hearing range of harbour porpoise includes the sound frequencies emitted by the proposed ADD model. As a result we consider that the use of ADDs may result in disturbance/habitat exclusion^[1].
- In our view the ADD deployment plan identifies an appropriate decision making process to guide the activation/deactivation of ADD's and this will ensure that the long term and continuous use of ADD's at this location will be avoided.
- Conservation Objective 2b states that the distribution of harbour porpoise throughout the site is maintained by avoiding significant disturbance. Significant disturbance in this context is where changes to the distribution of harbour porpoise occur on a continuing or sustained basis. We consider that in this location any short term temporary disturbance or displacement as a result of the deployment of ADD in line with the ADD deployment plan will not result in significant disturbance.

We would like to highlight the importance of ensuring that the measures outlined in the ADD deployment plan (including the type and number of devices and the requirement for monitoring and reporting) are set as a requirement of any planning consent, should Argyll and Bute Council be minded to approve this application.

We consider that the ongoing review of ADD use is an essential component of the deployment plan and as such we would like to highlight that an appropriate review process should be part of any consent granted. By ensuring a review process is in place Argyll and Bute Council, as the Competent Authority, in consultation with SNH, will maintain a mechanism to require future changes to the plan should they be deemed necessary.

We recommend that you consider whether it is necessary to impose conditions to achieve the above mitigation. You may wish to carry out further appraisal before completing the appropriate assessment.

2. Sea of the Hebrides possible Marine Protected Area (pMPA)

The proposal is within approximately 600m of the Sea of the Hebrides pMPA selected for its basking shark and minke whale.

The Scottish Government has a policy of protecting such sites as if they were designated as set out in the Marine Protected Areas Management Handbook. The legal protection afforded to designated NC MPAs is set out in the Marine (Scotland) Act 2010. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the pMPA before it can be consented.

There are natural heritage interests of national importance on the site which could be affected by this proposal, but in our view, there is no significant risk of hindering the achievement of the conservation objectives.

2.1 Minke Whale

In our view, this proposal is capable of affecting, other than insignificantly, the minke whale protected feature of the sea of the Hebrides the pMPA. Consequently, Argyll and Bute Council is required to carry out an assessment to determine if there is a significant risk of hindering the achievement of the conservation objectives.

To help you do this we advise that, in our view, based on the information provided and the appraisal carried out to date, the proposal will not result in a significant risk of hindering the achievement of the conservation objectives of the pMPA. The appraisal we carried out considered the impact of the proposals on the following factors:

- The hearing range of minke whale includes the sound frequencies emitted by the proposed ADD model. As a result we consider that the use of ADDs may result in disturbance/habitat exclusion^[2]. The same mitigation that applies to the Inner Hebrides and Minches SAC also applies to the Sea of the Hebrides pMPA. We consider that provided the ADD deployment plan is adhered to then any significant risk of hindering the conservation objectives of the pMPA will be avoided.

3. Loch na Keal, Isle of Mull National Scenic Area (NSA)

The landscape effects which would arise as a result of the addition of the two proposed pens would unlikely be of a magnitude that would significantly impact on the NSA's special qualities.

However the incremental extension of such developments results in a shifting baseline which always acts in favour of the extension. Therefore, any future-extension to this fish-farm should be considered cumulatively together with previous extensions and this should also be reflected in the visuals.

If you have any comments or questions regarding the above, please do not hesitate to contact me.

Yours sincerely

Ruari Dunsmuir
Operations Officer
Argyll & Outer Hebrides
ruari.dunsmuir@nature.scot

^[2] For example - **Coram** A., Gordon J., Thompson D. & Northridge S. 2014. Evaluating and assessing the relative effectiveness of non-lethal measures, including Acoustic Deterrent Devices on marine mammals. Scottish Government
Götz T., & Janik V.M. 2013 Acoustic deterrent devices to prevent pinniped depredation: efficiency, conservation concerns and possible solutions. *Marine Ecology Progress Series* 492: 285-302

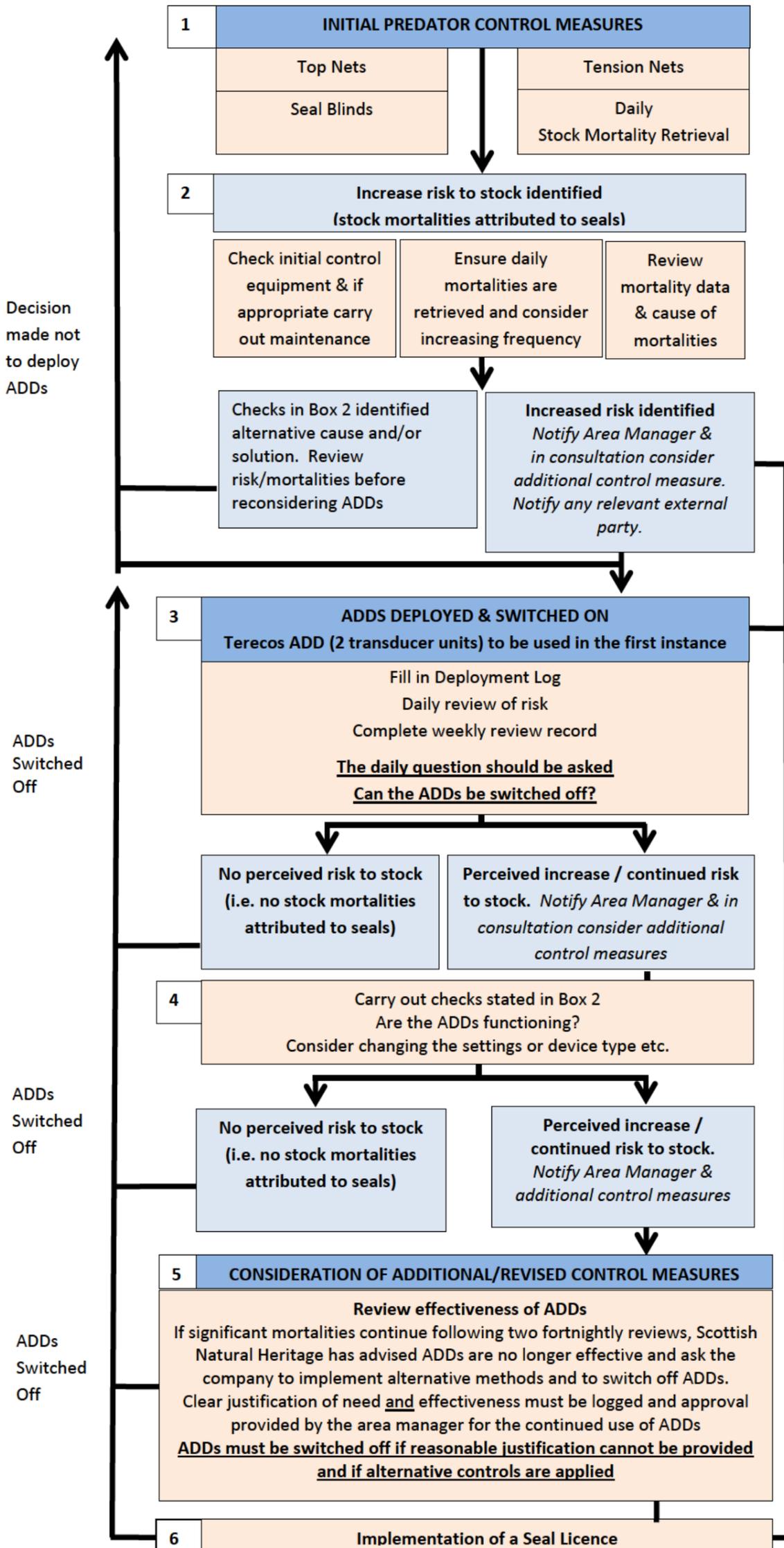
BDNC SALMON FARM

ACOUSTIC DETERRENT DEVICE DEPLOYMENT GUIDANCE

Under the Regulation 39(2) of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), it is an offence to deliberately or recklessly disturb any dolphin, porpoise or whale (cetacean). Furthermore, the farm is located within the Inner Hebrides and Minches candidate Special Area of Conservation (cSAC) for the protection of harbour porpoise. Scottish Natural Heritage advise that the use of ADDs has the potential to lead to disturbance/habitat exclusion of harbour porpoise and the continuous noise emission from ADDs is not best practice. The following deployment plan has been developed as a requirement of Scottish Natural Heritage to guide the efficient use of ADDs with due regard to the responsible management of fish welfare and protection given to seal species.

DECISION MAKING FLOW DIAGRAM

ROLES & CONSIDERATIONS



← Marine Harvest and its site managers have a responsibility to maintain the welfare of its stock. The RSPCA welfare standard is based on 5 core freedoms covering the freedom from pain, injury, fear and distress. Your site is independently assessed by Freedom Foods and RSPA Officers prior certification to this standard

← Is there a licence condition or other mechanism which prevent the use of ADDs?
Are any external notifications required before or after use?
If yes, notification sent to, or permission sought from, relevant external party. If in doubt, please consult the Marine Harvest Environmental Team

← The **Site Manager** is responsible for:-

- maintaining a record of the deployment date, make & model of device, dates of use, settings used, the position of the transducers
- a daily review as to whether the risk is still present and whether the ADDs can be switch off or additional measures required. Any changes to ADD use should be recorded, and
- a fortnightly review in conjunction with **Area Manager** as to whether the risk is still present and whether the ADDs can be switch off or additional measures required; actions and justification to be recorded in a log by the **site manager**.
- Site and Area Manager** to review ADD use at the end of each cycle.

← Marine (Scotland) Act - From the 31st January 2011, any fish farm in Scotland that requires to manage seals, at any time of year, will need an annual Seal Management Licence. Predator control at the salmon farm should be managed in a manner which is compliant with the conditions of its licence.

← Prior to taking further steps, the site manager must ensure that the following documents have been completed and approval formally issued by the Seawater Production Manager:-

Authorisation to dispatch seal
Contractor's guidelines – seal dispatch

← Please refer to the Seal Protocol for further details or seek guidance from your Area Manager.



Scottish Natural Heritage Dualchas Nàdair na h-Alba

All of nature for all of Scotland
Nàdar air fad airson Alba air fad

FAO: [REDACTED]
Argyll & Bute Council
Planning Services
1A Manse Brae
Lochgilphead
PA31 8RD

23 February 2018
Our ref: CDM148988 - A2538266
Your ref: 18/00005/MFF
By email only

Dear Sir / Madam

Town and Country Planning (Scotland) Act 1997 Marine fish farming planning application – Alterations to existing site - Bagh Dail Nan Ceann (BDNC), Loch Shuna – 18/00005/MFF

Thank you for your consultation on the above proposal dated 15 January 2018. The proposal is to enlarge the existing marine fin fish (Atlantic salmon) farm by installing an additional two 120m circumference cages, to upgrade and move the feed barge, and to increase the biomass at this site from 2,500t to 3,500t.

Summary

The proposal could affect the Inner Hebrides and the Minches Candidate Special Area of Conservation (cSAC) selected for its harbour porpoise interest. This proposal could be progressed with appropriate mitigation. However, because it could affect internationally important natural heritage interests and therefore, **we object to this proposal unless it is made subject to conditions, so that the works are done strictly in accordance with the mitigation as detailed in our appraisal below.**

We also provide advice about impacts on other aspects of the natural heritage. We have included details of these in our appraisal below.

Appraisal

1. Inner Hebrides and the Minches cSAC

The proposal lies within the Inner Hebrides and the Minches candidate Special Area of Conservation (cSAC) selected for its harbour porpoise.

The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") apply or, for reserved matters, The Conservation of Habitats and Species Regulations 2017. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the cSAC before it can be consented (commonly known as Habitats Regulations Appraisal). The SNH website has a summary of the legislative requirements (<https://www.nature.scot/professional->

[advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations](#)).

In our view, this proposal is likely to have a significant effect on the harbour porpoise qualifying interest of the Inner Hebrides and the Minches cSAC. Consequently, Argyll and Bute Council is required to carry out an appropriate assessment in view of the site's conservation objectives for its qualifying interest. To help you do this, we advise that in our view, on the basis of the information provided and the appraisal carried out to date, if the proposal is undertaken strictly in accordance with the following mitigation, then it will not adversely affect the integrity of the site. Our mitigation advice is as follows:

- 1) Any Acoustic Deterrent Devices (ADDs) that are deployed at this site will be done so in accordance with the agreed ADD deployment plan (as detailed in annex 1 of the supporting information provided with the application). Any future changes to the plan must be approved by the Planning Authority.
- 2) The operator must undertake reporting on ADD usage at the site including:
 - a. The exact dates when the device was operated, how often it was operated on that date, for what duration, and what was the cue for its manual or auto-sensor operation;
 - b. Details of any predation events by seals and any anti-predation measures (including ADD) deployment) in use at the time should be logged;
 - c. Details of the person (or persons) responsible for maintaining the logs;
 - d. An undertaking that all logs will be maintained for review by the Planning Authority and/or SNH, if deemed necessary by the Planning Authority.

The appraisal that we carried out considered the impact of the proposal on the following factors:

- The risk posed through potential entanglement of cetaceans in farm equipment is not considered to be significant.
- The risk of injury as a result of exposure to sound emanating from ADDs at this site is not considered to be significant. We conclude that it is unlikely that harbour porpoise will spend significant periods of time within the distances required to result in injury from the use of the equipment as proposed within the ADD deployment plan. We therefore consider the risk of auditory injury as a result of this individual development to be low.
- With the proposed mitigation any potential disturbance as a result of exposure to sound emanating from ADDs at this site is not considered to be significant. This is because:
 - a) The ADD deployment plan provides an appropriate protocol to ensure that the use of ADDs will be limited, and their repeated, continuous use over prolonged periods of time will be prevented, and;
 - b) Due to the relatively low source level of the devices that are proposed. It is predicted that the sound levels emanating from the devices that are proposed at this site will result in a reduced area of potential disturbance, in comparison to some other higher power device types.
- The operator has committed to keeping a record of ADD use at the site and will provide this information to the Planning Authority on request. This will provide an opportunity for the Planning Authority to consider and review the use of ADDs at this site, thus ensuring that long-term cumulative issues can be taken into account in the future.

If the planning authority intends to grant planning permission against this advice without the suggested mitigation, you must notify Scottish Ministers.

We would be happy to provide the full details and reasoning of these recommendations in the form of our Habitats Regulations Appraisal (HRA) proforma.

Background information on the cSAC can be found at: <https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-areas/international-designations/natura-sites/harbour-porpoise-candidate>

2. Loch Sunart to the Sound of Jura MPA

The proposal lies within the Loch Sunart to the Sound of Jura Nature Conservation Marine Protected Area (NC MPA) selected for its common skate and Quaternary of Scotland glaciated channels and troughs.

The site's status means that the requirements of the Marine (Scotland) Act 2010 apply. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the NC MPA before it can be consented. In our view, the proposal is capable of affecting the common skate protected feature of the Loch Sunart to the Sound of Jura MPA.

We have reached this conclusion because the proposal could theoretically result in a reduced availability of prey species, particularly crustaceans, in a relatively localised area around the proposed development. It could also affect egg-laying areas of common skate locally through deposition of materials onto suitable substrate. However, within the context of the MPA as a whole, we consider that any reduction in prey species or the degradation of egg-laying substrates as a result of the deposition of organic waste is unlikely to be significant.

We therefore consider that the risk of this proposal being capable of affecting, other than insignificantly, the protected features of the Loch Sunart to the Sound of Jura NC MPA is low.

The discharge of chemicals is primarily SEPA's remit and we would expect this aspect of the proposal to be considered in detail through the CAR licensing process. Argyll and Bute Council may wish to consult with SEPA when undertaking their own assessment of the effect of the proposal on the NC MPA.

3. Firth of Lorn SAC

The proposal is close to the Firth of Lorn Special Area of Conservation (SAC) designated for its reefs.

The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") apply or, for reserved matters, The Conservation of Habitats and Species Regulations 2017. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the SAC before it can be consented (commonly known as Habitats Regulations Appraisal). The SNH website has a summary of the legislative requirements (see link under section 2 above).

In our view, it is unlikely that the proposal will have a significant effect on any qualifying interests either directly or indirectly. An appropriate assessment is therefore not required. We have reached this conclusion because the proposal is located approximately 2.5km from the boundary of the Firth of Lorn SAC. The applicant states that no material is predicted to be exported outwith the modelled domain. However, we note that SEPA have stated that final modelling has not yet been verified for this proposal. Given the separation distance between the proposal and the SAC boundary, and on account of the expansive and energetic nature of this area of water, we would expect any potential waste material exported in to the SAC to be dispersed widely and therefore unlikely to result in any impacts on the feature on the SAC.

The discharge of chemicals is primarily SEPA's remit and we would expect this aspect to be considered in detail through the CAR licensing process.

4. Benthic Impacts

The applicant has reached the decision that no new baseline visual survey is required. At screening/scoping stage we advised that further dialogue between MHS, SEPA and SNH would be required to determine whether or not additional visual survey information was necessary, and if so, to agree where any such transects should be carried out. As far as we are aware this advice does not appear to have been taken into account by the applicant. No further information was provided subsequent to our screening/scoping response being issued and it is unclear whether or not this decision was agreed with SEPA.

We have data from a visual survey carried out in 2015 which suggests that the Priority Marine Feature (PMF) habitat Burrowed Mud is present in the vicinity of the cages. The component PMF species tall sea pen (*Funiculina quadrangularis*) was also recorded. Any increase in the footprint of this site is likely to result in increased impacts on these PMF habitats and species. These features do not have legislative protection, but the basis for protection of their national status across Scottish waters is included in the National Marine Plan.

As the information/dialogue that we requested at screening/scoping was not provided, there is insufficient information to complete an impact assessment for PMFs, and therefore we have no means of predicting the degree or extent of likely impacts. Therefore, we cannot advise further on the benthic impacts arising from this proposal. However, we note that this aspect of the proposal will be considered in detail through the CAR licencing process and we would expect to discuss this further with SEPA during that process.

I trust that our advice is clear but please do not hesitate to contact me if you require any further information or clarification.

Yours faithfully

Andrew Campbell
Operations Manager
Lorn and North Argyll
andrew.campbell@snh.gov.uk

NOTIFICATION OF INITIATION OF DEVELOPMENT



Under Part 3, Section 27A of The Town and Country Planning (Scotland) Act 1997, I hereby give notice of my intention to commence the implementation of planning permission (ref) 18/00005/MFF which was granted by Argyll & Bute Council on 20 / 06 / 2018

I intend to commence the implementation of this planning permission on 09 / 08 / 2018

Signed: 

Date: 07 / 08 / 2018

Please enter full details of person(s) responsible for carrying out the development below:

NAME: MARINE HARVEST (SCOTLAND) LIMITED
ADDRESS: STOIS BAN HOUSE
GLEN NEVIS BUSINESS PARK
FORT WILLIAM
PH33 6RX
TELEPHONE: 01397 701550

Please return this form, duly completed, to the appropriate area office (see page 2):

Please enter full details of landowner (if different from above) and site agent/architect/person appointed to oversee the carrying out of development (if appointed) below:

Landowner

Site Agent/Architect/Appointed Person

NAME: CROWN ESTATE SCOTLAND
ADDRESS: 6 BELLS BRAE
EDINBURGH
EH4 3BS

NAME: N/A
ADDRESS:

TELEPHONE: 0131 260 6070

TELEPHONE:

EMAIL: ENQUIRIES@CROWNESTATESCOTLAND.^{AM}

EMAIL:

NOTES FOR GUIDANCE

NOTIFICATION OF INITIATION OF DEVELOPMENT FORM

IMPORTANT INFORMATION – PLEASE READ CAREFULLY

The Planning etc (Scotland) Act 2006 came into force on 3rd August 2009. The changes to primary legislation in form of this Act are part of the wider package of modernisation of the Scottish Planning System. Included within these changes is the requirement for person(s) who intend to implement a planning permission to submit to the Planning Authority a Notification of Initiation of Development prior to any development works commencing on the subject site.

Failure to submit this notice to the Planning Authority prior to works commencing on site constitutes a breach of planning control under Section 123 of the Town & Country Planning (Scotland) Act 1997 and subject to planning enforcement proceedings. If you have any difficulty completing this form please contact your local area office (see below for contact details).

Your attention is drawn in particular to any associated planning conditions imposed on the planning permission, which should be read carefully and fully complied with. Such planning conditions are imposed as an integral part of the grant of planning permission. You are advised that any development carried out in breach of pre conditions (requiring details to be submitted and approved first) is unauthorised development. Non-compliance with such conditions will not be sufficient to implement a planning permission. Should you not wish to comply with the said conditions, the correct procedure is the submission of a planning application to remove or vary the condition(s) or an appeal against such condition(s). You cannot simply choose to ignore them, to do so will result in unauthorised development.

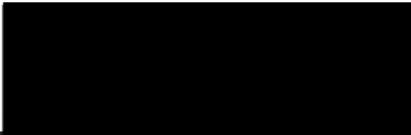
Area Office Contact Details:

Bute & Cowal	Argyll & Bute Council, Planning and Regulatory Services, Milton House, Milton Avenue, Dunoon, Argyll, PA23 7DU	01546 605518
Oban, Lorn & the Isles	Argyll & Bute Council, Planning and Regulatory Services, Municipal Buildings, Albany Street, Oban, Argyll, PA34 4AW	01546 605518
Mid Argyll, Kintyre & Islay	Argyll & Bute Council, Planning and Regulatory Services, 1A Manse Brae, Lochgilphead, Argyll, PA30 8DX	01546 605518
Helensburgh & Lomond	Argyll & Bute Council, Planning and Regulatory Services, Blairvadach, Shandon, Helensburgh, G84 8ND	01546 605518

NOTIFICATION OF COMPLETION OF DEVELOPMENT



Under Part 3, Section 27B of The Town and Country Planning (Scotland) Act 1997 I hereby give notice that the implementation of planning permission (ref) 18/00005/MFF was completed on 10 / 05 / 2019

Signed: 

Date: 13 / 05 / 2019

Please enter full details of person(s) responsible for carrying out the development below:

NAME: MOWI SCOTLAND LIMITED

ADDRESS: FARMS OFFICE

STOB BAN HOUSE

GLEN NEVIS BUSINESS PARK

FORT WILLIAM

PH33 6RX

TELEPHONE:

01397 71 

Please return this form, duly completed, to the appropriate area office (see page 2):

Please enter full details of landowner (if different from above) and site agent/architect/person who was appointed to oversee the carrying out of development (if appointed) below:

Landowner

NAME: CROWN ESTATE SCOTLAND

ADDRESS: 6 BEKS BRAE

EDINBURGH

EH4 3BJ

TELEPHONE: 0131 260 6070

NOTES FOR GUIDANCE

NOTIFICATION OF COMPLETION OF DEVELOPMENT FORM

IMPORTANT INFORMATION – PLEASE READ CAREFULLY

The Planning etc (Scotland) Act 2006 came into force on 3rd August 2009. The changes to primary legislation in form of this Act are part of the wider package of modernisation of the Scottish Planning System. Included within these changes is the requirement for person(s) who completes the development for which planning permission has been given must, as soon as practicable after doing so, give notice of completion of the development to the Planning Authority.

It is therefore statutory requirement, and essential that Development Services are advised of the date of completion of the development in respect of this planning permission, as soon as practicable after doing so. If you have any difficulty completing this form please contact your local area office (see below for contact details).

Failure to notify the Planning Authority of completion of the development may in some instance constitute a breach of planning control and as a result planning enforcement proceedings. Furthermore, the completion of this development in breach of any associated planning condition, or deviations from the approved plans/drawings, will result in a breach of planning control and, in some instances, the potential for remedial enforcement action to be taken by the Planning Authority. If you are aware of any such deviations to the approved plans/drawing or planning conditions fully details, in writing, must accompany the return of this notice.

Area Office Contact Details:

Bute & Cowal	Argyll & Bute Council, Planning and Regulatory Services, Milton House, Milton Avenue, Dunoon, Argyll, PA23 7DU	01546 605518
Oban, Lorn & the Isles	Argyll & Bute Council, Planning and Regulatory Services, Municipal Buildings, Albany Street, Oban, Argyll, PA34 4AW	01546 605518
Mid Argyll, Kintyre & Islay	Argyll & Bute Council, Planning and Regulatory Services, 1A Manse Brae, Lochgilphead, Argyll, PA30 8DX	01546 605518
Helensburgh & Lomond	Argyll & Bute Council, Planning and Regulatory Services, Blairvadach, Shandon, Helensburgh, G84 8ND	01546 605518

From: [REDACTED]
To: [Liam Wright](#)
Subject: FW: BDNC_ADD use
Date: 27 January 2020 09:14:40
Attachments: [image001.jpg](#)
[image002.png](#)
[image003.png](#)

For your info.

Regards

[REDACTED]

[REDACTED]

BA Hons, MSc MRTPI

Team Leader – Major Applications Team

Development Management

Development and Infrastructure Services

Argyll and Bute Council

t: 01436 [REDACTED]

e: [REDACTED] [argyll-bute.gov.uk](mailto:[REDACTED]@argyll-bute.gov.uk)

w: www.argyll-bute.gov.uk



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[Customer Satisfaction Questionnaire](#)

The Planning Service are keen to get customers views on how we deliver our services. Your feedback is important to allow us to tailor our services to customer needs.

If you have any comments or wish to make a suggestion, please fill in our online [Customer Satisfaction Questionnaire](#)

From: [REDACTED]@mowi.com]

Sent: 24 January 2020 17:10

To: [REDACTED]

Subject: BDNC_ADD use

Hello [REDACTED] just to acknowledge I have received your letter concerning ADD use at BDNC (dated 15 January) today. I note the contents and will discuss and review with colleagues and will come back to you in due course. I agree that a subsequent meeting on the issues raised would be beneficial.

Best regards

[REDACTED]

[REDACTED]

[REDACTED]

Mowi Scotland Limited

Mobile: [REDACTED]

DDI: +44 1397 [REDACTED]

[REDACTED] [@mowi.com](mailto:[REDACTED]@mowi.com)



Sharon Phipps

From: Catriona Laird
Sent: 27 January 2020 15:06
To: Liam Wright
Subject: RE: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Thanks Liam – agree with your changes re: wording of previous gannet entrapments in the local area! Will send this over to [REDACTED] at the Council this afternoon.

Cheers,

Catriona

Catriona Laird | Operations Officer – Mid Argyll | Scottish Natural Heritage

1 Kilmory Industrial Estate | Lochgilphead | Argyll | PA31 8RR | Tel: 0131 316 [REDACTED]

Cisco: [REDACTED]

www.nature.scot

From: Liam Wright
Sent: 27 January 2020 14:48
To: Catriona Laird
Subject: RE: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Just made a slight change to the annex too – also tracked changes.

Cheers

Liam

From: Catriona Laird <Catriona.Laird@nature.scot>
Sent: 27 January 2020 12:24
To: Liam Wright <Liam.Wright@nature.scot>
Subject: RE: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Thanks for the info Liam – I've incorporated it into our response now (see attached). In Stan's absence, would you be able to take a quick over the attached documents to see if I've missed anything major out (Stan seemed to think it was a complicated site, which I guess it is in terms of the Endrick Water SAC and Ailsa Craig SPA). Lucy Quinn provided really good detailed advice including appraisals of the proposal on marine SPAs – I've put the detailed appraisals into a separate annex and summarised the info in the scoping report template but please do let me know if you think I should include this info in the main document instead.

Many thanks,

Catriona

Catriona Laird | Operations Officer – Mid Argyll | Scottish Natural Heritage

1 Kilmory Industrial Estate | Lochgilphead | Argyll | PA31 8RR | Tel: 0131 316 [REDACTED]

Cisco [REDACTED]

www.nature.scot

From: Liam Wright <Liam.Wright@nature.scot>
Sent: 27 January 2020 11:39
To: Catriona Laird <Catriona.Laird@nature.scot>
Subject: FW: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Hi Catriona,

See below for slightly updated text – I have changed the benthic section slightly and have included some more detail in the Endrick Water section. I've also attached our recent response to Ardyne for info.

Happy to discuss.

Cheers
Liam

From: Liam Wright
Sent: 13 January 2020 16:52
To: Stan Phillips (Stan.Phillips@nature.scot) <Stan.Phillips@nature.scot>
Subject: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Hi Stan,

See below for advice on the fish farm proposal at Kilbrannan Sound.

Benthic Impacts

This screening / scoping application relates to a proposal to install a marine cage fish farm consisting of 12 x 120 m circumference cages and a feed barge with a maximum standing biomass of 2475.54 tons.

A new baseline visual survey has already been carried out for this proposal. We have not yet assessed the footage but the benthic survey report provided with the application indicates that no PMF habitats or species are present or likely to be impacted by this proposal. If this is correct then none of the sensitive receptors identified within section 4.3 of the template are likely to be impacted.

However, we would caveat the above advice by restating that we have not been provided with the visual survey footage. Until we have assessed the footage ourselves we cannot provide definitive advice on the presence of PMF habitats or species in the vicinity of the proposal. As such we would recommend that the applicant provides us with a copy of the survey footage and includes an assessment of the significance of impacts on the benthic habitats and species that are present. In addition, the applicant should submit modelling reports to identify the depositional footprint of waste and chemical chemotherapeutants for the proposed site.

Wild Salmonids

Designated Wild Salmonids - Endrick Water SAC

This proposals could affect the Atlantic salmon feature of the Endrick Water Special Area of Conservation (SAC).

The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") or, for reserved matters, The Conservation of Habitats and Species Regulations 2017 apply. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the SAC before it can be consented (commonly known as Habitats Regulations Appraisal). The SNH website has a summary of the legislative requirements (<https://www.snh.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations>).

In our view, this proposal is likely to have a significant effect on the Atlantic salmon feature of the Endrick Water SAC. Consequently, Argyll and Bute Council, as competent authority, is required to carry out an appropriate assessment in view of the site's conservation objectives for its Atlantic salmon qualifying interest. This assessment should include an appraisal of the following:

We would recommend that as an initial step to consider the potential connectivity between this site and the Endrick Water SAC that sea lice dispersion modelling is undertaken and provided with the final application / EIA. In addition,

this information will help to assess the potential connectivity between this site and any other existing and proposed sites in the Firth of Clyde which may help to inform cumulative assessment and identify appropriate areas which may require co-ordinated management in an area based EMP or similar.

To inform the Appropriate Assessment, if dispersion modelling confirms there is connectivity between the proposed fish farm and migrating salmon from the Endrick Water, the application should include detailed information (ideally within an overall Environmental Management Plan) on monitoring and mitigation measures that will be employed to manage and control sea lice and therefore reduce the risk to the SAC. The EMP should aim to set out a framework that will give the Planning Authority confidence that the operator is engaging in a meaningful way to minimise potentially damaging interactions with Atlantic salmon linked to the SAC. The EMP does not need to be complex in nature but must provide an enforceable framework which a) includes appropriate monitoring, the results of which feedback to inform on-farm management and b) includes commitments to make material changes to the management of the farm should an elevated risk to the SAC be identified.

Taking all proposals that are currently in the planning system in to account there is approximately 17,500 tonnes of additional biomass proposed in areas of the Firth of Clyde that are likely to have connectivity with the Endrick Water SAC. The assessment will need to consider the potential cumulative risk from multiple developments to the SAC, and therefore information on any coordinated activity/management should be included. It will therefore be particularly important that any mitigation that is proposed in any subsequent planning application / EIA takes potential cumulative impacts in to account and is robust and sufficient to protect the SAC from any adverse effect. Given the complexity of the cumulative issues in the wider Firth of Clyde area we would recommend that it would be advisable for the developer to discuss the potential cumulative issues with other existing and prospective operators in the Firth of Clyde region and consider taking a joined-up approach going forward. We would be happy to discuss the options further with both Argyll and Bute Planning Authority and the developer.

In addition to the above, any escape of farmed salmon poses a threat to the Atlantic salmon feature of the Endrick Water SAC through the risk of subsequent genetic introgression, should escaped Atlantic salmon enter the Endrick Water SAC and breed with wild Atlantic salmon. To mitigate this risk to the SAC we would expect confirmation that the proposed fish farms will comply with the Scottish Technical Standard, in order to ensure that any equipment used is robust and will reduce the risk of escapes occur and any subsequent interbreeding with salmon in the SAC.

The Endrick Water SAC is considered a sensitive area as defined in section 4.1 of the template. As such the proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

Non-Designated Wild Salmonids

There is potential for interactions to occur with non-designated wild salmonid populations. Sea trout and Atlantic salmon are both Priority Marine Features (PMF). This proposal has potential to impact on both these species. Impacts could occur as a result of the release of sea lice in to the marine environment and, should farmed stock escape in to the wild, as a result of genetic introgression with wild Atlantic salmon populations. PMFs are considered a sensitive species or habitat as defined in section 4.3 of the template. As such the proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

The final application / EIA report should provide an assessment of the risk posed to wild salmonids, including details of any mitigation measures reduce the risk of significant impacts occurring. We have limited access to any detailed data on local wild salmonid populations. On this this basis we are happy to defer to the DSFB and / or Marine Scotland Science to provide further advice to the Planning Authority on the local significance of any non-designated wild salmonid populations likely to be impacted by this proposal.

Cetaceans

All species of cetacean qualify as European Protected Species (EPS) and are therefore considered sensitive species as identified in section 4.3 of the template. The use of acoustic deterrent devices (ADDs) can in some instances be capable of causing disturbance to cetaceans. As such this proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

We would suggest that best practice measures should be adopted to ensure that the risk of any impacts on cetaceans as a result of the use of ADDs will be minimised. In order to do so we would recommend that the applicant develops and adheres to an ADD deployment plan which sets out appropriate measures to be followed to ensure any potential impacts on cetaceans will be minimised.

From 1 May 2020, SNH will be rebranding and changing its name to NatureScot.



Argyll and Bute Council

EIA TEMPLATE FOR SCREENING & SCOPING

MARINE PEN FISH FARMING

NOTE: Completion of this Screening & Scoping template must comply with the requirements of the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended). It is the responsibility of the developer and, ultimately, the relevant planning authority to ensure that it does.

PROPOSAL *(To be completed by the developer)*

Project Name: North Kilbrannan Fish Farm
Location: Kilbrannan Sound
Date: 15-11-2019
Signed: Greg Moschonas
Position: Environmental Analyst
Company: Mowi Scotland
Address: Stob Ban House, Glen Nevis Business Park, Fort William
Email: [REDACTED]@mowi.com
Tel: 01397 [REDACTED]

We request an EIA screening/scoping opinion. Details of the project are attached.

We provide additional material which we believe will be of assistance to statutory consultees when considering EIA Screening and Scoping. These are:

Annex_1.1-NKilbrannan_charts
Annex_1.2-NKilbrannan_other_relevant_graphical_information
Annex_1.3-Temp_shorebase_facility_visualisations
Annex_1.4-NKilbrannan_video_survey_report
Annex_1.5-NKilbrannan_benthic_survey_report
Annex_1.6-Carradale_North_ES_2015
Annex_1.7-ADSFB_S&S_response_June_2018
Annex_1.8-MSS_S&S_response_June_2018

PURPOSE OF THIS TEMPLATE

Before completing this template, you should familiarise yourself with Environmental Impact Assessment: Practical Guidelines Toolkit for Marine Fish Farming, Planning Advice Note (PAN) 58 *Environmental Impact Assessment*, and circular 8/2007 (links below to these documents).

<http://www.sarf.org.uk/Project%20Final%20Reports/SARF024%20-%20Final%20Reports%20and%20Templates/EIA%20Guidelines%20FINAL+%20Templates.pdf>

<http://www.scotland.gov.uk/Publications/1999/10/pan58-root/pan58>

This EIA Screening & Scoping Template is primarily designed to assist the work of the relevant planning authority and the statutory consultees.

The **developer** should initiate the use of this template by completing the proposal box and sections 2-5 and by attaching any additional material in Annex 1 of this template. This should then be forwarded to the relevant planning authority.

The **relevant planning authority** continues the use of this template as indicated in the appropriate sections.

FILLING IN THE TEMPLATE

At the points where you wish add text, insert the cursor over the grey 'text form field'. Simply start typing. Text should wrap down the page, and main form boxes will expand to accommodate. Please attempt to keep responses brief and factual. **Save your version of the master file with your own unique filename.**

For 'check boxes', double click when the cursor is on the box, and click the '*default value – checked*' option.

1 EIA SCREENING & SCOPING OPINION TEMPLATE (To be completed by the relevant authority)

Relevant Planning Authority Request to Statutory Consultees

Planning authorities should forward this template to statutory consultees immediately upon receipt from the developer

We have received this request for an EIA Screening opinion, and if necessary a Scoping opinion, from the developer named at the start of the template. Information on the proposal and supporting details are attached.

I would be grateful if your organisation or agency would provide your advice (at the relevant part of sections 5 and 6) to assist us with our decision on the screening (and if relevant scoping) opinion.

We remind statutory consultees that our interest is in assessing whether the development will be likely to have **significant** effects on the environment by virtue inter alia of its nature, size or location.

You should advise that:

- You consider that the proposed development will be likely to have “significant effect” on the environment by virtue of its nature, size or location (refer to Annex A & B of the Planning Circular 8/2007, and to the EIA Guidance published by Scottish Government). If so, please provide a clear description of the breadth and extent of the supplemental environmental information to be provided in the form of an Environmental Statement.

or

- You consider that the proposed development is not likely to have a “significant effect” on the environment, but you request that certain additional information is submitted in support of any future planning application for the proposed development.

or

- As far as your interests are concerned you are content for the proposal to proceed without any further requirements for environmental information.

Your response is requested by *[allow six weeks for combined screening/scoping]*

If I do not hear from you within the stated timescale, I shall issue any opinion on the assumption that you have no comments to make.

Electronic signature:

Name:

Planning authority:

Telephone no:

Date:

Insert the appropriate planning application form on the next page.

Only complete, at this stage, the boxes that relate to identification of the developer, and details about the proposed development.

Do not complete, at this stage, the boxes that relate to later stages of formal planning application, i.e. Land Ownership, Fees and signed Declarations.

Note: provision is made for insertion of plans, maps and diagrams after the pasted-in Planning Application form (see Section 2).

Planning Applications Forms can be located at the website links shown below:

Comhairle Nan Eilean:

<http://www.w-isles.gov.uk/planapps/planforms.htm>

Highland Council:

<http://www.highland.gov.uk/NR/rdonlyres/D2A1FF38-0E12-4BBF-8366-B975CBEF5104/0/FishfarmingApplication.pdf>

Argyll and Bute Council:

https://www.argyll-bute.gov.uk/sites/default/files/planning-and-environment/marine_fish_farm_planning_application_form_may_2012.pdf

Orkney Islands Council:

http://www.orkney.gov.uk/nqcontent.cfm?a_id=9823&tt=orkneyv2

Shetland Council:

<http://www.shetland.gov.uk/planningcontrol/applicationforms/default.asp>

North Ayrshire Council:

<http://www.north-ayrshire.gov.uk/na/FormsDB.nsf/index/AD47EA88A616B6838025700B004B19BD?OpenDocument&MenuType=Environment&DocDisplay=NoDoc&DFBC=Planning&CatLevel=1>

FOR USE BELOW LOW WATER MARK ONLY



PLEASE SEND YOUR COMPLETED APPLICATION FORM TO THE:

**CENTRAL VALIDATION TEAM,
PLANNING AND REGULATORY SERVICES, 1A MANSE BRAE,
LOCHGILPHEAD, ARGYLL PA31 8RD**

For Official Use Only:	
Reference No.	
Date of Receipt	
Fee Paid	Date of Receipt
Valid Date	

MARINE FISH FARMING PLANNING APPLICATION

Town and Country Planning (Scotland) Acts

The undernoted applicant hereby makes application for express planning consent for the development described on this form and on the accompanying plans.

This form should not be used for applications for planning permission (including fish farms) above low water mark, Mineral Consent, Listed Building Consent, Conservation Area Consent, Advertisement Consent, Certificates of Lawfulness or Prior Notification as separate application forms are available for these.

Please refer to the accompanying Guidance Notes when completing this application.

Limited space is available on the form provide additional information on a separate sheet of paper.

1. Applicant (IN BLOCK CAPITALS)

Full Name: Mowi Scotland Ltd

Address:

1st Floor
Admiralty Park
Admiralty Road
Rosyth
Fife
Post Code: KY11 2YW

Tel. No:

Email address:

2. Agent (IN BLOCK CAPITALS)

Full Name: [REDACTED]

Address:

Stob Ban House
Glen Nevis Business Park
Fort William

Post Code PH33 6RX

Tel. No 01397 [REDACTED]

Email [REDACTED]@mowi.com

3. Location of Proposed Development: Please identify/describe the location of the site or sites

(a) Description of the location of the development

North Kilbrannan, Kilbrannan Sound, just North of Cour Bay and approximately 9km of North of existing Mowi sites Carradale North and Carradale South

(b) Grid reference of mid-point of site: NR8374249765 (E183742.75 N 649765.86)

(c) Latitude/Longitude position: 55.69N 5.44W

4. Type of Application: What is the application for? Please select one of the following:

- New site
- Change of Use of Existing site (including species change)
- Alterations/extension to an existing site
- Variation or removal of condition

***If there have been previous planning permissions on this site please provide the reference number of the most recent one:**

Reference No:

Date of Decision:

Please provide details of any other consent for the site (i.e. Crown Estate, Scottish Ministers):

Draft CAR licence no.: CAR/L/1168182

Crown Estate Scotland LOA: XX100/326C

4a. Species (if mixed use please indicate)

Fin fish Species: Atlantic Salmon.....
 Shellfish Species:
 Other (Please specify) Species:

5. Description of the Proposal

Please describe the proposal including any change of use:

New fish farm with 12 pens of 120m circumference arranged in regular grid (2x6), including associated moorings, a feed barge as well as ancillary single point moorings.

The site will operate at a maximum biomass of 2,475.54T

Please tick the relevant boxes for the type(s) of equipment which will be involved (see notes for full explanation)

Circular cages	<input checked="" type="checkbox"/>	Square/rectangular cages	<input type="checkbox"/>	Longlines	<input type="checkbox"/>
Raft/grids	<input checked="" type="checkbox"/>	Moorings	<input checked="" type="checkbox"/>	Feed barges	<input checked="" type="checkbox"/>
Feed pipes to shore	<input type="checkbox"/>	Pontoons	<input type="checkbox"/>		

Accommodation on the marine installation(s)

Other (please specify):

Have works already been started? Yes No

If yes, please state date and, if completion, the completion date:

Date started: Date Completed:

If yes, please explain why work has already taken place in advance of making this application:

6. Development Area

Please state the dimensions of the site in metres and the total site area in both square metres and hectares:

	Site dimensions		Total Site Area	
	Length (m)	Width (m)	(sq. m)	(hectares)
Existing Surface area:				
Proposed surface area:	12 x 38.2m diameter pens	each pen = 1145.9m ²	13,750.8	1.37
Existing moorings area:				
Proposed moorings area:	765	400	306,000	30.6

Is the surface area of the site 2 hectares of above? No

If yes please include with your application a pre-application consultations report along with a design statement.

7. Equipment

	Existing	Proposed
7a. Primary Equipment		
Type of units (e.g. cages/pens/longlines/rafts/trestles):		pens
Number of Units:		12
Shape(s) of units:		circular
Cage sizes/longline length:		120m circumference
Number of cage/longline/raft/trestle group:		1
Moorings grid dimensions for each unit (circular cages):		75m

Other equipment – specify below:

.....

7b. Ancillary Equipment:	Existing	Proposed
Barge/feeding station type (e.g. automated feed barge)		Feed barge
Capacity of feed barge (tonnes)		400
Number, type and colour of buoys		36 Grey; 1.2m diameter, 1.6m height
Lighting (underwater/surface)		Underwater; no surface
Navigational equipment		As per NLB requirements

Other equipment:

Single point moorings x3 (all ancillary equipment to be confirmed in the final planning application)

8. Production Information	Existing	Proposed
Maximum stocked biomass (tonnes)		2475.54
Maximum production biomass per cycle (tonnes)		3,611
Proposed production cycle (months)		22.5
Stocking densities (kg/m ³)		15
Fallow Periods	Minimum of 6 weeks at the end of the production cycle.	
9. Operation of Facility/Landing/Servicing		
<p>How will the site be serviced?</p> <p>The site will be accessed and serviced by sea. Deliveries of feed and harvesting operations will be carried out by vessels. The site will be serviced from a local shore base facility.</p>		
<p>Where will the site be served from? Details of the shore base location(s)</p> <p>At present our operational site in Kilbrannan Sound, Eilean Grianain (Carradale north and Carradale south farms), is serviced from a shore base location within Carradale harbour; this is a shorebase that Mowi inherited from a previous operator. There are constraints associated with this location, primarily space, however we have been working to improve management procedures and the working environment directly within our own operational area and with other local users concerning the wider harbour environment. We are also engaged with stakeholders regarding more significant improvements to the shore base in conjunction with local development plans for the harbour area. At this stage the preferred long-term option is that the site will be serviced via a redeveloped shore base located within Carradale harbour and we are working with the community towards this goal. In the interim, however, we are progressing plans for an improved but temporary facility (Annex 1.3).</p>		
<p>Normal daily operational hours of site (feeding, deliveries etc.)</p> <p>Mowi Scotland makes every effort to work within the normal working hours of 0800 to 1700 over a seven-day working week. These times are likely to vary slightly due to seasonal daylight hours e.g. to be slightly longer in the summer and shorter in the winter. Due to the nature of farming animals there are occasions where it is required to work longer hours, but this is kept to a minimum wherever possible. Non-routine operations such as harvesting and grading may occur outside these periods, but this will also be kept to a minimum.</p>		
<p>Operational activities during harvesting and stocking periods (method of delivery stock etc.)</p> <p>The site will be stocked, harvested and potentially treated using a well boat.</p>		
10. Supporting Information		
<p>Will the site be used in a rotational basis with other sites? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Please provide details:</p> <p>.....</p> <p>.....</p> <p>.....</p>		

Are there agreements in place with other nearby fish farms and/or fishing interests? Yes No

Please provide details:

A Farm Management Statement (FMS) is in place for the Eilean Grianain sites which includes Carradale North and Carradale South. No other companies operate fin fish farms in Kilbrannan Sound. The FMS will be included in the final Planning Application.

What operational and management practices are to be put in place to ensure site containment and disease control?

To avoid duplication relevant information has been provided in the Section 5.4. of the screening-scoping template.

What methods will be used to control the impacts of predatory wildlife (e.g. top nets, anti-predator nets or Acoustic Deterrent Devices)? With ADD's provide name of the manufacturer and the model, also the proposed patter of use (i.e. continuous/scare-response/seasonal).

To avoid duplication relevant information has been provided in the Section 5.3 of the screening-scoping template.

Note: site-specific strategy on predator control may be required which takes account of conservation legislation. Data on protected species in the area may also be required. These should be provided as an attachment.

What level of local employment will be generated directly as a result of the proposal?

Aquaculture significantly contributes to sustainable economic growth in rural and coastal communities, with many depending on the employment and revenue it provides (National Marine Plan, 2015). Scottish Planning Policy also identifies aquaculture as making a significant contribution to the Scottish economy, particularly for coastal and island communities. Small changes in economic activity has potential to impact communities in rural Scotland more significantly than more populated areas. A significant proportion of Mowi Scotland employment is located in such rural areas. This employment allows traditional settlement patterns and land use activities to be maintained, with the presence of the company and its employees playing a critically important role in sustaining local rural services. In terms of the proposed North Kilbrannan site there will be through life direct and indirect economic impacts arising from job creation and local services expenditure arising from the installation, ongoing operation and maintenance activities of the site. The proposed site will result in the direct employment of up to an additional seven to ten permanently employed members of staff (or equivalent) and potentially additional seasonal workers in the busier summer periods in the second year of the production cycle. Downstream jobs will also be supported in transport, processing and support services

What restoration works are proposed in the event of cessation of operations?

In the event of the site becoming surplus to requirements or if the proposed equipment needs replacing, all equipment will be removed from the site. This will be utilised elsewhere in the company, recycled, or disposed of appropriately.

Nutrient enhancement calculations, benthic impact, water column and assimilative capacity along with impacts on biodiversity are all issues that are of interest to consultees in the planning process and it may aid their ability to comment on the application if information on these matters are included within your application Please provide this information or any other relevant information below:

To avoid duplication relevant information has been provided in the Section 5 of the screening-scoping template.

11. Discharges (not required for shellfish developments)

Has an application been made to SEPA under The Water Environment (Controlled Activities) (Scotland) Regulation 2005? Yes No

If yes, please give the date of approval and the maximum biomass approved.

Decision pending – application biomass 2475.54T

12. Water Quality

Has a water quality report been prepared? Yes No

If yes, please attach a copy of the report with your application.

If a shellfish proposal, please indicate status of water (e.g. is it shellfish waters)

13. Environmental Assessment

Has the development been the subject of a screening and or scoping opinion under the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended)? Yes No

If yes, please provide a copy of the screening and or scoping opinion

Was an Environmental Assessment required? Yes No

If yes, please submit the environmental statement along with the application

14. Pre-Application Discussion

Have you received any advice from the planning authority in relation to this proposal? Yes No
If yes, in what format was the advice given?

Meeting Telephone call Letter Email

Please indicate who you discussed this proposal with:

15. Planning Service Employee/Elected Member Interest

Are you/the applicant/the applicant's spouse or partner, a member of staff within the planning service or an elected member of the Council? Yes No

Or

Are you /the applicant/the applicant's spouse or partner a close relative or a member of staff in the planning service or elected member of the planning authority? Yes No

If you have answered yes please provide details:

16. Land Ownership Certificate (includes seabed)

(a) I hereby certify that 21 days before the date of the application: (tick one box only)

1. No person (other than the applicant) was the owner of any of the land, including the seabed, to which the application relates, or an agricultural tenant.

Or

2. The applicant does not own all the land involved, including the seabed, in the application site, but has given a copy of the requisite notice under Regulation 15(1) to the owner(s) or agricultural tenants of any of the application site.

Name of Owner: Crown Estate Scotland

Address where notification sent:

Date Notified: To be notified at the final planning application

(b) I further certify that 21 days before the date of the application: (tick one box only)

1. None of the land formed part of an agricultural holding.

Or

2. The applicant has given notice to every person who was a tenant of an agricultural holding, any part of which formed part of the applicant site

These persons are:

Name of Tenant:

Address where notification sent:

Date Notified:

CHECKLIST To be completed in the final planning application.

Please complete the following checklist to make sure you have provided all the necessary information in support of your application. Failure to submit this information may result in your application being deemed invalid.

Appropriate fee (please refer to the guidance notes or Scale of Fees)

Signed and dated land Ownership Certificate

Location plan including north point and scale (Site boundary shown in red)

Admiralty chart showing the application site

Site plan or block plan (showing the layout of the site, equipment, grid reference and co-ordinates)

Plans and sections of the cages/cultivation equipment, including all ancillary equipment

Photographs and/or photomontages (where these have been specified as necessary by the planning authority)

Provide copies of the following documents if applicable:

Environmental Statement

Landscape and visual impact assessment

Design statement	<input type="checkbox"/>
Pre-application consultation report (required when sites with a surface area of 2 hectares or above)	<input type="checkbox"/>
Water Quality report	<input type="checkbox"/>
Other, please specify: To be provided at the final planning application stage.	

DECLARATION

I, the applicant/agent certify that this is an application for planning permission. The accompanying plans/drawings and additional information are provided as part of this application.

I, the applicant /agent hereby certify that the attached Land Ownership Certificate has been completed:

Signature: [REDACTED]

Name: [REDACTED]

Date: 15-11-2019

Any personal data that you have been asked to provide on this form will be held and processed in accordance with the requirements of the 1998 Data Protection Act.

Insert a map showing location of farm, or range of location options if the development is for a new farm. If possible, also indicate the location of the relevant shore base on the map, and if known, the locations of other fish farm sites in the area.

'Copy' appropriate sized map from relevant file, highlight the grey form field below, and 'paste'

See Annex 1.1

Note: The exact position and configuration of the pens, moorings and ancillary equipment will be confirmed in the final planning application, the details provided in the screening-scoping are indicative and subject to potential change.

Insert a map showing configuration of proposed pens and moorings and identify the coordinate of the NE corner of each group.

'Copy' appropriate sized map from relevant file, highlight the grey form field below, and 'paste'

See Annex 1.1

Note: The exact position and configuration of the pens, moorings and ancillary equipment will be confirmed in the final planning application, the details provided in the screening-scoping are indicative and subject to potential change.

Insert any other relevant graphical information.

'Copy' appropriate sized map from relevant file, highlight the grey form field below, and 'paste'

See Annex 1.2

Note: Detailed diagrams of proposed equipment will be provided with the final planning application.

Insert any other relevant textual information concerning either the design or the operational characteristics of the proposed development.

Note: Detailed descriptions of proposed equipment will be provided with the final planning application.

Development Summary – Mowi Scotland Ltd is proposing to install a new fish farm with 12 pens of 120m circumference arranged in regular grid (2x6), including associated moorings, a feed barge and ancillary single point moorings. The pens will be installed in a 75m x 75m mooring grid with a net depth of 16m. The stocking density of the site will be c. 15 kg/m³ and the maximum biomass at the site will be 2,475.54T.

Surface Equipment - Site equipment on a fish farm is generally low-lying and a sizeable proportion is submerged below the surface of the water. Fish will be held in floating circular pens that measure 120m in circumference (38.2m in diameter).

Top nets will be installed over stocked pens as mitigation against predation by wild animals. These nets are secured at the pen ring and tensioned to prevent entanglement. A support structure will be installed that is designed at a height to ensure the top nets are kept at a safe distance from the water and the feed rotor, whilst also ensuring that the supporting structure itself is stable on the water.

Shore base

At present our operational site in Kilbrannan Sound, Eilean Grianain (Carradale north and Carradale south farms), is serviced from a shore base location within Carradale harbour; this is a shorebase that Mowi inherited from a previous operator. There are constraints associated with this location, primarily space, however we have been working to improve management procedures and the working

environment directly within our own operational area and with other local users concerning the wider harbour environment. We are also engaged with stakeholders regarding more significant improvements to the shore base in conjunction with local development plans for the harbour area. At this stage the preferred long-term option is that the site will be serviced via a redeveloped shore base located within Carradale harbour and we are working with the community towards this goal. In the interim, however, we are progressing plans for an improved but temporary facility (Annex 1.3).

Operating Times

Mowi Scotland Ltd makes every effort to work within the normal working hours of 0800 to 1700 over a seven-day working week. These times are likely to vary slightly due to seasonal daylight hours e.g. to be slightly longer in the summer and shorter in the winter. Due to the nature of farming animals there are occasions where it is required to work longer hours, but this is kept to a minimum wherever possible. Non-routine operations such as harvesting and grading may occur outside these periods, but this will also be kept to a minimum.

Moorings

Each pen will be attached to, and held in position, by a 75m² submerged mooring grid that allows unimpeded boat access to the pens. The matrix grid will be held in position by mooring legs (comprising of rope, chain and anchors or blocks) that extend out from the grid. All the mooring and equipment specifications will be designed with engineered tolerances to stand up to a 1 in 50-year storm. Moorings will be designed using wave-climate analysis and site-specific setups devised to ensure that they are the most suitable for each specific location. Mooring lengths are likely to be four times the depth. Further mooring details and lengths will be confirmed in the final planning application. Further details regarding equipment attestation will be provided with the final planning application.

Underwater Lighting

Removable underwater photoperiod lights (400-1000w) may be used in each pen during the first year that smolts are put to sea to control maturation in the stock. These underwater lights are generally used between November and May and being submerged, only produce a localised glow at night.

Waste Management

As with any livestock farming, a small proportion of fish may perish during each cycle at the site. These collect in a cone placed purposefully at the bottom of each pen and are retrieved using a lift-up system. Site staff will endeavour to remove mortalities from the base of the pen daily and 3 times a week as a minimum. Stock mortalities removed from the pens will be stored in a sealed ensiler system upon the feed barge and will be transported by a licensed waste carrier for disposal at a licensed facility. Having the operational presence of recognised technologies such as an ensiling unit on site helps to maintain biosecurity, reduce risk and improve safety. At present, the intended end point for disposal would be via anaerobic digestion or other approved methods.

Should a mass mortality event occur, Mowi Scotland and senior management and the health veterinarian within Mowi Scotland Ltd will be notified in response. Operational incident response measures will include site staff ensuring all nets are above the water-line to contain moribund fish. Diving contractors will be instructed where required to inspect nets for damage or displacement. Samples will be taken of any moribund or very fresh dead fish to identify the cause. The operational method employed to extract and dispose of the fish will depend on the cause of the event. Previously the use of vessels has proved sufficient at other sites, to pump the fish from the pens for further ensiling or incineration. In the event of a significant disease causing a mass mortality event Mowi Scotland Ltd would agree the final location for disposal in conjunction with Marine Scotland.

Certifications

As a member of The Scottish Salmon Producers' Organisation (SSPO), the trade association for the salmon farming industry, Mowi Scotland Ltd is committed to following the Code of Good Practice for Scottish Finfish Aquaculture (CoGP) and work to the highest welfare and environmental standards enshrined in the Code. The CoGP comprehensively sets out the standards that farmers must demonstrate compliance with, when independently audited by UKAS-approved inspection services. The Code covers more than 300 specific compliance points serving all aspects of finfish good practice including: fish health, protecting the environment, welfare and husbandry, and annexes giving further technical guidance on good practice, including the National Sea Lice Treatment Strategy, Integrated Sea Lice Management, Containment, and a Veterinary Health Plan.

4 IDENTIFICATION OF ENVIRONMENTAL RECEPTORS (To be completed by the developer)

Initial Assessment of Presence of Environmental Receptors

The **developer** should complete section 4.1 to 4.4 to the best of their ability and knowledge. Links to important websites concerning these sections can be found in the Practical Guidelines, Section 6.1.

4.1 Sensitive Areas (see <http://www.snh.org.uk/snhi/>)

Is the proposed development located in or adjacent to any of the following:

Note: reporting areas within 7km radius from proposed site

Site of Special Scientific Interest
Claonaig Wood (terrestrial) – vicinity (5.2km from boundary)
Arran Northern Mountains (terrestrial) – vicinity (5.9km from boundary)

Land subject to Nature Conservation Orders
International Conservation Sites (e.g. SAC etc.)
Kintyre Goose Lochs (terrestrial) SSSI, SPA and Ramsar – vicinity (6.2km from boundary)

National Scenic Areas
North Arran - vicinity (3.2km from boundary)

World Heritage Sites
Scheduled Monuments
National Park

4.2 FRS Locational Guidelines (see <http://www.marlab.ac.uk/>)

Ensure that the most recently published Locational Guidelines have been consulted.

In terms of Locational Guidelines, is the location:

Category 1
Category 2
Category 3
Uncategorised

4.3 Sensitive Species or Habitat (see <http://www.ukbap.org.uk/>, & <http://www.marlin.ac.uk/>)

Is the proposed development located near to any identified sensitive species or habitat?
Reporting PMFs (Redacted GeMS) within 7km radius from proposed site

Identify:

Burrowed mud – 5km
Burrowed mud – 6.8km
Burrowed mud or Inshore deep mud with burrowing heart urchins – 6.9km
Burrowed mud or Inshore deep mud with burrowing heart urchins – 4.7km
Burrowed mud or Inshore deep mud with burrowing heart urchins – 4.7km
Kelp and seaweed communities on sublittoral sediment – 4.4km
Kelp and seaweed communities on sublittoral sediment – 3.8km
Kelp and seaweed communities on sublittoral sediment – 3.8km
Kelp and seaweed communities on sublittoral sediment – 6.8km
Seagrass beds – 6.8km

4.4 Any other relevant environmental issues (e.g. human interaction; noise, pollution, cultural heritage, cumulative impact, air quality)

Identify: Not applicable. Refer to section 5.



5 SCREENING & SCOPING CHECKLIST *(To be completed by the developer initially, and statutory consultees subsequently)*

The relevant planning authority might wish to take account of the following potential impacts of fish farming in relation to existing regulatory regimes. In some cases, the impacts are generally dealt with by other regulations and it is not the remit of the planning authority to secure objectives achievable under other legislation or powers. However, it should be noted that the issues controlled under other legislation may be material considerations to be taken into account by the planning authority.

Where a statutory consultee is also the regulator, they should clearly state this and briefly summarise the scope of their powers to regulate the impact in question.

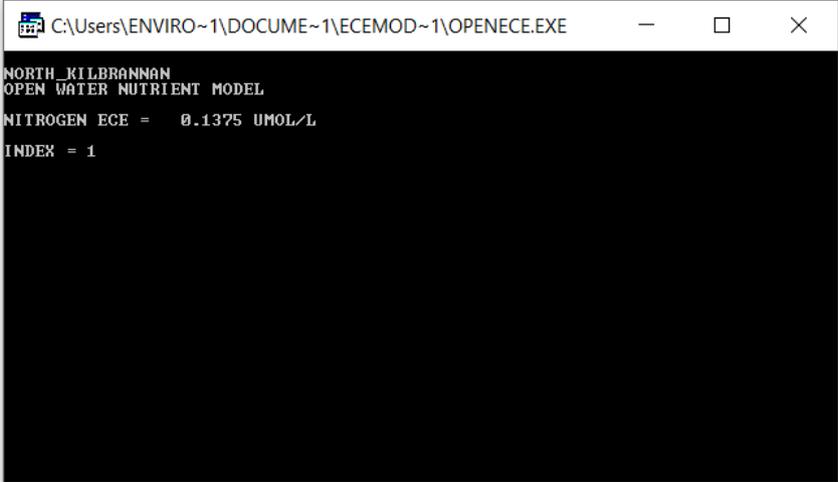
IMPACT	EXISTING REGULATORY REGIMES
1. Benthic Impacts	Benthic impacts are regulated by the Scottish Environment Protection Agency (SEPA) under Controlled Activities Regulations (CAR) and advised by Marine Scotland's Locational Guidelines.
2. Water Column Impacts	Water Column Impacts are regulated by the Scottish Environment Protection Agency (SEPA) under Controlled Activities Regulations (CAR) and advised by Marine Scotland under Locational Guidelines which estimate the environmental sensitivity of sea lochs.
3. Interaction with Predators;	Since the 31st January 2011, any fish farm in Scotland that requires seal management, at any time of year, requires an annual Seal Management Licence. Seal Management Licences are issued by the Scottish Government.
4. Interaction with Wild Salmonids	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.
5. Impacts upon species or habitats of conservation importance, including Sensitive Sites	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).
6. Navigation, Anchorage, Commercial Fisheries, other non-recreational maritime uses (MOD)	Marine Scotland issues marine licenses covering navigational issues and deposits in the marine environment including discharges from well boats.
7. Landscape and Visual Impact Assessment	
8. Noise	
9. Marine Cultural Heritage	
10. Waste Management (non-fish);	
11. Socioeconomic, Access and Recreation	
12. Traffic and Transport	
13. Any other issue	

Project Name: North Kilbrannan
Location: Kilbrannan Sound
Other identifier:

Screening & Scoping Checklist
<p>For each of the numbered potential impacts in the left hand column, consideration should be given to the following points:</p> <ul style="list-style-type: none"> A. Will the impact have an effect on any of the receptors or issues identified in sections 4.1 to 4.4 Have all the receptors/issues/effects been identified. Explain. B. Is the impact covered by other regulation? State your reasons for wishing to discuss it further in this document. C. Is there potential for cumulative or indirect impact on an identified receptor. Explain. D. SCREENING ADVICE. Is the impact on receptor(s) likely to have a significant effect. Explain. E. SCOPING ADVICE. If so, what details of additional information required and methodology <p><i>Provide concise information, and refer it specifically to elements A to E where appropriate.</i></p>

IMPACT TYPE	INSERT YOUR COMMENTS IN THE APPROPRIATE ROW
1. Benthic Impacts	
DEVELOPER	<p>Potential Benthic Impacts</p> <p>For the purposes of this assessment “benthic” is considered to encompass all living features which occur within, on, or just above the bed of an aquatic environment.</p> <p>Uneaten food and faeces are the main components of particulate waste generated at a fish farm which may impact the benthic environment. Some of this material will sink to the seabed while other parts will be suspended or dissolved and then transported within the water column. Carbon, nitrogen and phosphorus are the main nutrient components of this discharged material.</p> <p>Mitigation – Methods used to reduce feed and faecal waste</p> <p>The feed pellets used by Mowi Scotland Ltd are chosen to match, as closely as possible, the natural food of wild salmon and contains the nutritional requirements for healthy growing fish.</p> <p>Fish feed is a substantial financial outlay and consequently feed efficiency is a high priority at any Mowi Scotland Ltd farm. The company ensures that all farm staff undertakes a high standard of training to reduce feed waste. Mowi Scotland Ltd will also continue to use feed guides to predict the appropriate feed rate for the fish for any given time of year and the production cycle.</p> <p>The amount of particulate deposition resulting from faecal waste is determined by the digestibility of the feed. Modern diets are easily assimilated and give good feed conversion ratios (FCR: product produced per unit feed). The lowering of FCRs has led to reduced waste inputs to the environment per unit production. Extensive research and development efforts have been and continue to be made, to continue this downward trend until the lowest FCR possible is attained. The feed conversion ratio (FCR) for the farm will be budgeted at 1.07:1, where 1.07 kg of feed is required to produce 1 kg of harvested fish.</p> <p>Any benthic impacts that may occur during the growing cycle are expected to be temporary; the pens will be left fallow for a period of at least 6 weeks at the end of each production cycle to assist seabed recovery.</p> <p>Regulation and Assessment - CAR Licences and Modelling Assessment</p> <p>Benthic impacts are regulated by the Scottish Environment Protection Agency (SEPA) under Controlled Activities Regulations (CAR) and advised by Marine Scotland’s Locational Guidelines. Planning permission does not negate the need for a CAR Licence; it is not possible to operate a farm without a CAR Licence. Regular Environmental Audits are carried out as part of the compliance monitoring set out by</p>

	<p>SEPA and SEPA can enforce restrictions on the site if required, such as biomass reductions.</p> <p>North Kilbrannan was modelled using NewDepomod and Mowi Scotland has a pending application for a CAR licence with a proposed maximum biomass of 2,475.54T</p> <p>Any benthic impacts that may occur during the growing cycle will meet limitations set by SEPA; monitoring of the seabed will be regularly undertaken in line with SEPA standards. North Kilbrannan will be left fallow for a period of at least 6 weeks at the end of each production cycle to assist seabed recovery.</p> <p>Baseline Survey</p> <p>Baseline video and benthic surveys were carried out in 2017 to characterise the baseline benthic environment before site development. The baseline video and benthic survey reports are provided in Annex 1.4 and Annex 1.5 respectively.</p>
<p>STATUTORY CONSULTEE</p>	<p>SNH Response:</p> <p>This screening / scoping application relates to a proposal to install a marine cage fish farm consisting of 12 x 120 m circumference cages and a feed barge with a maximum standing biomass of 2475.54 tons.</p> <p>A new baseline visual survey has already been carried out for this proposal. We have not yet assessed the footage but the benthic survey report provided with the application indicates that no PMF habitats or species are present or likely to be impacted by this proposal. If this is correct then none of the sensitive receptors identified within section 4.3 of the template are likely to be impacted. On this basis it would be our opinion that, based on the information provided by the applicant, the benthic impacts as a result of this proposal are unlikely to result in any significant effects on any of the sensitive receptors identified within section 4.3 of the template.</p> <p>However, we would caveat the above advice by restating that we have not been provided with the visual survey footage. Until we have assessed the footage ourselves we cannot provide definitive advice on the presence of PMF habitats or species in the vicinity of the proposal. As such we would recommend that the applicant provides us with a copy of the survey footage and includes an assessment of the significance of impacts on the benthic habitats and species that are present. In addition, the applicant should submit modelling reports to identify the depositional footprint of waste and chemical chemotherapeutants for the proposed site.</p>
<p>2. Water Column Impacts</p>	<p>Equilibrium Concentration Enhancement (ECE) modelling was undertaken to show the degree of nutrient enhancement likely to result from the proposed fish farm and also from any cumulative effects in the water body.</p> <p>The proposed site does not sit within a categorised water body and as such the open water model for Equilibrium Concentration Enhancement (ECE) was used. The relevant data was entered to a surfer worksheet which provides the parameters for the OPENECE application. The model was then run using the parameters detailed in the table below, which were derived from a hydrographic survey of the site.</p>

	Diffusion Coefficient: 0.1	Depth of water at the site: 31.968m
	Open Water: 0	Number of cages: 12
	Normal tidal current amplitude: 0.042	Maximum biomass: 2475.54 tonnes
	Tidal current phase: 0	Total cage area: 13750m ²
	Along-shore residual velocity: 0.070	Distance from head of grid: 3.7km
	Normal residual velocity: 0.001	Distance of cages from shore: 0.3km
	Along-shore tidal current amplitude: 0.248	
		
	<p>The ECE value for the proposed operations was calculated as 0.1375 µmol/L or 1.925 µg/L.</p> <p>The sum ECE value for the Eilean Grianain fish farms, the only other sites in Kilbrannan Sound, was calculated as 0.097 µmol/L or 1.36 µg/L (Annex 1.6). Therefore, the cumulative ECE value for Kilbrannan sound is 0.234 µmol/L or 3.28 µg/L.</p> <p>SEPA previously stated: “Kilbrannan Sound is an uncategorised area under Marine Scotland locational guidelines. Background levels of maximum winter Dissolved Available Inorganic Nitrogen (DAIN) for the Lochgilphead is 104.3 µg/L (Gubbins et al 2003)” (Annex 1.6).</p> <p>When this value is added to the cumulative ECE value for Kilbrannan sound, it yields a value of 107.58 µg/L. This is well below the SEPA EQS of 168 µg/L.</p> <p>Therefore, the impact from nutrient enrichment from the existing and proposed fish farm in Kilbrannan Sound on sensitive receptors in the region is expected to be negligible. Kilbrannan Sound is a well flushed water body and so it is expected that nutrient discharges from the site will be dispersed quickly.</p>	
DEVELOPER		
STATUTORY CONSULTEE		
3. Interaction with Predators		
DEVELOPER	<p>An abundance of wildlife naturally occurs in and around fish farms, and much of this wildlife can coexist alongside the fish farm without any interaction. However, there are potential predators that may try to feed on farmed fish and these attempts of predation are usually made by bird or seal species. Seal attacks can devastate fish stocks and the animals can cause net damage which could lead to escape incidents. Birds species are also known to attempt to access fish feed. Therefore, potential interactions can be summarised as:</p>	

- predation of farmed fish by seals and bird species,
- fish escape incidents as a result of net damage by seal attacks, and
- the removal of fish feed by bird species.

Whilst wildlife such as species of birds and seals may attempt to predate at the farm, it should be noted that their presence near to the farm does not automatically guarantee this.

Management & Mitigation – Birds

Removing incentives for predators to visit the farm is an important management technique; conscientious husbandry practices, such as the careful stowing of feed and appropriate maintenance of equipment, can reduce the number of birds attracted to the site.

The company intends to install top nets on stocked pens throughout the production period to mitigate against bird attacks from above the water. These nets are secured at the pen ring and tensioned to prevent entanglement. The purpose of these is to raise the net above the water surface to prevent birds from accessing the fish feed. Tensioned nets below the surface of the water are expected to help prevent diving birds from accessing the farmed fish.

Management & Mitigation – Seals

Net Tension

The first and principal method of preventing seals attacking farmed fish at the site is to use well tensioned netting. The higher the net tension, the harder it is for any seal to get close to the fish or damage the nets. In general terms, if the animal is not successful at gaining access to fish it will quickly learn that this is not a viable food source and will not continue to pursue this. It is very important to check net tension on a regular basis and ensure nets are well maintained and in good condition. This is an important part of farm staff duties.

Fish Mortality Retrieval

Seals are thought to be initially attracted to a site to graze on fallen stock at the bottom of pens. The pens will continue to have a collection system installed at the bottom of the nets to enable the frequent retrieval of fish mortalities. Fish mortalities at farms need to be removed frequently as per Freedom Food standards. Mowi staff endeavours to collect and dispose of mortalities daily.

Predator Enclosure Nets

Historically, some fish farming operations have employed the use of full enclosure predator nets when initial tension netting has not been sufficient. These were essentially a second net which completely enclosed the primary fish pen net to act as a physical barrier between predators such as seals, and the nets containing farmed fish. As a precautionary measure, these will not be used at the proposed farm because of potential interactions with other wildlife such as cetaceans. This will be reviewed on an ongoing basis in consultation with, and only with approval from, SNH. If approval was given by SNH, then their use would be reviewed in the occurrence of wildlife entanglement.

Acoustic Deterrent Devices (ADDs)

ADDs are one option available at Mowi farms should other mitigation (such as tension nets, fish mortality retrieval, and seal blinds) fail to prevent seal attacks. ADDs can emit a frequency of sound which effectively deters seals from the pens and the ADD systems are switched off as soon as the significant risk is removed. An ADD deployment plan reflecting principles of best practice will be submitted with the final planning application.

Seal Licence

On rare occasions there may be a problem with a particularly aggressive and persistent seal which is not deterred by any of the above consented predator control methods. Therefore, as a precautionary measure, Mowi can apply to dispatch

	<p>the seal on site. This option is only ever considered as a last resort, when other methods fail, and is conducted in line with the appropriate regulations.</p> <p>Dispatch of a seal will require internal authorisation and will be done in a manner which minimises potential safety and environmental impacts, using licensed and trained contractors. The selective dispatch of seals is unlikely to have an appreciable impact upon a healthy population. However, the company recognises shooting of persistent seals is a deeply emotive and often controversial issue.</p> <p>Mowi endeavours to continue to improve the welfare standards of farmed salmon and reduce impacts on the environment. Control methods, that reduce the likelihood of seal attacks, will continue to be reviewed as new internal and external research becomes available. A site-specific predator mitigation plan will be provided with the final planning application; however, the company does not foresee the need for any further assessment or information regarding this topic. Additional information would be provided upon request and guidance from statutory consultees.</p>
<p>STATUTORY CONSULTEE</p>	<p>SNH Response:</p> <p>Acoustic Deterrent Devices</p> <p>All species of cetacean qualify as European Protected Species (EPS) and are therefore considered sensitive species as identified in section 4.3 of the template. The use of acoustic deterrent devices (ADDs) can in some instances be capable of causing disturbance to cetaceans. As such this proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.</p> <p>We would suggest that best practice measures should be adopted to ensure that the risk of any impacts on cetaceans as a result of the use of ADDs will be minimised. In order to do so we would recommend that the applicant develops and adheres to an ADD deployment plan which sets out appropriate measures to be followed to ensure any potential impacts on cetaceans will be minimised.</p> <p>Top Nets</p> <p>If inappropriate netting is installed there is potential for some bird species to become entangled (see section 5 for further details). It is therefore imperative that details on nets and tensions are provided to inform our assessment. With respect to top nets, SNH consider that mesh sizes of 50-75cm represent best practice with respect to minimising entanglement risk. However, this does not remove all risk in all circumstances (see following advice on monitoring). Sub-sea predator exclusion nets are mentioned within Section 3 ‘interactions with predators’, and we agree with the applicant that these should not be used at this site unless first reviewed with and approved by SNH. Mesh size and tensioning are the most important factors determining entanglement risk in top nets and cage nets. Further descriptions of the nets proposed for the new fish farm should be provided to ensure the mesh size is in line with SNH recommendations. There should be no use of drift nets or vertical static nets to recover escaped fish.</p> <p>We recommend that the requirement to record and report bird entanglement in a systematic and context-specific format should be a consenting condition for any development of a finfish farm in this location to inform both adaptive management, if appropriate, and future development applications. Whilst any bird species should be recorded, this particularly relates to potential entanglement risk for gannets and gulls in top nets and gannets and guillemot in sub-sea nets. Entanglement recording proformas and a guide for entanglement recording can be provided if required. Whether any entangled birds are adults or non-adults should also be recorded where known.</p>
<p>4. Interaction with Wild Salmonids</p>	

DEVELOPER

Cumulative considerations

North Kilbrannan will be located within a Mowi Scotland Ltd Production area that comprises Eilean Grianain (Carradale North and Carradale South).

Summary of current knowledge

The Scottish Government has identified 12 high level pressures on salmon on coastal waters, only two of which relate to fish farming; fish health and genetic introgression¹.

Fish health refers predominantly to sea lice. Sea lice are parasites that use finfish as their host; they belong to the Caligidae family. They have a complex life cycle; involving nauplius, copepodid, chalimus, pre-adult and adult stages. The nauplius stage is a dispersive phase during which the sea lice are free swimming, searching for a host. During the subsequent growth phases, the sea lice are attached to the host fish and by the pre-adult and adult phases, they can move around the host and swim unanchored from the host. It is during these later stages that acute infection can occur.

Ultimately, sea lice can reduce fish growth and cause mortality. Sea lice infection is a serious challenge which affects the whole salmon farming industry. Without intervention, infestation can cause considerable welfare and financial losses to a fish farm.

It is generally accepted that salmon farms are associated with elevated sea lice concentrations in the surrounding environment and that there is risk of increased sea lice burdens on individual wild salmonids. However, potential linked effects on wild salmonid populations in Scotland are not fully understood².

Genetic introgression refers to interactions of escaped farmed salmon with wild salmonids. However, any resulting introgression requires survival until maturation, followed by successful reproduction and early development of the next generation. Little is known about the potential effect on wild salmonid populations and further research is required. It is noted that deliberate introduction and restocking of reared salmonids has been happening in northern Europe since the 18th century, hundreds of years before the 1960's, when intensive salmonid farming began. In the past in Scotland, it had also been wide-spread practice to use farmed salmon eggs and juvenile fish to bolster wild salmon stocks in some Scottish river systems however this practice has now ceased with evolving knowledge of best practice.

Wild salmonid populations

There are four main local rivers that hold salmonid populations within about 15km of the proposed North Kilbrannan fish farm: Skipness River, Claonaig Water and Carradale Water on the Kintyre peninsula and Iorsa Water and Machrie Water on the island of Arran (Annex 1.1). These were highlighted by the Argyll District Salmon Fishery Board (ADFSB) in its response to the Eilean Grianain screening and scoping request on 20 June 2018 (Annex 1.7). Marine Scotland Science (MSS) also indicated in its response to the same request that sea trout are present in the inshore waters near Eilean Grianain year-round and presented data showing that salmon and trout catches in the Carradale statistical district have been low in the past few decades (Annex 1.8).

Carradale Water, Iorsa Water and Machrie Water, for which conservation assessments are available, all have a proposed 2020 salmon conservation grading of 3, meaning that "Exploitation is unsustainable therefore management actions required to reduce exploitation for 1 year i.e. mandatory catch and release (all methods)"³.

Mitigation - Fish Health and Welfare

Fish health and welfare is a major area of focus for Mowi Scotland Ltd. Salmon, like any other farmed animal, is subject to potential health problems. Maintaining good fish health is paramount to the economic sustainability of any salmon farm and Mowi Scotland Ltd has an overarching duty of care to do so.

In most cases, best practice of good husbandry techniques restricts the spread of disease. On each site, husbandry staff are required to observe stock on a day-to-day basis and are trained to recognise differences between healthy and potentially non-healthy fish. In addition, each geographical area of operation has a dedicated fish health manager who reports to one of the company's in-house veterinarians. This network of fish health personnel is responsible for ensuring that any health problems are diagnosed swiftly. If medicinal intervention is required, it is first authorised by a veterinarian.

Mitigation - Escapes

A pens, net, and moorings attestation Letter will be provided in the final planning application. The proposed equipment will be to the same high standard and design as that utilised at existing farms operated by Mowi Scotland Ltd.

An action plan for the containment of fish and the recovery of escapes will be followed by site staff. This plan lays out measures to be taken to maintain the integrity of the holding structures and in the event of an escape. Many of the containment practices employed by Mowi Scotland Ltd apply to all its sites; details that vary will be updated specifically for the proposed site's containment plan and will be provided with the final planning application (e.g. the site manager responsible, regional health manager, and the contact details for the Local Fisheries Trust). Escapes are reported to the Local Fisheries Board, Scottish Salmon Producers Organisation (SSPO) and the Scottish Government.

Mitigation – Sea Lice

The most effective form of mitigation is minimising the potential risks of infestation arising from farm operations. A suite of sea lice management measures is proposed to reduce the potential transmission of larval lice states to wild populations. Mitigation measures include a range of traditional medicinal measures, but also a series of newly developed techniques and policy modifications which have been developed and refined at Mowi farms since 2015. In summary, these include:

- Introduction and increased capacity of mechanical treatment methodologies
- Increased capacity of a national capability for freshwater treatments
- Policy interventions based on early treatments based on an individual pen basis, instead of later treatments based on farm basis
- Introduction of stricter intervention limits for treatment
- Significant increase in capacity of cleaner fish provision and improvements in cleaner fish husbandry

Moreover, the Scottish Government's response to the Rural Economy and Connectivity Committee's report on Salmon Farming stated that Marine Scotland will expect an Environmental Monitoring Plan (EMP) to be delivered as a condition of any consents for marine aquaculture planning applications where there is potential for interactions between farmed and wild salmonids. Mowi Scotland commits to develop

and agree an EMP for this development, if licensed, that contains the minimum recognised elements including but not limited to the following:

- monitoring and reporting of lice burdens on farmed fish;
- lice connectivity modelling to inform locations for wild-fish monitoring;
- monitoring of lice burdens on wild fish;
- a framework for cooperation and transparency;
- a framework for adaptive management – management measures taken in response to evidence of negative impacts on wild salmonids.

Mowi Scotland has worked in partnership with wild fish stakeholders to agree and implement EMPs elsewhere and has adopted the above principles.

Investment in Cleanerfish & New Technology

Cleanerfish - Mowi considers cleanerfish to be an extremely important part of the salmon farming industry's future. The term "cleanerfish" encompasses fish, typically wrasse and lumpsuckers, that provide a service to other fish species, such as the removal of parasites. The Scottish Salmon industry is increasingly stocking cleanerfish in marine salmon farms and they have proven effective in reducing sea lice numbers and, in turn, significantly reducing the need for medicinal treatments. To supply Mowi's numerous seawater sites it is essential to develop capacity to rear a significant output of farmed cleanerfish stock. In response to the limited availability of farmed stocks of Ballan Wrasse, Mowi Scotland has also now committed to the development of in-house cleaner fish farming.

The company has invested significant financial and technical resources into the development of several pioneering cleaner fish hatcheries at locations around the UK. Recently a new recirculation plant was purchased to produce farmed Ballan Wrasse. This facility will be developed over the next few years into a state of the art cleaner fish hatchery. The facility will aim to produce Ballan Wrasse as a sustainable cleaner fish that will then be deployed into the company's salmon farms. When fully operational, by 2021, this facility will produce 100% of Ballan Wrasse demand for Mowi Scotland. In the intervening period there will be a steady transition towards producing cleaner fish stocking requirements from hatchery sources with an annual corresponding declining impact on sourcing these fish from the wild stocks. We are still learning about growing cleaner fish in hatchery environments and the husbandry methods we are using to grow, handle and distribute cleaner fish are improving with our increasing knowledge and expertise within this new area.

Freshwater treatment - Freshwater treatments have been recognised as an effective strategy for both sea lice and Amoebic Gill Disease (AGD) control. AGD is an infectious disease caused by a ubiquitous free-living protozoan parasite (*Paramoeba perurans*). It is a condition of marine and farmed fish (including Atlantic salmon and rainbow trout) which can result in reduced performance and mortality, if uncontrolled. Both the disease and parasite are influenced by water temperature, salinity and the condition of gills. AGD is most common during periods of high oceanic salinity and temperatures.

Mowi Scotland has brought into operation several freshwater abstraction locations and storage pen infrastructure, enabling direct fill of freshwater to wellboats to facilitate sea lice and AGD treatments. Several other freshwater abstraction locations in strategic locations to Mowi Scotland farms have been identified should further resource be required.

	<p>In addition to freshwater abstraction sites, Mowi Scotland has invested in new wellboat technology, specifically designed to undertake freshwater treatments at seawater farms using the process of desalination. This vessel can also, if required, obtain water from natural freshwater abstraction sources.</p> <p>Hydrolicer - Hydrolicer systems work by using variable-pressure seawater to dislodge sea lice from the salmon without any detrimental impact on the fish. The method is benign in that it only uses seawater and fish are not exposed to physiological stress or deteriorating water quality. Dislodged sea lice are removed from the used seawater by fine mesh filtration, collected and disposed of by incineration on land. The first prototype hydrolicer unit in Mowi was brought into operation in late December 2015. With familiarisation and experiences of using the method we have refined how we operate the system and results, in terms of sea lice clearance efficacy, have improved over time.</p> <p>Thermolicer - A second type of device, a Thermolicer is a highly effective and safe option for the mechanical removal of sealice. It works by exposing the fish to lukewarm water for 30 seconds which dislodges sealice due to the low tolerance of a louse to sudden changes in temperature.</p> <p>Sources</p> <ol style="list-style-type: none"> 1. https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreform/licence/status/Pressures, accessed 14 October 2019. 2. https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/Aqint/sealice, accessed 14 October 2019. 3. https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/fishreform/licence/status, accessed 14 October 2019
<p>STATUTORY CONSULTEE</p>	<p><u>SNH Response</u></p> <p><u>Designated Wild Salmonids - Endrick Water SAC</u></p> <p>This proposals could affect the Atlantic salmon feature of the Endrick Water Special Area of Conservation (SAC).</p> <p>The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") or, for reserved matters, The Conservation of Habitats and Species Regulations 2017 apply. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the SAC before it can be consented (commonly known as Habitats Regulations Appraisal). The SNH website has a summary of the legislative requirements (https://www.snh.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations).</p> <p>In our view, this proposal is likely to have a significant effect on the Atlantic salmon feature of the Endrick Water SAC. Consequently, Argyll and Bute Council, as competent authority, is required to carry out an appropriate assessment in view of the site's conservation objectives for its Atlantic salmon qualifying interest. This assessment should include an appraisal of the following:</p> <p>We would recommend that as an initial step to consider the potential connectivity between this site and the Endrick Water SAC that sea lice dispersion modelling is undertaken and provided with the final application / EIA. In addition, this information will help to assess the potential connectivity</p>

between this site and any other existing and proposed sites in the Firth of Clyde which may help to inform cumulative assessment and identify appropriate areas which may require co-ordinated management in an area based EMP or similar.

To inform the Appropriate Assessment, if dispersion modelling confirms there is connectivity between the proposed fish farm and migrating salmon from the Endrick Water, the application should include detailed information (ideally within an overall Environmental Management Plan) on monitoring and mitigation measures that will be employed to manage and control sea lice and therefore reduce the risk to the SAC. The EMP should aim to set out a framework that will give the Planning Authority confidence that the operator is engaging in a meaningful way to minimise potentially damaging interactions with Atlantic salmon linked to the SAC. The EMP does not need to be complex in nature but must provide an enforceable framework which a) includes appropriate monitoring, the results of which feedback to inform on-farm management and b) includes commitments to make material changes to the management of the farm should an elevated risk to the SAC be identified.

Taking all proposals that are currently in the planning system in to account there is approximately 17,500 tonnes of additional biomass proposed in areas of the Firth of Clyde that are likely to have connectivity with the Endrick Water SAC. The assessment will need to consider the potential cumulative risk from multiple developments to the SAC, and therefore information on any coordinated activity/management should be included. It will therefore be particularly important that any mitigation that is proposed in any subsequent planning application / EIA takes potential cumulative impacts in to account and is robust and sufficient to protect the SAC from any adverse effect. Given the complexity of the cumulative issues in the wider Firth of Clyde area we would recommend that it would be advisable for the developer to discuss the potential cumulative issues with other existing and prospective operators in the Firth of Clyde region and consider taking a joined-up approach going forward. We would be happy to discuss the options further with both Argyll and Bute Planning Authority and the developer.

In addition to the above, any escape of farmed salmon poses a threat to the Atlantic salmon feature of the Endrick Water SAC through the risk of subsequent genetic introgression, should escaped Atlantic salmon enter the Endrick Water SAC and breed with wild Atlantic salmon. To mitigate this risk to the SAC we would expect confirmation that the proposed fish farms will comply with the Scottish Technical Standard, in order to ensure that any equipment used is robust and will reduce the risk of escapes occur and any subsequent interbreeding with salmon in the SAC.

The Endrick Water SAC is considered a sensitive area as defined in section 4.1 of the template. As such the proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

Non-Designated Wild Salmonids

There is potential for interactions to occur with non-designated wild salmonid populations. Sea trout and Atlantic salmon are both Priority Marine Features (PMF). This proposal has potential to impact on both these species. Impacts could occur as a result of the release of sea lice in to the marine environment and, should farmed stock escape in to the wild, as a result of genetic introgression with wild Atlantic salmon populations. PMFs are considered a sensitive species or habitat as defined in section 4.3 of the template. As such the proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

	<p>The final application / EIA report should provide an assessment of the risk posed to wild salmonids, including details of any mitigation measures reduce the risk of significant impacts occurring. We have limited access to any detailed data on local wild salmonid populations. On this this basis we are happy to defer to the DSFB and / or Marine Scotland Science to provide further advice to the Planning Authority on the local significance of any non-designated wild salmonid populations likely to be impacted by this proposal.</p>												
<p>5. Impacts upon species or habitats of conservation importance, including Sensitive Sites</p>													
<p>DEVELOPER</p>	<p>The proposed farm is within 7km of protected areas (Annex 1.1).</p> <table border="1" data-bbox="384 701 1406 1014"> <thead> <tr> <th>Protected area</th> <th>Approx. distance from site (km)</th> <th>Features</th> </tr> </thead> <tbody> <tr> <td>Claonaig Wood SSSI</td> <td>5.2</td> <td>Upland oak woodland</td> </tr> <tr> <td>Arran Northern Mountains SSSI</td> <td>5.9</td> <td>Beetle assemblage Breeding bird assemblage Dragonfly assemblage Ordovician Igneous</td> </tr> <tr> <td>Kintyre Goose Roost SPA SSSI, and Ramsar</td> <td>6.2</td> <td>Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>), non-breeding</td> </tr> </tbody> </table> <p>These protected areas are terrestrial and distant from the proposed farm, so it is highly unlikely that they will be affected by it.</p> <p>The proposed farm is within 7km of priority marine features (Annex 1.1).</p> <p>Burrowed mud – 5km Burrowed mud – 6.8km Burrowed mud or Inshore deep mud with burrowing heart urchins – 6.9km Burrowed mud or Inshore deep mud with burrowing heart urchins – 4.7km Burrowed mud or Inshore deep mud with burrowing heart urchins – 4.7km Kelp and seaweed communities on sublittoral sediment – 4.4km Kelp and seaweed communities on sublittoral sediment – 3.8km Kelp and seaweed communities on sublittoral sediment – 3.8km Kelp and seaweed communities on sublittoral sediment – 6.8km Seagrass beds – 6.8km</p> <p>The effect of the discharge of chemotherapeutants from salmon farming was scientifically reviewed in 2018, as part of a wider review of the environmental impacts of salmon farming in Scotland, for the Scottish Parliament¹. The chemotherapeutants commonly used in baths to treat sea lice are hydrogen peroxide, cypermethrin, deltamethrin and azamethiphos. All four degrade rapidly or are adsorbed onto particles in the water, making them unavailable to marine organisms²; therefore, they are considered low risk.</p> <p>The use of these chemotherapeutants follows veterinary prescription and their discharge is regulated by SEPA through CAR licencing. Regulation is based on Environmental Quality Standards (EQS). EQS is the residual concentration in the environment of a discharged chemotherapeutant on an appropriate spatial scale, above which its pressure on the environment is deemed significant. EQS values are typically based on laboratory assays on representative organisms and they are precautionary in nature: a factor of 10, 100 or 1000 is applied to the laboratory values. SEPA regulates rates of use and resulting discharge of chemotherapeutants from bath treatments based on EQS and dispersion modelling: “The model predicts environmental concentrations that can be compared with quality standards to</p>	Protected area	Approx. distance from site (km)	Features	Claonaig Wood SSSI	5.2	Upland oak woodland	Arran Northern Mountains SSSI	5.9	Beetle assemblage Breeding bird assemblage Dragonfly assemblage Ordovician Igneous	Kintyre Goose Roost SPA SSSI, and Ramsar	6.2	Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>), non-breeding
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Arran Northern Mountains SSSI	5.9	Beetle assemblage Breeding bird assemblage Dragonfly assemblage Ordovician Igneous											
Kintyre Goose Roost SPA SSSI, and Ramsar	6.2	Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>), non-breeding											

	<p>determine the quantity of medicine that can be licensed for a particular site.”²</p> <p>On the possible effects of chemotherapeutants on conservation features, the review¹ stated that: “As SEPA’s EQS are precautionary in nature, it should be emphasised that the actual threat to these features should be minimal so long as standard procedures and protocols are adhered to, given the limited range of organisms that have been used in testing.”</p> <p>The focus for many protected areas and features are on benthic habitats and communities, such as burrowed mud, maerl beds and native oyster beds. However, since bath treatment medicines tend to disperse more quickly and are located within the water column, the review concluded that the more likely cause of concern in conservation areas is from organic deposition/enrichment than from chemotherapeutant use.</p> <p>The priority marine features within 7km from the proposed farm are distant from the site and its modelled deposition (Annex 1.1), so it is unlikely that they will be affected by it.</p> <p><u>Sources</u></p> <ol style="list-style-type: none"> 1. Tett, P, Benjamins, S, Black, K, Coulson, M, Davidson, K, Fernandes, TF, Fox, C, Hart, M, Hicks, N, Hughes, A, Hunter, DC, Nickell, T, Risch, D, Tocher, D, Vare, L, Verspoor, E, Wilding, T, Wilson, B & Wittich, A (2018). Review of the environmental impacts of salmon farming in Scotland. 2. SEPA (2008). Fish Farm Manual, Annex G: Models for Assessing the use of Medicines in Bath Treatments.
<p>STATUTORY CONSULTEE</p>	<p>SNH Response:</p> <p><u>Terrestrial Designations</u></p> <p>We can confirm that there is no likely connectivity between the proposal and Cloanaig Woods SSSI or North Arran Mountains SSSI. In addition, the proposal is unlikely to have a significant impact on the Kintyre Goose Roost SPA and therefore it does not further assessment.</p> <p><u>Special Conservation Areas (SACs)</u></p> <p>Please see Section 4 above regarding potential impacts on the wild salmonid population of the Endrick Water SAC.</p> <p><u>Special Protection Areas (SPAs)</u></p> <p><u>Summary of Advice:</u></p> <p>The proposed new site at Cour Bay, North Kilbrannan is not within an SPA for marine bird features, but there is connectivity with SPAs within foraging range of qualifying features. Most relevant for this new proposal is Ailsa Craig SPA and an assessment of the potential effects on this SPA should be made, in view of the site’s conservation objectives.</p> <p>Potential impact pathways for marine birds in relation to finfish farms are: fatal entanglement in top, cage or antipredator netting or in any nets deployed to recapture stock in event of escape; direct displacement from the farm footprint; disturbance in the vicinity of the farm and/or associated vessels; and, loss of or damage to prey-supporting habitats in vicinity of the farm and/or as a consequence of export of organic materials or chemicals from the farm site. Nocturnal seabirds may also be disorientated by presence of artificial lights. Likely significant effects for Ailsa Craig SPA exist for gannet, herring gull, lesser black-backed gull and guillemot, due to potential for entanglement risk.</p>

	<p>The other impact pathways are not considered to have LSE for any of the qualifying features and are therefore not considered in detail.</p> <p>We require more information on:</p> <ul style="list-style-type: none"> • Activity schedule, including timings of installation and when the nets are restocked; • Top and cage net types, mesh sizes and tensioning details; • Details on any chemical treatments which could be used on the farmed fish (as some are known neurotoxins to birds). <p>We recommend:</p> <ul style="list-style-type: none"> • An EIA should be carried out which includes assessment of marine ornithological features, and an HRA is required for Ailsa Craig SPA. • The measures to be used at this proposed site to mitigate any potential for entanglements should be fully detailed as part of the Planning Application and should follow best practice to minimise entanglement risk. In particular, SNH advise a mesh size of 50-75mm for top nets. • Before any nets are installed the correct mesh size should be verified, and no net should be installed in or above the water if the size has not been consented for. • The requirement to record and report bird entanglement in a systematic and context-specific format should be a consenting condition for any development of a finfish farm in this location to inform both adaptive management, if appropriate, and future development applications. • There should be no use of drift nets or vertical static nets to recover escaped fish, nor should there be any use of predator enclosure nets. • A cumulative impact assessment should be carried out in relation to potential effects on the ornithological interests of Ailsa Craig SPA to included consideration of the Applicant's existing fish farms at Carradale north and south. <p>Further details on the appraisal of this proposal on marine ornithological SPAs is provided in the attached appendix.</p>
<p>6. Navigation, Anchorage, Commercial Fisheries, other non-recreational maritime uses (MOD)</p>	
<p>DEVELOPER</p>	<p>Marine Scotland regulates the aquaculture industry by providing licences for several activities in the marine environment, including moorings installations such as those for fish farms. The licence is to primarily ensure that navigation issues have been fully considered before equipment is anchored at sea; this is known as a Marine Licence.</p> <p>The exact position and configuration of the pens, moorings and ancillary will be confirmed in the final planning application, the details provided in the screening and scoping are indicative and subject to potential change. However, the proposed surface equipment is likely to be based on 12 pens of 120 m circumference which equates to surface area 13,750.8 m². Mooring lengths are likely to be four times the depth (Annex 1.1) and will be comfortably contained within the described moorings boundary.</p> <p>Mowi aims to minimise impacts on navigation by: keeping pen moorings as short as possible and ensuring moorings are clearly and correctly marked. The proposed site will be lit as per the Northern Lighthouse Board's recommendations.</p>

	<p>Anchorage The company has consulted Admiralty Charts and is not aware of any anchorages within a 1 km radius of the development site. No further assessment required.</p> <p>Ministry Of Defence The MOD is known to be active in the area and will be notified of the proposed development and provided with an opportunity to discuss the proposals further. However, given the scale of the development concerns are unlikely.</p> <p>Commercial Fisheries Data from Marine Scotland indicates that most commercial fishing vessels in the area operate in the Firth of Clyde between the east coast of Arran and the mainland as shown in figure 5.6.1 with an average of 14 to 20 vessels operating in Kilbrannan Sound (Annex 1.1)</p>
STATUTORY CONSULTEE	
7. Landscape and Visual Impacts	
DEVELOPER	<p>A Zone of Theoretical Visibility (ZTV) was calculated using the OS Open Data 50 m Terrain® model using the position and height of existing and proposed pens (Annex 1.1)</p> <p>The North Arran National Scenic Area (NSA) is located east/southeast of the proposed site. The proposed fish farm site does not fall within the boundary of the NSA and is approximately 3.2km away from the nearest boundary (Annex 1.1). The initial ZTV showed that the proposed pens will be visible from small parts of the NSA at more than 3.2km distance from the farm.</p> <p>We would be grateful if consultees could advise on requirement for any further assessments.</p>
STATUTORY CONSULTEE	<p>SNH Response:</p> <p>SNH does not intend to provide detailed advice on the landscape and visual aspects of the proposal.</p>
8. Noise	
DEVELOPER	<p>There are no noise sensitive receptors near the site. There are no predicted impacts from noise on residential properties or general amenities due to the intervening topography. Due to the remote position of the site, most noise from fish farming operations is unlikely to be heard except by receptors at sea.</p> <p>Noise from farming operations is predominantly intermittent and is almost entirely confined to daylight hours except in exceptional circumstances. Given the lack of habitation near the proposed site and the fact that operations are not conducted at unsocial hours, it is considered that the site will not have any impact on residential amenity at such distances. Nonetheless Mowi Scotland Ltd will make all efforts to keep noise to a minimum at all times.</p>
STATUTORY CONSULTEE	
9. Marine Cultural Heritage	
DEVELOPER	<p>The PastMap mapping tool (http://pastmap.org.uk/) was searched for records of marine cultural heritage sites of interest. There were no records of such sites within the region of the proposed farm. The nearest Canmore maritime record was circa 1.5-2km northeast of the proposed farm, therefore no impacts on marine cultural heritage are anticipated.</p>
STATUTORY CONSULTEE	
10. Waste Management (non-fish)	
DEVELOPER	<p>Mowi Scotland Ltd is committed to reducing the waste generated by its fish farming</p>

	<p>operation, and makes every effort to repair and re-use equipment where possible. In the event of the site becoming surplus to requirements or if the equipment needs replacing, all equipment will be removed from the site. This will be utilised elsewhere in the company, recycled, or disposed of appropriately. Decommissioning equipment from the site would take less than 30 days in total.</p> <p>Unless requested in the scoping response it is considered that no further information is required.</p>
STATUTORY CONSULTEE	
11. Socioeconomic, Access and Recreation	
DEVELOPER	<p>Aquaculture significantly contributes to sustainable economic growth in rural and coastal communities, with many depending on the employment and revenue it provides (National Marine Plan, 2015). Scottish Planning Policy also identifies aquaculture as making a significant contribution to the Scottish economy, particularly for coastal and island communities. Small changes in economic activity has potential to impact communities in rural Scotland more significantly than more populated areas. A significant proportion of Mowi Scotland employment is located in such rural areas. This employment allows traditional settlement patterns and land use activities to be maintained, with the presence of the company and its employees playing a critically important role in sustaining local rural services. In terms of the proposed North Kilbrannan site there will be through life direct and indirect economic impacts arising from job creation and local services expenditure arising from the installation, ongoing operation and maintenance activities of the site. The proposed site will result in the direct employment of up to an additional seven to ten permanently employed members of staff (or equivalent) and potentially additional seasonal workers in the busier summer periods in the second year of the production cycle. Downstream jobs will also be supported in transport, processing and support services.</p>
STATUTORY CONSULTEE	
12. Traffic and Transport	
DEVELOPER	<p>Farm Access Access would be by boat from a shore base. Stocking, grading, treatments, and harvesting would continue to be carried out at sea using well-boats. Well-boats will travel directly to the pens, and not dock at Carradale harbour, as per existing practice at other Mowi sites.</p> <p>Feed Deliveries Primarily by boat, although there may be occasions when road delivery would be required.</p> <p>Harvest Traffic Fish will continue to be removed using a well-boat, typically in volumes of 100-150t. A maximum biomass of 2,500T would require approximately 33-49 boat trips to remove all the 3,611T tonnes which is expected to be produced over the production cycle. Frequency will vary throughout the cycle, with less harvest in the early stages of the cycle and more in the second half of the cycle.</p> <p>Construction Traffic Installing the proposed farm equipment (not including pontoon/shorebase) at the site will take less than 30 days.</p>
STATUTORY CONSULTEE	
13. Any other issue	
DEVELOPER	
STATUTORY CONSULTEE	

TEMPLATE TRANSFER GUIDANCE – 1

After the developer has completed the Proposal box and Sections 2, 3, 4 and the relevant rows of Section 5, the current version of the master template, **should be emailed or posted on CD-ROM to the relevant authority (local authority planning department).**

The template should have a unique file name, which might usefully include the date at which this version is emailed/posted to the relevant authority.

TEMPLATE TRANSFER GUIDANCE – 2

After the relevant authority (local authority planning department) has completed Section 1, the current version of the master template, **should be emailed or posted on CD-ROM to the statutory consultees.**

The template should have a unique file name, which might usefully include the date at which this version is emailed/posted to the statutory consultees.

6 STATUTORY CONSULTEE RESPONSE

6.1. Organisation: Scottish Natural Heritage

Contact name: Catriona Laird
Directorate/Division/Agency: Argyll and Outer Hebrides
Telephone number: 0131 316 [REDACTED]
Email: Catriona.laird@nature.scot

We have considered this proposed development in terms of formal EIA Screening and Scoping, and have completed our assessment of the significance of potential environmental impacts.

Check or complete the following fields as required.

We obtained supplementary information from the developer during our consideration

We consulted with other Statutory Consultees during our consideration

Our advice as to your Screening opinion is summarised as:

In our view, the proposal could have likely significant effects on the Endrick Water SAC (designated for Atlantic salmon) and the Ailsa Craig SPA (for entanglement risks to gannet, herring gull, lesser black-backed gull and guillemot).

Our advice as to your Scoping opinion/advice, relating to environmental information that should be included in an Environmental Statement, is summarised as:

If Argyll and Bute Council determine that an EIA is required then we would expect the following information is provided in support of the EIA Report:

- A copy of the benthic survey footage and an assessment of the significance of impacts on

the benthic habitats and species that are present;

- Modelling reports to identify the depositional footprint of waste and chemical chemotherapeutants for the proposed site;
- Sea lice dispersion modelling to determine connectivity with the Endrick Water SAC. Should the modelling confirm that there is connectivity between the proposal and migrating salmon from the Endrick Water SAC, the application should include detailed information on monitoring and mitigation measures that will be employed to manage and control sea lice and therefore reduce the risk to the SAC;
- An EIA should be carried out which includes assessment of marine ornithological features, and an HRA is required for Ailsa Craig SPA. This should also include a Cumulative impact assessment on fish farms within the Kilbrannan Sound area, specifically relating to potential impacts on the qualifying features of the Ailsa Craig SPA
- The EIA should also provide details on i) the activity schedule, including timings of installation and when top nets are restocked; ii) details on any chemical treatments which could be used on the farmed fish (as some are known neurotoxins to birds; and iii) top and cage net types, mesh sizes and tensioning details.
- We would recommend that the applicant develops and adheres to an ADD deployment plan which sets out appropriate measures to be followed to ensure any potential impacts on cetaceans will be minimised.

Our advice on additional information that should be submitted in support of any future planning application for the proposed development is summarised as:

If Argyll and Bute Council determine that an EIA is not required then we would still expect the information detailed above to be submitted in support of a planning application:

Electronic signature: Catriona Laird

Date: 27/01/2020

TEMPLATE TRANSFER GUIDANCE – 3

*After each statutory consultee has completed their relevant part of Sections 5 and 6, they should email or post on CD-ROM **those sections only** back to the **relevant planning authority** within six weeks from the date of the planning authority's letter. Prior to doing so, the statutory consultee should complete the boxes at the top of the second page of Section 5 on the name of the project and its location in order to identify which project they are commenting upon. If another unique identifier has been agreed with the planning authority, the 'other identifier' box should also be completed.*

The returned portion of the template should have a unique file name, which might usefully include the date at which this version is emailed/posted to the relevant authority.

7 RELEVANT PLANNING AUTHORITY SUMMARY

Once the relevant authority has received and analysed the responses from statutory consultees, they should complete Section 7.

7.1. SCREENING OPINION - Relevant Planning Authority Summary

We have considered this proposed development in terms of formal EIA Screening, and have completed our assessment of the significance of potential environmental impacts, and the advice offered by statutory consultees where relevant. We conclude:

- 1. No EIA is required for this proposed development
- 2. No EIA is required but we will seek further information on some details during the planning process
- 3. An ES will be required for this proposal. A statement of reasons is attached (Annex 2).

In the event of checking box 2 above, please enter further information here.

We would wish to see the planning application take account of the following detailed points:

Electronic signature:

Name:

Planning authority:

Telephone no:

Date:

7.2. SCOPING OPINION - Relevant Planning Authority Summary

We have received advice by way of completed versions of this Template, from all relevant statutory consultees. We conclude that an Environmental Statement should be prepared and submitted with the planning application. The specific issues we would wish to see addressed in the ES are set out in our attached scoping opinion (Annex 3).

Complete as required, using the scoping advice offered by statutory consultees, which can be pasted in if appropriate (see Annex 4).

Summary of the specific concern about any **significant** environmental impacts, and summary of details required in the Environmental Statement.

Any other comments:

Electronic signature:

Name:

Planning authority:

Telephone no:

Date:

TEMPLATE TRANSFER GUIDANCE - 4

*The relevant authority should now send (e-mail or post on CD-ROM) this completed template to the developer within the **8 week** deadline period.*

Insert any attachments here.

**ANNEX 2 PLANNING AUTHORITY TO INSERT A FULL STATEMENT OF REASONS WHY
THE DEVELOPMENT IS EIA DEVELOPMENT**

Planning authority insert letter here.

Planning authority insert letter here.

**ANNEX 4 PLANNING AUTHORITY TO INSERT STATUTORY CONSULTEE RESPONSES
(IF APPROPRIATE)**

If this Annex is to be utilised, the planning authority should paste in all the statutory consultee Section 5 and 6 responses.

From: Catriona Laird
To: [REDACTED]
Cc: [Liam Wright](mailto:Liam.Wright@nature.scot); [Stan Phillips](mailto:Stan.Phillips@argyll-bute.gov.uk); "centralvalidationteam@argyll-bute.gov.uk"
Subject: 19/02422/SCRSCO Proposed North Kilbrannan Fish Farm - SNH Response - 27 January 2020
Date: 27 January 2020 15:48:00
Attachments: [image001.png](#)
[image002.png](#)
[North_Kilbrannan_Sound_FF_Screening_Scoping_2019_SNH_Response_-_27_January_2020.doc](#)
[Annex_1_-_Marine_Ornithological_Appraisal_-_North_Kilbrannan_Sound_FF_-_27_January_2020.pdf](#)

Dear [REDACTED]

Many apologies for the delay but please find attached our advice on the screening and scoping of a new fish farm at North Kilbrannan (planning ref: 19/02422/SCRSCO). Please do not hesitate to contact me should you have any queries.

Kind regards,

Catriona

Catriona Laird | Operations Officer – Mid Argyll

Scottish Natural Heritage | 1 Kilmory Industrial Estate | Kilmory | Lochgilphead | Argyll| PA31 8RR | t: 0131 316 [REDACTED]

Dualchas Nàdair na h-Alba | 1 Raon Gnìomhachais Chille Mhoire | Cille Mhoire | Ceann Loch Gilb|Earra-Ghàidheal| PA31 8RR

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All Scottish Natural Heritage (SNH) email addresses have changed to this new format:

firstname.lastname@nature.scot. Please note my new email address is Catriona.Laird@nature.scot

From: Liam Wright <Liam.Wright@nature.scot>
Sent: 24 January 2020 14:46
To: [REDACTED] <[REDACTED]@argyll-bute.gov.uk>
Cc: Catriona Laird <Catriona.Laird@nature.scot>
Subject: RE: Proposed North Kilbrannan Fish Farm

Hi [REDACTED]

[REDACTED] It's in hand though and Catriona Laird will be getting a response in next week.

Kind regards,

Liam

From: [REDACTED] <[REDACTED]@argyll-bute.gov.uk>
Sent: 24 January 2020 14:35
To: Liam Wright <Liam.Wright@nature.scot>
Subject: Proposed North Kilbrannan Fish Farm

Hi Liam

I am sorry to bother you about this but I am hoping you can point me in the right direction.

The Council consulted SNH on a screening and scoping for a fish farm at North Kilbrannan north of Carradale (19/02422/SCRSCO) on 27/11/19 but we haven't had a response back yet which seems a bit strange. Do you know who I should chase this up with? Can you supply me with an email address?

Thanks for your help with this.

Regards

██████

██████ ████████ **BA Hons, MSc MRTPI**
Team Leader – Major Applications Team
Development Management
Development and Infrastructure Services
Argyll and Bute Council

t: 01436 6██████
e: ████████ [argyll-bute.gov.uk](mailto:██████@argyll-bute.gov.uk)
w: www.argyll-bute.gov.uk



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Customer Satisfaction Questionnaire

The Planning Service are keen to get customers views on how we deliver our services. Your feedback is important to allow us to tailor our services to customer needs.

If you have any comments or wish to make a suggestion, please fill in our online [Customer Satisfaction Questionnaire](#)

ANNEX 1 - Marine Ornithological Appraisal

It is not clear why 7 km radius was used to screen in protected sites. In our view, there is connectivity with additional protected sites (SPAs) within the foraging ranges of qualifying features. The following protected sites should have been included at the screening/scoping stage:

1. Ailsa Craig SPA (with marine extension)

Qualifying features (breeding season)

Northern gannet
Herring gull
Lesser black-backed gull
Common guillemot
Black-legged kittiwake

All the qualifying features are within their mean maximum foraging range (as determined in Thaxter et al. 2012) of the proposed development, which sits approximately 50km from Ailsa Craig SPA.

In the context of the overall foraging range available to the qualifying species, it is unlikely that disturbance or displacement as a result of the fish farm would result in any likely significant effects for these species. Given potential for connectivity between qualifying features from Ailsa Craig SPA and Kilbrannan Sound, and recent serious gannet entanglement incident at an existing fishfarm at Carradale operated by the applicant (Eilean Grianain/Carradale north and Carradale south farms), the impact pathway being considered in further detail below relates specifically to entanglement risk in top and/or cage nets. Should the applicant in future wish to consider use of sub-surface anti-predator nets at this site a further assessment would be required with respect to associated entanglement risk for the northern gannet and common guillemot features of the Ailsa Craig SPA.

Northern Gannet

Gannets from Ailsa Craig SPA use Kilbrannan Sound at particular times of the year when their food source (e.g. fish such as mackerel) are present. It is possible that once in the Sound they could then also be attracted to the salmon within the fish farms. Gannets will plunge dive up to around 10m, and can pursuit dive to deeper depths if required (up to 24m). Gannets have their breeding period from mid-march to mid-September, with peak fledgling period being in the first half of September. Evidence is lacking, though it is possible that young gannets may be particularly attracted to fish farms when they fledge as a perceived easy food source. Given that gannets were attracted to the nearby Carradale fish farm site, **likely significant effects on gannets from Ailsa Craig SPA are predicted, as a result of potential for entanglement in top and/or sub-surface (cage) nets.**

Herring gull and lesser black-backed gull

Gull species from Ailsa Craig SPA may also be attracted to the fish farm. Both herring and lesser black-backed gulls feeding in the marine environment are largely surface feeders, scavengers and predators. They are opportunistic and therefore will take advantage of a food source should it become available to them. Gull species are known to be susceptible to entanglement in fishing gear (Žydelis et al. 2013) and from tracked birds have been known to interact with and have become trapped by fish farms previously (BTO data, unpub.). Herring gulls breeding period is from April to the end of August, and for lesser black-backed gulls from mid-March to end of August (SNH, 2018). **Likely significant effects on herring and lesser black-backed gulls from Ailsa Craig SPA are predicted, as a result of potential for entanglement in top nets.**

Guillemot

As a diving species (up to 200m) (BirdLife International, 2020), guillemots are potentially susceptible to entanglement from sub-surface nets. Historically, this has been a species that has been caught in salmon fishing nets in large numbers off NE Scotland (Bradbury et al. 2017). **Likely significant effects on guillemots from Ailsa Craig SPA are predicted, as a result of potential for entanglement in sub-surface (cage) nets.**

Kittiwake

Kittiwakes are surface feeders and are known to be susceptible to being caught accidentally in surface gear (Žydelis et al. 2013). Whilst it is possible that kittiwakes could be feeding within Kilbrannan Sound during the breeding period, it is not thought to be likely they would be attracted to the fish farm, and therefore are potentially less at risk to entanglement compared to the other qualifying features. Therefore, **no LSE is predicted for kittiwakes from Ailsa Craig SPA.**

2. Sound of Gigha pSPA

Qualifying features (non-breeding season)

Great northern diver
Slavonian grebe
Red-breasted merganser
Common eider

Whilst the qualifying features may use Kilbrannan Sound in addition to the Sound of Gigha pSPA, the pSPA is designated for marine foraging habitat. As the new proposed fishfarm does not directly impact supporting habitats or distributions of birds directly within this pSPA, **no LSE would be predicted for any of the qualifying features.** This site need not be scoped in for further assessment within the subsequent EIAR.

3. North Colonsay and Western Cliffs SPA (with marine extension)

Qualifying features (breeding season) – only marine species noted

Common guillemot (seabird assemblage feature)
Black-legged kittiwake (seabird assemblage feature)

Whilst these two species are within foraging range of Kilbrannan Sound, in the context of the large range of foraging habitat available to them, it is not thought to be likely that birds from this colony would be at significant risk of entanglement due to this new proposal. Therefore **no LSE would be predicted for any of the qualifying features at this site.**

4. Rathlin Island SPA (with marine extension)

Qualifying features (breeding season)

Razorbill
Guillemot
Kittiwake
Puffin

Fulmar
Herring gull
Lesser black-backed gull
Common gull

This site should have been initially scoped in as some of these species are within foraging range of Kilbrannan Sound (e.g. guillemot, fulmar, herring gull, lesser black-backed gull, and kittiwake). However, consultation with colleagues at DAERA and the limited tracking data available from Rathlin Island suggests that Kilbrannan Sound is not an important foraging area for these species (RSPB data, unpub). This, along with the context of the overall foraging area available to them, means it is unlikely that the new proposal would have significant effects for these species and therefore **no LSE would be predicted for this site.**

Other marine birds:

Red-throated divers are an Annex 1 species, and are known to also use Kilbrannan Sound and have been noted in Carradale Bay. It is worth noting that this is a species that would also be at risk of entanglement.

References

BirdLife International (2020) Species factsheet: *Uria aalge*. Downloaded from <http://www.birdlife.org> on 16/01/2020. Recommended citation for factsheets for more than one species: BirdLife International (2020) IUCN Red List for birds. Downloaded from <http://www.birdlife.org> on 16/01/2020.

Bradbury, G., Shackshaft, M., Scott-Hayward, L., Rexstad, E., Miller, D. & Edwards, D. 2017. Risk assessment of seabird bycatch in UK waters. Report to Defra. Defra Project: MB0126. http://sciencesearch.defra.gov.uk/Document.aspx?Document=14236_MB0126Riskassessm entofseabirdbycatchinUKwaters.pdf

SNH 2018 Suggested seasonal definitions for birds in the Scottish Marine Environment <https://www.nature.scot/sites/default/files/2018-11/Guidance%20-%20Suggested%20seasonal%20definitions%20for%20birds%20in%20the%20Scottish%20Marine%20Environment.pdf>

Žydelis, R., Small, C., & French, G. (2013). The incidental catch of seabirds in gillnet fisheries: A global review. *Biological Conservation*, 162, 76-88.

Sharon Phipps

From: Liam Wright
Sent: 27 January 2020 14:45
To: Catriona Laird
Subject: RE: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Looks good to me! I updated the benthic bit and have saved a couple of suggestions in tracked changes.

Happy to discuss.
Cheers
Liam

From: Catriona Laird <Catriona.Laird@nature.scot>
Sent: 27 January 2020 12:24
To: Liam Wright <Liam.Wright@nature.scot>
Subject: RE: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Thanks for the info Liam – I've incorporated it into our response now (see attached). In Stan's absence, would you be able to take a quick over the attached documents to see if I've missed anything major out (Stan seemed to think it was a complicated site, which I guess it is in terms of the Endrick Water SAC and Ailsa Craig SPA). Lucy Quinn provided really good detailed advice including appraisals of the proposal on marine SPAs – I've put the detailed appraisals into a separate annex and summarised the info in the scoping report template but please do let me know if you think I should include this info in the main document instead.

Many thanks,

Catriona

Catriona Laird | Operations Officer – Mid Argyll | Scottish Natural Heritage

1 Kilmory Industrial Estate | Lochgilphead | Argyll | PA31 8RR | Tel: 0131 316 [REDACTED]

Cisco: [REDACTED]

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From: Liam Wright <Liam.Wright@nature.scot>
Sent: 27 January 2020 11:39
To: Catriona Laird <Catriona.Laird@nature.scot>
Subject: FW: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Hi Catriona,

See below for slightly updated text – I have changed the benthic section slightly and have included some more detail in the Endrick Water section. I've also attached our recent response to Ardyne for info.

Happy to discuss.

Cheers
Liam

From: Liam Wright
Sent: 13 January 2020 16:52
To: Stan Phillips (Stan.Phillips@nature.scot) <Stan.Phillips@nature.scot>
Subject: Kilbrannan Sound Fish Farm Proposal - Screening and Scoping Application

Hi Stan,

See below for advice on the fish farm proposal at Kilbrannan Sound.

Benthic Impacts

This screening / scoping application relates to a proposal to install a marine cage fish farm consisting of 12 x 120 m circumference cages and a feed barge with a maximum standing biomass of 2475.54 tons.

A new baseline visual survey has already been carried out for this proposal. We have not yet assessed the footage but the benthic survey report provided with the application indicates that no PMF habitats or species are present or likely to be impacted by this proposal. If this is correct then none of the sensitive receptors identified within section 4.3 of the template are likely to be impacted.

However, we would caveat the above advice by restating that we have not been provided with the visual survey footage. Until we have assessed the footage ourselves we cannot provide definitive advice on the presence of PMF habitats or species in the vicinity of the proposal. As such we would recommend that the applicant provides us with a copy of the survey footage and includes an assessment of the significance of impacts on the benthic habitats and species that are present. In addition, the applicant should submit modelling reports to identify the depositional footprint of waste and chemical chemotherapeutants for the proposed site.

Wild Salmonids

Designated Wild Salmonids - Endrick Water SAC

This proposals could affect the Atlantic salmon feature of the Endrick Water Special Area of Conservation (SAC).

The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the "Habitats Regulations") or, for reserved matters, The Conservation of Habitats and Species Regulations 2017 apply. Consequently, Argyll and Bute Council is required to consider the effect of the proposal on the SAC before it can be consented (commonly known as Habitats Regulations Appraisal). The SNH website has a summary of the legislative requirements (<https://www.snh.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations>).

In our view, this proposal is likely to have a significant effect on the Atlantic salmon feature of the Endrick Water SAC. Consequently, Argyll and Bute Council, as competent authority, is required to carry out an appropriate assessment in view of the site's conservation objectives for its Atlantic salmon qualifying interest. This assessment should include an appraisal of the following:

We would recommend that as an initial step to consider the potential connectivity between this site and the Endrick Water SAC that sea lice dispersion modelling is undertaken and provided with the final application / EIA. In addition, this information will help to assess the potential connectivity between this site and any other existing and proposed sites in the Firth of Clyde which may help to inform cumulative assessment and identify appropriate areas which may require co-ordinated management in an area based EMP or similar.

To inform the Appropriate Assessment, if dispersion modelling confirms there is connectivity between the proposed fish farm and migrating salmon from the Endrick Water, the application should include detailed information (ideally within an overall Environmental Management Plan) on monitoring and mitigation measures that will be employed to manage and control sea lice and therefore reduce the risk to the SAC. The EMP should aim to set out a framework that will give the Planning Authority confidence that the operator is engaging in a meaningful way to minimise potentially damaging interactions with Atlantic salmon linked to the SAC. The EMP does not need to be complex in nature but must provide an enforceable framework which a) includes appropriate monitoring, the results of which feedback to inform on-farm management and b) includes commitments to make material changes to the management of the farm should an elevated risk to the SAC be identified.

Taking all proposals that are currently in the planning system in to account there is approximately 17,500 tonnes of additional biomass proposed in areas of the Firth of Clyde that are likely to have connectivity with the Endrick Water SAC. The assessment will need to consider the potential cumulative risk from multiple developments to the SAC, and therefore information on any coordinated activity/management should be included. It will therefore be particularly important that any mitigation that is proposed in any subsequent planning application / EIA takes potential cumulative impacts in to account and is robust and sufficient to protect the SAC from any adverse effect. Given the complexity of the cumulative issues in the wider Firth of Clyde area we would recommend that it would be advisable for the developer to discuss the potential cumulative issues with other existing and prospective operators in the Firth of Clyde region and consider taking a joined-up approach going forward. We would be happy to discuss the options further with both Argyll and Bute Planning Authority and the developer.

In addition to the above, any escape of farmed salmon poses a threat to the Atlantic salmon feature of the Endrick Water SAC through the risk of subsequent genetic introgression, should escaped Atlantic salmon enter the Endrick Water SAC and breed with wild Atlantic salmon. To mitigate this risk to the SAC we would expect confirmation that the proposed fish farms will comply with the Scottish Technical Standard, in order to ensure that any equipment used is robust and will reduce the risk of escapes occur and any subsequent interbreeding with salmon in the SAC.

The Endrick Water SAC is considered a sensitive area as defined in section 4.1 of the template. As such the proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

Non-Designated Wild Salmonids

There is potential for interactions to occur with non-designated wild salmonid populations. Sea trout and Atlantic salmon are both Priority Marine Features (PMF). This proposal has potential to impact on both these species. Impacts could occur as a result of the release of sea lice in to the marine environment and, should farmed stock escape in to the wild, as a result of genetic introgression with wild Atlantic salmon populations. PMFs are considered a sensitive species or habitat as defined in section 4.3 of the template. As such the proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

The final application / EIA report should provide an assessment of the risk posed to wild salmonids, including details of any mitigation measures reduce the risk of significant impacts occurring. We have limited access to any detailed data on local wild salmonid populations. On this basis we are happy to defer to the DSFB and / or Marine Scotland Science to provide further advice to the Planning Authority on the local significance of any non-designated wild salmonid populations likely to be impacted by this proposal.

Cetaceans

All species of cetacean qualify as European Protected Species (EPS) and are therefore considered sensitive species as identified in section 4.3 of the template. The use of acoustic deterrent devices (ADDs) can in some instances be capable of causing disturbance to cetaceans. As such this proposal could result in an impact which may have an effect on the receptors or issues identified in sections 4.1 to 4.4.

We would suggest that best practice measures should be adopted to ensure that the risk of any impacts on cetaceans as a result of the use of ADDs will be minimised. In order to do so we would recommend that the applicant develops and adheres to an ADD deployment plan which sets out appropriate measures to be followed to ensure any potential impacts on cetaceans will be minimised.

From 1 May 2020, SNH will be rebranding and changing its name to NatureScot.