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24th September 2018

**Re18/01730/SCRSCO Screening and Scoping Opinion for proposed
marine fin fish farm.
Fish Farm North Of Corpach Bay Ardlussa Isle Of Jura Argyll And Bute**

Dear Mr Kerr,

Friends of the Sound of Jura represents members of the communities in and around Knapdale, concerned about the impact of open cage fish farming on the marine environment, and on sustainable jobs in our communities.

We object to the proposal to site a 2500 tonne fish farm at Corpach Bay, Jura, on the following grounds:

Landscape Impact

Corpach Bay is inside the 'Jura Scarba, Lunga & the Garvallachs Wild Lands Area'. Argyll & Bute Council's Local Development Plan also designates this area an Area of Panoramic Quality (APQ). It is close to but not within the Jura National Scenic Area and visible from parts of that NSA - an area recognised and protected for its *'outstanding scenic value in a national context'*. Jura's coast and hinterland is described as *'very sensitive countryside'* in Kames' scoping document.

The Jura Scarba, Lunga & the Garvallachs Wild Lands Area is one of only 20 in Scotland. Jura was designated as an *'inaccessible and remote area, with a strong sense of solitude'* and in recognition of its *'Dramatic mountains, cliffs, islands, and tidal currents which emphasise a sense of nature being in control'*, with the *'all-pervading influence of the sea and sense of being perched on the edge of the land.'* These are rare qualities in our country and abroad.

Areas of Panoramic Quality are of regional importance for their landscape and for the environmental assets they represent. The Supplementary Guidance to the Argyll and Bute 2016 LDP says: *'These qualities could easily be destroyed or damaged by even a relatively small, insensitive development. They therefore must be protected'*.

Scotland's National Marine Plan says: *'The emphasis should be on*

maintaining and growing communities by encouraging development that provides suitable sustainable economic activity while preserving important environmental assets such as landscape and wildlife habitats that underpin continuing tourism visits and quality of place'

This proposal is incompatible with the NMP. The LDP also specifies these policies, which are incompatible with the scale, nature and location of the Corpach Bay proposal:

SG LDP ENV 9 – Development Impact on Areas of Wild Land

Argyll and Bute Council will resist development proposals, located either within or outwith the Wild Land Areas as currently defined by SNH, where it is determined that the proposal would significantly diminish the wild character of a Wild Land Area, unless it is clearly demonstrated that these adverse effects can be substantially overcome by siting, design or other mitigation.

SG LDP ENV 12 - Development Impact on National Scenic Areas (NSAs)

Argyll and Bute Council will resist any development in, or affecting, National Scenic Areas that would have an adverse effect on the integrity of the area, or that would undermine the Special Qualities* of the area unless it is adequately demonstrated that any significant adverse effects on the landscape quality for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.

SG LDP ENV 13 - Development Impact on Areas of Panoramic Quality (APQs)

Argyll and Bute Council will resist development in, or affecting, an Area of Panoramic Quality where its scale, location or design will have a significant adverse impact on the character of the landscape unless it is adequately demonstrated that: (A) Any significant adverse effects on the landscape quality for which the area has been designated are clearly outweighed by social, economic or environmental benefits of community wide importance;

The west coast of Jura is one of the wildest places in Britain. There are no buildings visible at all from Corpach Bay, but Kames' scoping report includes a long list of the human influences that their fish farm would impose on this wild place. As well as 14 large farm cages and a 43m long service barge there would be wellboats, helicopters, full-time generators and lighting.

As the scoping report says; *'the impact on the perception of wilderness comes down to a question of whether the farm is there or not'*.

It is impossible to mitigate the visual impact of such a large industrial fish farm

on this landscape. Just by being there it would destroy the sense of wildness recognised as precious by both the Government and Local Authority.

For these reasons and the reasons below, we urge you to turn down this proposal.

Exposure and containment

SEPA are encouraging new fish farm development in exposed locations, because many sheltered inshore waters are already at or beyond their ability to assimilate fish farm pollution. The west coast of Jura is among the most exposed shorelines in the Western Europe. It faces the Atlantic directly and Colonsay is too far away to provide any protection from wind of waves. The Government's containment specifications require all fish farms to be able to withstand a 1 in 50 year storm. Releasing farmed fish into the sea threatens wild fish, so it is also necessary to retain 2500 tones of fish during such a storm, and, for welfare reasons, to ensure that they are not harmed.

There is no way that a 14 cage fish farm and a 43m long unpowered service vessel, anchored less than 100m from one of the worst lee shores in Scotland, would survive a 1 in 50 year storm. Even regular winter storms here would threaten its integrity.

There is also no way that Kames' can have an adequate and practical plan for recapturing fish in the event that they escape during a storm, with a vessel coming from their land base 20km away.

Their report describes that the farm would be operated and monitored remotely from the mainland for much of the time.

Locating a fish farm at Corpach Bay is not only irresponsible but unsafe.

Jobs

Substantial remote operation of the proposed farm suggests that the estimated (not promised) 6 full time equivalent jobs is optimistic. None of these jobs are on Jura, the community that would pay the price of pollution from the farm and risk losing wild sea trout that are important to its economy and to neighboring Islay. Kames has avoided any contact with the Jura community.

Local creel fishermen fish for prawns, crabs and lobsters off the west coast of Jura. They have been ignored in the Kames' scoping report, yet they would lose fishing grounds and risk having their catch poisoned by the anti-sea lice chemicals dumped into the sea by the fish farm.

Pollution

Prawns, crabs and lobsters are all crustaceans - so are sea lice. There is plenty of evidence that the chemicals used to treat sea lice also harm other

crustaceans. For instance, the Government and industry-funded PAMP2 study showed an average 60% reduction in crustacean abundance was correlated with the use of Slice (emamectin benzoate) - an in-feed treatment for sea lice on farms. The Norwegian PestPuls study has reported this year that hydrogen peroxide, seen by SEPA as not harmful, kills 100% of commercially-fished shrimps three days after a short exposure to concentrations one hundred times less than are usual in fish farms.

How can Argyll and Bute Council be certain that creel fishermen will not lose catch because of these chemicals, as fishermen in Wester Ross, the Outer Hebrides and Norway are reporting has happened around fish farms in their areas?

Pollution Modelling

Corpach Bay is a very exposed and dispersive site. Kames has submitted a pollution modelling report produced by using the Autodepomod software model. SEPA admits openly that this software cannot accurately predict where particulate pollution and emamectin benzoate will go in 'dispersive' locations, such as Corpach Bay, or where the seabed slopes, or when storms resuspend and move the waste, or when it travels more than 500m from its source. It is completely inappropriate to use Autodepomod in this location. SEPA has newer software for doing modelling pollution dispersal, called Newdepomod. This should have been used at Corpach Bay, coupled with hydrodynamic modelling. Newdepomod requires at least three months of current flow data to be collected. Autodepomod uses just 17 days.

Have you asked SEPA to justify why Autodepomod is being used to assess pollution from the proposed fish farm?

If the software is incapable of showing where the emamectin benzoate will end up, and at what concentration, how can you be certain that the crustaceans caught by fishermen will not be affected?

Priority Marine Features (PMFs)

Kames' seabed monitoring video and report have not been submitted with this scoping report. SNH said the video that Kames submitted for their Dounie proposal was of very poor quality. Its written report also failed to identify the presence of northern sea fans in the footage. These are Priority Marine Features, protected from any development that would harm their national status. The Dounie proposal was withdrawn after a second benthic survey showed the presence of a large population of this species further from the fish farm than Kames had surveyed, but well within the area that would have been polluted, as modeled by Newdepomod, but not by Autodepomod.

It is essential that the wider area around the Corpach Bay proposed farm is properly surveyed for Priority Marine Feature species.

The impact of sea lice on wild salmonids

Wild salmon and sea trout are also PMFs. Marine Scotland and the fish farm industry (eg Marine Harvest's letter to you, re BDNC Loch Shuna) recognise that sea lice from fish farms harm wild salmonids. MS says that even farms staying below the industry's Code of Good Practice levels for sea lice may still release substantial numbers of larval sea lice into the sea.

Sea trout are present all year in coastal waters in Argyll and are particularly vulnerable to this risk. Salmon smolts leaving their natal rivers are also at great risk from sea lice. Islay Estate confirm that salmon have been caught in the Corran, Lussa, Cairidh Mhor on Jura and the Sorn, Laggan and Grey on Islay during 2018.

Marine Scotland is obliged by the National Marine Plan to provide Locational Guidance on the sensitivity of wild salmonids to fish farm development. Four years after the NMP was published, MS has still not provided this information. You have described MS's advice on the risk posed by fish farms as unhelpful, and said that MS is 'sitting on the fence'. How can you assess the risk to the wild salmonids that depend on the west coast of Jura when you lack this most basic of information?

SEPA's policy to encourage larger farms in exposed places ignores the fact that many of these sites are used by wild salmon and sea trout, and that sea lice larvae will be transported further from such sites by strong currents. Adams et al, 2016 showed that viable larvae can be carried from the mainland to the Outer Hebrides. The risk to wild salmonids is increased by siting such large farms in more exposed sites like Corpach Bay.

If a public body knows there is a risk to the environment but lacks certainty about its significance, it is obliged to apply the precautionary principle. The ECCLR Committee's report said specifically: *'further development and expansion must be on the basis of a precautionary approach and must be based on resolving the environmental problems. **The status quo is not an option.**'*

Argyll and Bute Council should apply the precautionary principle to the risk of harm to the wild salmonids that live on the west coast of Jura, until accurate information is available about the impact.

Acoustic Deterrent Devices

Kames indicate that they will use ADDs to deter seals. ADDs also scare cetaceans. The proposed fish farm is within the Inner Hebrides and The

Minches Special Area of Conservation (cSAC) for Harbour Porpoises. This area is considered one of the best areas in the UK for this species. The coastal waters around Jura are also home to minke whales and common and bottlenose dolphins. Killer whales and sei whales have been seen in 2018.

On 28th July 2017, the Head of Policy and Advice at SNH wrote to Marine Planning and Policy at Marine Scotland, with the following advice to Scottish Ministers: *'There is sufficient evidence, both empirical and modelled, to show that ADDs can cause disturbance and displacement of cetaceans'*.

All species of whales, dolphins and porpoises are protected by the 1994 Habitats Regulation and are known as European Protected Species (EPS), making it an offence *'to deliberately or recklessly disturb any dolphin, porpoise or whale'*, under Habitats Regulation 39(2) as amended in Scotland. This law applies to individual cetaceans as well as at a species level, as established by the successful prosecution of a jet-skier who disturbed a small group of dolphins on a single occasion. It must therefore follow that it is an offence for a salmon farmer to disturb any individual cetacean, even once, with an ADD, and that it does not matter how large an area the disturbance or injury occurs in; it is still an offence under Habitats Regulation 39(2).

The ADDs on a farm at Corpach Bay would have a cumulative impact with the ADDs used on Marine Harvest's farm on the Jura side of Colonsay, disturbing cetaceans across a very large area.

The research showing disturbance is very clear. One study¹ found that 96% of porpoises were excluded from stations 7.5 km from a single active ADD at a received sound level of 113dB re 1 µPa (RMS). Aquaculture ADDs output from 179-194 dB re 1 µPa (RMS). They are normally used in multiple arrays of between 4 and 20 ADDs per farm. Disturbance has been recorded by Kok, at 100dB re 1 µPa (RMS) and hearing injury at short exposures to 164 dB² and longer exposures at lower levels. A report to SNH stated *"the risk that ADDs at Scottish aquaculture sites is causing permanent hearing damage to marine mammals cannot be discounted"*.

¹ 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* ² Lucke *et al.* (2009) Temporary shift in masked hearing thresholds in harbour porpoise after exposure to seismic airgun stimuli. *J Acoust Soc Am* 125:4060-70

² 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*.

The latest research, published this year ³, was *'the first broad-scale measure of the acoustic footprint of ADDs used in the Scottish salmon aquaculture industry'* with 11 years of data (to 2016) from the west coast, much of it collected by the Hebridean Whale and Dolphin Trust.

The study found that in 2015, 278 active ADDs were detected in its west coast survey area. It also found *'a steady increase in ADD detections ... as well as substantial geographic expansion. This study demonstrates that ADDs are a significant and chronic source of underwater noise on the Scottish west coast with potential adverse impacts on target (pinniped) and non-target (e.g. cetaceans) species.'*

'...In Scotland, the deployment of multiple ADD transducers per fish farm (e.g. one per cage) is common (Northridge et al., 2010)'

'...despite being widely used as mitigation to seal depredation at aquaculture facilities, consistent long term effectiveness of ADDs in reducing depredation has yet to be conclusively proven...In contrast, there is considerable evidence for the unintentional effects of ADDs on non-target species'

'Given present knowledge of ADD signals' effects on species such as harbour porpoises, the widespread and increasing use of ADDs in Scottish waters could therefore have a range of negative impacts including causing chronic reductions in hearing thresholds (Götz and Janik, 2013; Lepper et al., 2014), and/or the potential for exclusion from key habitats, risking creating barriers to their movement (Johnston, 2002), all of which can have long-term fitness and population-level consequences.'

Given that there is scientific evidence demonstrating that ADDs do disturb and can injure cetaceans, MS should enforce Habitats Regulation 44, by requiring farms that might disturb cetaceans with ADDs to hold EPS licenses. It has not done so. A typical open cage salmon farm could not pass any of the 3 tests required before an EPS licence can be issued.

So far 9000 people have signed a Change.org petition on this subject to the Cabinet Secretary for the Environment (<https://www.change.org/p/roseanna-cunninham-scottish-government-cabinet-secretary-for-the-environment-save-dolphins-porpoises-and-seals-from-scottish-salmon-farms>).

Disturbance of cetaceans by unlicensed ADDs is also subject to a complaint to the EU.

The ECCLR Committee's recent report into salmon farming said: *'The*

³ *Mapping widespread and increasing underwater noise pollution from acoustic deterrent devices.* Findlaya et al. Marine Pollution Bulletin 135 (2018) 1042–1050.

committee has significant concern about the use and operation of ADDs and their cumulative impact and considers all fish farms in Scotland should be required via legislative or any other appropriate means, to follow the position of the Aquaculture Stewardship Council in relation to ADDs. This ensures fish farms cannot use ADDs'

Not only are the impacts to cetaceans being questioned but the actual long-term effectiveness of these devices to seals is also under scrutiny (SMRU, 2011).

Seals

Grey and common seals are also PMFs and both species pup on the beaches of Jura, Islay and Colonsay, as well as feeding all around their shores.

Kames' EIA template says that predator control will be 'primarily' achieved by good husbandry but that as well as using ADDs they will apply for licences to shoot seals as a last resort.

The site will be primarily unmanned. How could its operators to its likely ADD EMP licence conditions that the devices should only be turned on when there is a clear threat of predation, and turned off again immediately the seal has been deterred?

The US Marine Mammal Protection Act will come into force in 2022 but requires countries to be working toward compliance by 2019. If Scotland fails to do so it will face an export ban. Seal shooting has to end.

There is an effective solution, using double nets, correctly tensioned. Some companies already use them here, others use them abroad. They cost more but they represent best practice in this respect.

Farms not using the best technology are not complying with the licensing condition to only shoot seals as a last resort.

The ECCLR report said: '*The committee considers the industry should manage the risk of predation through extension of the use of double skinned predator nets'*.

Otters

Otters are also a European Protected Species. It is illegal to capture, injure, kill or harass otters or group of otters, or to disturb an otter while it is occupying a structure or place used for shelter or protection, or to disturb one while it is rearing or otherwise caring for its young, or to disturb one in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species, or to disturb one in a manner or in circumstances

likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young.

Jura has a particularly strong population of otters, which breed on its west coast. Newly independent young otters depend on eating crabs for their survival. Crabs are poisoned by emamectin benzoate and the other pesticides used on fish farms. Otters may also be disturbed by fish farm activities. None of these impacts have been assessed.

Golden Eagles and other protected birds

The Isle of Jura is a Golden Eagle Special Protection Area (SPA). There are four golden eagle territories within 10km of this site. Development proposals within an SPA which are likely to have an impact on the designated species must undergo an 'Appropriate Assessment'.

Other protected species nesting within close range or under a potential helicopter flight path of this proposal include white tailed eagles, peregrine and hen harrier. Nest sites of these species have not been identified nor have the potential impacts on these species been assessed.

Tourism

Tourism's value to Scotland dwarfs fish farming. In Argyll and Bute it provides almost 25% of private sector jobs (the highest in Scotland) and supports other service industries.

The wildness of Jura's landscape is the main reason that people visit it, and 'landscape' is the number one reason given by Scotland's visitors overall, according to VisitScotland surveys. Fish farm cages never feature in photos advertising Scottish tourism but their on tourism and the many sustainable jobs it supports in Argyll is usually dismissed.

The Government and industry-funded (SARF) study⁴ usually used to do so actually does nothing of the sort. It actually shows that a quarter of people surveyed did not want to see an increase in the number of fish farms; over a third didn't want to see them get any bigger and 10% said they would be less likely to visit these locations again. 48% of respondents said the expansion of fish farming would negatively impact the scenery and 46% said it would negatively impact the natural environment.

Deer stalking and wild fishing are an important part of the Jura economy, with the appreciation of its scenery part of the experience. The attraction of this landscape to these visitors will be lost if this development takes place and the island's economy will suffer as a result.

⁴ SARF045 study: Assessment of evidence that fish farming impacts on tourism. F Nimmo. R Cappell. Aquaculture

