T: +44 (0)300 244 5046
(Please note, this line is not active during COVID-19)
E:
ms.marinelicensing@gov.scot

Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)

Application for a licence to disturb or injure marine European protected species (EPS) for one of the following purposes

- **For preserving public health or public safety**
- **For an imperative reason of overriding public interest (including those of a social or economic nature and beneficial consequences of primary importance for the environment)**
- **For preventing the spread of disease**
- **For preventing serious damage to livestock, foodstuffs for livestock, crops,vegetables, fruit, growing timber or any other form of property, or to fisheries.**

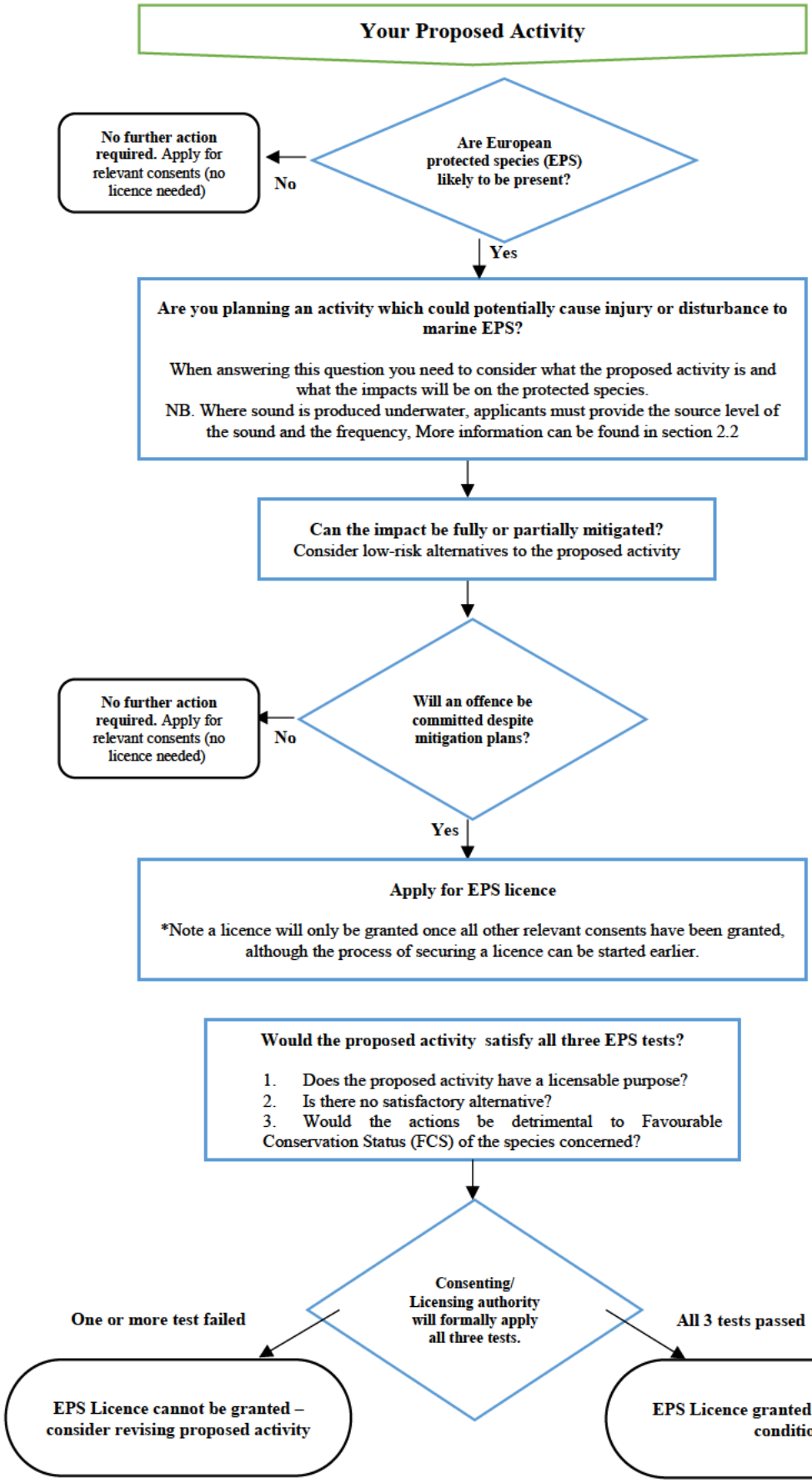
Please use this application form if you wish to undertake works/activities that would affect European protected species in the Scottish inshore marine area (0 – 12nm).

IMPORTANT: Before completing this form, please read these notes carefully

Applicants are advised to read these notes in conjunction with The Protection of Marine European Protected Species from injury and disturbance:Guidance for Scottish Inshore Waters. If further clarification is needed please contact Marine Scotland Licensing Operations Team (MS-LOT) via email: ms.marinelicensing@gov.scot

Flowchart showing the decision-making process

Please refer to the relevant chapter of the guidance



Gathering baseline information (Chapter 2 – Stage 1)

Gathering supplementary information, defining impacts and mitigation (Chapter 2 – Stage 2)

Production of a cetacean risk assessment (Chapter 2 - Stage 3)

The three tests (Chapter 3)

Please complete all relevant sections of the form.

Please ensure that you answer questions fully in order to avoid delays.

The completed application should be sent to Marine Scotland Licensing Operations Team (MS-LOT) at the address below or emailed to ms.marinelicensing@gov.scot.

We will not process unsigned application forms.

Please ensure that you provide appropriate information to support your application. Applicants can provide this supporting information in the form of an EPS Risk Assessment. Guidance can be found in The Protection of Marine European Protected Species from injury and disturbance:Guidance for Scottish Inshore Waters. Please contact MS-LOT if you wish to discuss the level of supporting documentation required for your application. Failure to provide sufficient supporting information may delay the consultation and licensing process.

MS-LOT will aim to determine whether a licence should be issued **within 6 to 8 weeks of acceptance of a completed application**. However, please note that for large scale or complex projects, the determination period may be longer.

If you experience any problems filling in this form, please contact MS-LOT.

Please use this application form if you wish to undertake works/activities that would affect European protected species in the Scottish marine area (0 – 12nm).

Please note that European protected species are also protected in the offshore marine environment (between 12 and 200 nautical miles). Species in this area are protected under The Conservation of Offshore Marine Habitats and Species Regulations 2017.

Do not use this form if your application relates to scientific, research, conservation or educational purposes. Please contact NatureScot (NatureScot Licensing, Great Glen House, Leachkin Road, Inverness IV3 8NW, Telephone 01463 725000, email **licensing@nature.scot** or visit their website) for a licence application for these purposes. NatureScot also issues licences for the purposes of marking animals or plants in relation to conservation or introducing them to particular areas for conserving natural habitats, and for protecting zoological or botanical collections.

Before a licence can be granted, it is essential that other relevant licences or consents have been secured for the proposed activity (eg Marine licence).

It is the responsibility of the applicant to obtain any other consents or authorisations that may be required.

Part A
Section 1 Personal details

Please provide details of the individual, company or partnership you wish to be named on the licence. The licensee is responsible for ensuring compliance with the licence and its conditions. Under the Conservation (Natural Habitats) Regulations 1994 (as amended) it is an offence to fail to comply with the terms and conditions of a licence.

Section 2 Previous applications

Please provide details of any previous relevant licences.

Part B
Section 3

Species

Please provide details of the species that will be affected by the work, the number likely to be affected and a description of how this number was determined. This information can be described in detail in your supporting information. You will need to provide detailed proposals (to be included in the 'Supporting information') of all the mitigation work that you plan to carry out which will affect European protected species.

Location

Describe the location of the proposed works. Include a list of the latitude and longitude co-ordinates (WGS84) of the boundary points of the proposed project. WGS84 is the World Geodetic System 1984 and the reference co-ordinate system used for marine licence applications. Co-ordinates taken from GPS equipment should be set to WGS84. Coordinates taken from recent admiralty charts will be on a WGS84 compatible datum. Ordnance survey maps do not use WGS84. In a few cases, (e.g. laying of cables or pipelines) it may only be practicable to supply co-ordinates for the start and end points.

Example: For positions read from charts the format should be as in the example: 55◦55.555'N 002◦22.222'W (WGS84). The decimal point specifies that decimals of minutes are used and the datum is stated explicitly. If seconds are used then the format should be as in the example: 55°55'44''N 2°22'11''W (WGS84).

It is important that the correct positions, in the correct format, are included with this application, as any errors will result in the application being refused or delayed.

Section 4 Consideration of designated sites

Please provide details of any designated sites affected by your proposals. You are advised to consult NatureScot, or other appropriate regulator, if the work you propose to do affects a Natura site, an MPA or a Site of Special Scientific Interest.

Section 5 Activities to be licensed

Please indicate the activities you intend to undertake that would otherwise be unlawful
Provide details of the proposed commencement and completion dates of the activities. **The licence start date will not be backdated, since to commence a project for which a licence has not been obtained may constitute an offence resulting in appropriate legal action.**

It is the licensee's responsibility to apply for any further licences or an extension prior to the expiry of the initial licence.

Section 6 Purpose of the licence application

Please indicate the purpose of the licence application, the first of the legal tests.
Please complete the relevant Annex to provide justification for the licensing purpose. This is the legal basis of the application.

Section 7 Satisfactory alternatives

Please provide your consideration of why there is no satisfactory alternative. This must include all other options that have been evaluated, the alternative sites that were considered by you and why they were rejected (if no other sites were considered, you must provide the reasons why), as well as all alternative methods of carrying out the work and alternatives dates / timings.

In relation to each alternative considered, please provide an explanation of why you consider it to be satisfactory or unsatisfactory. In respect of any alternative sites please provide the location(s) and details of the alternative site(s), or your views on how the activity/proposal might have been achieved differently, and any other helpful information; e.g., pros and cons of alternative sites, or whether there is likely to be demand for all suitable sites to be used to meet an identified need. Please explain how this conclusion was reached.

Section 8 Summary of the planning / licensing position

Detail all consents and licences required for the proposed project and indicate those that you have applied for or received.

Section 9 Noise Monitoring

Under the Marine Strategy Regulations (2010), there is now a requirement to monitor loud, low to mid frequency (10Hz to 10kHz) impulsive noise. This includes use of seismic airguns, other geophysical surveys (<10kHz), pile driving, explosives and certain acoustic deterrent devices. This monitoring requires completion of a form at the application stage (giving details of the proposed work) as well as completion of a 'close-out' form (giving details of the actual dates and locations where the activities occurred). The close-out form should be returned within 12 weeks of completing the 'noisy' activity or, in the case of prolonged activities such as piling for harbour construction or wind farms, at quarterly intervals or after each phase of foundation installation.
These forms are available at: https://mnr.jncc.gov.uk//

Part D
Section 10 Declaration and warning

It is important to read the Declaration and Warning sections before signing the application form.

Site visits and compliance checks

It is possible that the licensing authority may undertake a site visit prior to the issue of a licence. The majority of site visits will be arranged several days in advance and will be conducted in the presence of the licensee (or applicant) however there may be occasions when a site visit will be made at short notice.

Licensees should be aware that they may receive a request for a site visit by the licensing authority, or a person authorised by the licensing authority, to assess site conditions against the conditions of the licence. It is essential that if any of the agreed mitigation measures contained in the application and supporting information are changed for any reason, the licensing authority is informed as soon as possible.

The Licensing authority will monitor compliance with licences issued based on the information included in licence reports.

Where to seek further information

Further information can be obtained from Licensing Operations Team at the address below.
If your proposal relates to one of the purposes for which NatureScot is the licensing authority, please contact your local office of NatureScot.

Licensing Operations Team
Marine Scotland
375 Victoria Road
Aberdeen
AB11 9DB

Email: MS.marinelicensing@gov.scot

Disclaimer

While every effort has been made to ensure the information contained in this document is accurate, nothing in this document should be taken to replace the current legislation in force at this time. You are advised to obtain qualified legal advice in relation to your rights and responsibilities under the 1994 Regulations and other legislation.

Part A. The Applicant: Personal details

These questions relate to the person who will be the **named licensee**. The licence can be issued to an individual or a company or a partnership and the licensee will be responsible for ensuring compliance with the licence and the conditions of the licence. Under the Conservation (Natural Habitats) Regulations 1994 (as amended) it is an offence to fail to comply with any condition imposed by a licence.

1. Name of applicant

Title: | Forename(s): | Surname:

Company Name: Kames Fish Farming Limited

Business Title (if Appropriate):

Address: Kilmelford, Oban PA34 4XA

Tel no. (inc. dialling code): [redacted]

Email address:

2. **The Applicant: Previous applications**:

Have you previously held a wildlife licence issued in the UK? (please tick as appropriate)

Yes ☐ No ☑ (If yes, please complete below, if no, please go to Part B)

Who issued the licence?

Licence number (most recent licence)

Year in which the licence was issued.

What species were covered by the licence?

What activity was covered by the licence e.g. disturb, injure?

Part B. The Application

3. **Species**

(a) Please indicate which species is / are affected by the proposed works.

Common name(s):

Risk of short-term disturbance to:
1. Seals - common and grey
2. Minke whale
3. Harbour porpoise
4. Bottlenose dolpin

Scientific name(s)

1. Phoca vitulina, Halichoerus grypus
2. Balaenoptera acutorostrata
3. Phocoena phocoena
4. Tursipos truncates

(b) How many individual animals will be affected by licensed work?

The attached modelling report shows disturbance calculated for all animals according to the MS method is <1.0 animal. The animal most at risk of PTS is the harbour porpoise when 1 US3 device is being used, and this risk remains <0.1.

Please provide a description of how this number was calculated / estimated

See attached modeling report. Maps presented in the Appendix illustrate the process undertaken to determine the areas affected to the specified disturbance and PTS thresholds for each scenario. Calculated sea areas, from which an estimate of potential cetacean impacts has been derived, follow the method set out by MS using data from SCANS-III.

Based on the quantitative assessment detailed above it is not believed that any potential hearing injury (PTS) or disturbance to any one individual harbour porpoise or minke whale may occur. While the system output may be within audible range of harbour porpoise and minke whale, as are many activities in the marine environment, use of the RT1/US3 systems will not result in a sound level which is either injurious or disturbing to these species at a level relevant to conservation status

(c) **Location of proposed licensed action**

Latitude and Longitude co-ordinates (WGS84) defining the extent of the project. Please continue on a separate sheet if necessary.

LATITUDE											LONGITUDE										
		°			.				'N					°			.				'W
		°			.				'N					°			.				'W
		°			.				'N					°			.				'W
		°			.				'N					°			.				'W
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		°			.				'N					°			.				'W
		°			.				'N					°			.				'W

(d) Provide a brief description of the proposed activity and the methods to be used.
Detailed information should be included in your Supporting Information
Please provide details of the source levels and frequencies of underwater noise if relevant

Installation of Ace Aquatec acoustic deterrent device(s) at an operational marine salmon farm in the Kames Fish Farms sites in North Moine, Shuna Castle, Kames Bay East, Kames Bay West, Ardifuir and Pooltiel West. Total equipment on hire is 4x RT1s, and 1xUS3. No more than one device is installed on any one site at a time.The US3 will only be used in the event that the RT1s are not deterring the seals. In the past, the US3 has only ever been used at the Loch Craignish site and has never been used at any other site.

(e) Briefly state how you will minimise the impact of your proposed work on European protected species.
Detailed information should be included in your Supporting Information.

Analysis was conducted to ensure that the disturbance threshold remained <1.0 animal for each of the potentially affected species. All Ace systems operate with zero injury to marine mammals due to the extremely low duty cycles used. See report in Supporting information.

Each device is IOT enabled, and can have its sound patterns tailored to the conditions found on the chosen site. Sound patterns vary in average source levels, and tonal characteristics, allowing precise characterisation for the area.

4. **Consideration of designated sites**

Designated Areas: National Nature Reserves (NNR), Sites of Specific Scientific Interest (SSSI), Special Protection Area (SPA), Special Areas of Conservation (SAC), Ramsar sites, Marine Protected Areas (MPA). Information on designated sites is available on NatureScot website https://sitelink.nature.scot/home or from your local NatureScot office.

(a) Will any part of the proposed activity fall within /or adjacent to an area covered by a designated site eg SSSI, SAC, MPA? Yes ☒ No ☐

(b) Please give the name of the designated site(s) and either the outcome of your consultations or the reason why you have not consulted (see note 4). Please enclose any relevant correspondence.

Please see the attached Appendix 1 for details of designations for some locations

5. **Activities to be Licenced**

Proposed Methods

(a) Please complete all relevant columns in the table below to indicate the methods you propose to use, the activity involved and the time period in which you propose to use each method. This information will be used when preparing the licence to cover activities that would otherwise be unlawful, and failure to give full details may result in an inappropriate licence being issued.

Activity to be licensed (please tick)						**Time period**	
Capture	Kill (exceptional circumstances only)	Injure	Transport	Disturb/ Harass	Method to be used, (e.g. piling)	From	To
☐	☐	☐	☐	☑	Acoustic deterrent device	01.06.22	01.06.23
☐	☐	☐	☐	☐			
☐	☐	☐	☐	☐			
☐	☐	☐	☐	☐			
☐	☐	☐	☐	☐			

6. Purposes of the licence application (tick one box only)

A licence can only be issued if 3 specific legal tests are met. The section below relates to the first of these tests. The options shown are taken from the **Conservation (Natural Habitats, &c.) Regulations 1994 (as amended).**

Please indicate which purpose relates to the proposed works

(a) Preserving public health or public safety (we will require evidence that there is a risk to public health or public safety e.g. an imminent risk of flooding) Regulation 44(2)(e) ☐

Complete Annex A

(b) Imperative reasons of overriding public interest (*including those of a social or economic nature and beneficial consequences of primary importance for the environment)* Regulation 44(2)(e) ☐

Complete Annex B

(c) Preventing the spread of disease Regulation 44(2)(f) ☐

Complete Annex C

(d) Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property, or to fisheries Regulation 44(2)(g). ☐

Complete Annex D

(e) If you wish to use acoustic deterrent devices to protect fish farm sites in Scottish waters, you must also complete Annex E. ☑

Complete Annex E

7. **Satisfactory alternatives**

This relates to the second of the legal tests which must be satisfied. Please explain why there is no satisfactory alternative to carrying out the proposed work affecting the species. You must describe all possible alternatives which were considered and why they were considered unsuitable. You must also consider the option of not undertaking the work. **It is not acceptable to state that 'there is no alternative'.** Please continue on a separate sheet if necessary.

The site is suggested to be suitable in these respects, having operated for many years. To relocate farming activity to an alternative site would not be preferable on many counts (including fish health management and benthic impacts) and would displace activity to locations potentially closer to protected areas (Inner Hebrides & the Minches SAC). The purpose of underwater sound-producing devices is to deter seal interaction with farm livestock. Their use is part of a suite of predation-mitigation measures which include regular removal of fallen/moribund stock, low stocking densities, tensioned HDPE pen-nets and top-nets to reduce seal interest in the farm from the very start of the production cycle. These additional methods do not however provide a satisfactory alternative, rather they are complementary measures which help minimise the level of acoustic device use. As an audible deterrent to seals these devices have a different mode of action to physical barriers and reduction of attractants (stocking density & removal of fallen/moribund stock), and function to help keep seals away from pen nets. This s a critical function, which as well as preventing direct predation events and reducing the likelihood of seals establishing a pattern of interaction with a farm, also mitigates the sub-lethal effects on livestock from seals. These sub-lethal effects are due to stress and flight behaviour caused by seal presence around a farm - even if direct predation does not occur - and have significant negative impacts on farm productivity (reduced feeding, growth & survival), fish health (physical damage, disease and parasite risk increased), fish welfare and ultimately sustainability through reduced productivity and challenging fish health management. As such, no satisfactory alternative to underwater sound-producing devices is considered to be available.

8. **Other Licences / Consents**

Please detail below all licences / consents you have applied for or received. **Before a licence can be granted, it is essential that other relevant licences or consents have been secured for the proposed activity (eg Marine licence).**

Type of Licence / Consent (e.g. Marine Licence, Local Planing Authority, Local Works Licence)	**Date Applied for**	**Reference no.**	**Date of issue of licence / consent**
Please see Appendix 1 for details of each site/ location			

9. Noise Monitoring

Please indicate if any of the following noise generating activities will be taking place during the operations:

Use of explosives	☐
Piling	☐
Use of Acoustic Deterrent Devices	☑
Survey equipment operating in the range 10 Hz – 10kHz	☐

If you have ticked any of the above boxes please complete a Proposed Activity form in the Marine Noise Registry at: https://mnr.jncc.gov.uk/.

Please note the form must only be completed once for each activity. If you have already completed a form for this activity (eg through the marine licensing process) please give details.

The Marine Noise registry is for impulse noise. As the equipment used is non impulsive this is not a r i t thl th f h l t

EPS licence applications will not be accepted until this form has been completed and submitted

Have you remembered to enclose Supporting Information with your application, as described in the accompanying guidance? Please check

Completed Application form	☑
Completed Annex	☑
Map / Chart	☑
Correct co-ordinates	☑
Additional information / EPS risk assessment	☑

Annex A

Only to be completed if you selected *for Preserving public health or public safety* in Question 6 of the application form

Please complete all questions

Give details of the risk to public health or safety

How has the risk been identified. Please give details of any expert advice received.

How will the proposed activity address the identified risk

Annex B

Only to be completed if you selected for *Imperative reasons of overriding public interest (including those of a social or economic nature and beneficial consequences of primary importance for the environment)* in Question 6 of the application form

Please complete all questions

What benefits will be provided by the proposed activity? Give details and indicate if they are social, economic or environmental. Please indicate if the benefits are short or long term.

What public interest will be served? Who will benefit from the proposed activity? Does the proposed activity address a need?

Why is it imperative the proposed activity goes ahead?

Does the proposed activity support any local regional or national policies? Please give details. Are you fulfilling a statutory role?

Annex C

Only to be completed if you selected for *Preventing the spread of disease* in Question 6 of the application form

Please complete all questions

What disease(s) is / are at risk of being spread if the proposed activity does not go ahead? Please give details of any expert advice received.

How will the proposed activity prevent the spread of disease? Please give details of any expert advice received.

Annex D

Only to be completed if you selected for *Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property, or to fisheries* in Question 6 of the application form.

Please complete all questions

What serious damage has occurred or will occur if the proposed activity does not go ahead. Please give details of any expert advice received.

Since the removal of RT1's from our sites, we have recorded 6,884 mortalities caused by seal attacks. This equates to around £145,716 in lost revenue. Due to the speed in which dead fish degrade in the nets, this number in reality will be higher.

This is only the cost of the direct loss and does not account for the lost feeding and growth caused by the additional stress on the population within the affected pens.

Like other farms in the region, this year has seen increasing numbers of seals in the area, and greater pressure on anti predation measures.

How will the proposed activity prevent serious damage? Please give details of any expert advice received.

RT1s have proven to be effective in reducing seal predation at Kames by up to 75%. Prior to the use of Ace Aquatec's systems, mortalities were as high as 10% for a cycle.

The seals at Kames' sites have been observed circling the Sites, to the extent that fish become tired and are sucked through the netting. The seals eat the parts that they like and leave body parts such as the head. Various nets have been deployed to prevent strikes, but do not stop hounding behaviours which can put fish off their feed, causing stress and loss biomass.
Ace Aquatec's systems have been used for several years, and a well documented decrease in fish predation by seals is well documented. Since we have lost have lost these systems in June last year Seal attacks have increased to unsustainable levels.

The proposed activity will prevent direct stirkes on fish, increases in stress which can cause higher susceptibility to disease, lice, and can cause fish feed to be rejected. Kames prides itself on putting animal welfare first, and as good shepherds to our fish, we must ensure all necessary precautions are taken to reduce stress and harm to our livestock. Seal predation is a growing problem in the region, and the deterrent plan enacted by kames seeks to mitigate the potential risks of direct harm, indirect stress, and risks of containment breach.

The supplier Ace Aquatec has been chosen because of its award winning range of deterrent systems which have been designed to reduce impact on non target species, by operating with an extremely low duty cycle, low average volume, and in targeted frequencies to have the strongest impact on predation, and the lowest impact on the surrounding environment. Reports supporting this have been produced by Coram et al 2022 (in press); and Ace Aquatec's systems pass the criteria set out on NOAA's certification system (a live document).

Annex E

Only to be completed if you intend to operate ADDs at marine fish farm sites in Scotland

Please complete a copy of this annex for *each individual site* included on your application

Please complete all questions

Site name and ID (FS number)

North Moine (FS/0356), Shuna Castle (FS/0465), Kames Bay East (FS/0462), Kames Bay West (FS/0271), Ardifuir (FS/1062), Pooltiel West (FS/1310)

Device Type 1

Device Details

Device name (and version if relevant)

Ace Aquatec RT1 (a low frequnecy variant of its ASR (acoustic startle response technoogy) systems, designed to reduce impact on non target species, and maximise the effectiveness of the sounds through sensitisation.

Number of devices proposed

Four x RT1s.

Source level of device (rms and SPLpeak)

SPL levels will be kept within the thresholds for each of the sites, i.e., >175 <181 SPL(dB) rms dB re 1uPa

Typical frequency content

0.8 - 1.2 kHz (RT1)

Please give details of the proposed duty cycle (or available settings) including the system duty cycle

Operates intermittently in randomly timed 2.8 s bursts with an average duty cycle of <5%

Duration of use of device (e.g. hours per 24 hour period)

Device is remotely operated from a portal. It will be operated for two week periods whever seal mortalities appear; or during historical periods of hihg seal activity.

Time of use (e.g particular time of day or time of year)

Particularly during the night, and especially from early autumn to spring.

If multiple devices of this type are to be used, please give details of numbers to be deployed and locations in relation to the site.

No more than 1 device will be deployed at any one site. Devices are set to never play overlapping sounds.

Management of ADD Use

Please give details of the cues/triggers and the decision process to activate ADDs. These cues / triggers should be specific and measurable and should relate to predation events by seals rather than presence of seals in the area.

At this stage, the ADDs will be activated when seal predation is detected in the area by divers in the cage, and will be returned to standby after a period of two weeks with no seal activity.

Give details of how ADD use is to be reviewed

Regular internal meetings occur weekly where seal mortality and mitigation measures are discussed. Data for the the opeational history of the systems is collected on the Ace Aquatec portal and is made available to managers for assessment. Access to the ace Aquatec portal allows easy tracking and remote operation for site managers, rather than any requirement to be present on site to adjust the systems.

Give details of criteria for deactivation or removal of ADDs (including if they appear to be ineffective)

Give details of ADD deployment plans and any relevant planning conditions relating to ADD use

Device type 2

Device details

The Ace Aquatec ASR (acoustic startle response) systems have been developed with Scottish SMART funding support to avoid impact on non target species while maximising the effect on predatory seals. This technology utilises extremely short bursts of sounds, with long periods of silence, in order to elicit a startle response in the predatory seal.

Device name (and version if relevant)

Ace Aquatec US3

Number of devices proposed

1x US3

Source level of device (rms and SPLpeak)

SPL levels will be kept within the thresholds for each of the sites, i.e., >175 <181 rms dB re 1uPa

Typical frequency content

US3 8-11khz

How is the device triggered (please state if the device operates constantly or if there is no triggering method)

Operates intermittently in random 2.6 s bursts with an average duty cycle of less than 5% (manually configurable).

Please give details of the proposed duty cycle (or available settings) including the system duty cycle

Less than 5%.

Duration of use of device (e.g. hours per 24 hour period)

As noted above, it is predicted that the US3 will rarely be on and will only be used as a last resort when RT1s are ineffective. In the past, it has rarely been used, and was only deployed at the Loch Craignish site when there was evidence that the seals were not being deterred by the RT1s and the salmon welfare was being compromised.

Time of use (e.g particular time of day or time of year)

Only in the rare event that the RT1s are not deterring the seals effectively.

If multiple devices of this type are to be used, please give details of numbers to be deployed and locations in relation to the site.

Only one device per site will be deployed. Systems may be one of four RT1s or a single US3.

Management of ADD Use

Please give details of the cues/triggers and the decision process to activate ADDs. These cues / triggers should be specific and measurable and should relate to predation events by seals rather than presence of seals in the area.

If seal mortality is detected in the cage, or if seals are seen circling the pens, then the deterrents may be activated. If a breach of the net occurs due to seal attacks, then the deterrents may be activated. If the historical trends show increases, then particularly overnight, the systems may be activated.

Give details of how ADD use is to be reviewed

The systems are monitored remotely by site managers, and by the senior managment team, as well as by Ace Aquatec. The mortality figures on the site are monitored weekly by senior staff, and decisions on the system's intervention will be taken by the site manager. Reporting of system use will be available through Ace Aquatec's portal to both senior management and regulators.

Give details of criteria for deactivation or removal of ADDs (including if they appear to be ineffective)

Should the mortalities not drop at least 50% from historical levels, then the system will not be deployed. Should mortality levels rise over time, then Ace Aquatec will be contacted to adjust the tones available. Should this not reduce the mortality figures then the systems will be switched off.

In the unlikely event where a seal has become trapped in the cage with the fish, the system will be turned off.

In the event that divers are in the water inspecting nets or conducting other undwater inspections, the systems will be turned off.

Give details of ADD deployment plans and any relevant planning conditions relating to ADD use

One Ace Aquatec system will be deployed on a site at any one time. The system will be set to avoid overlap with the timings of other Ace Aquatec systems. The systems will all be connected to the internet with records around operational periods recorded within the Ace Aquatec portal.

Device type 3

Device Details

Device name (and version if relevant)

Number of devices proposed

Source level of device (rms and SPLpeak)

Typical frequency content

How is the device triggered (please state if the device operates constantly or if there is no triggering method)

Please give details of the proposed duty cycle (or available settings) including the system duty cycle

Duration of use of device (e.g. hours per 24 hour period)

Time of use (e.g particular time of day or time of year)

If multiple devices of this type are to be used, please give details of numbers to be deployed and locations in relation to the site.

Management of ADD Use

Please give details of the cues/triggers and the decision process to activate ADDs. These cues / triggers should be specific and measurable and should relate to predation events by seals rather than presence of seals in the area.

Give details of how ADD use is to be reviewed

Give details of criteria for deactivation or removal of ADDs (including if they appear to be ineffective)

Give details of ADD deployment plans and any relevant planning conditions relating to ADD use

Please use additional sheets for further device types