

Major Applications Team
Argyll and Bute Council

By email only to: centralvalidationteam@argyll-bute.gov.uk

25 February 2021

Our ref: CDM161826

Your ref: 20/01345/FF

Dear Sir / Madam,

20/01345/FF – Formation of fish farm incorporating twelve 120m circumference circular cages and siting of feed barge, North Kilbrannan fish farm, North of Cour Bay.

Town and Country Planning (Scotland) Act 1997 (as amended)

Thank you for your consultation requested dated the 21st January 2021, requesting comments on additional supporting information received for the proposed North Kilbrannan Sound Fish Farm (hereafter referred to as 'the Proposal').

1. Summary of Our Advice

This Proposal could be progressed with appropriate mitigation. However, because it could affect internationally important natural heritage interests, **we object to this proposal unless it is made subject to conditions so that works are done strictly in accordance with the mitigation detailed in our appraisal in Section 3 and Annex 1 below.**

2. Background

We previously provided advice on this Proposal to Argyll and Bute Council on the 14th October 2020. In our response, we highlighted that the Proposal was likely to have a significant effect on the Atlantic salmon qualifying interest of the Endrick Water Special Conservation Area (SAC), however we were unable to undertake an appraisal of the Proposal due to a lack of information in the Habitats Regulation Appraisal. As a result, we issued a holding objection and requested that the EMP be revised to include details of how the plan will be protective of the freshwater salmon population of the Endrick Water SAC.

Following consultation with the Applicant (MOWI), a revised EMP has now been submitted in support of the application and we provide advice on this in the following sections. We note that additional information has been provided by MOWI in relation to the technical specification of equipment, however we will not be providing comment on this as it is not within NatureScot's remit as a statutory consultee on fish farm applications.

3. Protected Areas

3.1 Endrick Water Special Conservation Area (SAC)

In our view, this Proposal is likely to have a significant effect on the Atlantic salmon qualifying interest 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 qualifying interest. To help you do this we advise that, in our view, on the basis of the information provided to date, if the Proposal is undertaken strictly in accordance with the revised EMP (December, 2020) and the suggested planning conditions below, then the Proposal will not adversely affect the integrity of the site.

In addition to the measures contained within the EMP, we suggest the following planning conditions are applied to any consent:

- The site will not be stocked until the wild fish monitoring plan has been agreed, including a requirement to monitor the juvenile salmon population in coastal waters within a zone of 30km from the Management Area; and
- As part of the end of cycle review the site will not be restocked until the review has been agreed by Argyll and Bute Council in consultation with NatureScot.

See Annex 1 for further details and reasoning of this recommendation.

Please do not hesitate to contact Catriona Laird (Catriona.laird@nature.scot) if you have any queries regarding our advice.

Yours sincerely,



Stan Phillips
Operations Manager
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Annex 1 – Appraisal of the Impacts of the Proposal and Advice

NatureScot’s appraisal of the impacts on the Endrick Water SAC

The Endrick Water Special Area of Conservation (SAC) is classified for its Atlantic salmon, brook lamprey and river lamprey qualifying interests. Further details of the Endrick Water SAC, including the Conservation Objectives for the site, can be found on the SiteLink page of the NatureScot website at <https://sitelink.nature.scot/site/8252>.

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 2010 as amended, 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 a Habitats Regulations Appraisal). The NatureScot website has a summary of the legislative requirements¹.

In our view, from the information available, it appears that in this case the Proposal is not directly connected with or necessary for the conservation management of the site. Hence, further consideration is required.

An ongoing evaluation of the recent increase of marine fish farm activity in the upper Clyde estuary has identified a potential risk to the Endrick Water SAC through salmon smolt and sea lice interaction. In our view, this Proposal is likely to have a significant effect on the Atlantic salmon feature of the Endrick Water SAC due to:

- The risk posed as a result of the potential impacts of sea lice on Atlantic salmon smolts emigrating through the Firth of Clyde; and
- Genetic introgression should farmed Atlantic salmon escape in to the wild.

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. Brook lamprey and river lamprey will not be directly impacted by the proposed development.

The revised EMP (MOWI, December 2020) in combination with the suggested planning conditions will provide Argyll and Bute Council with an enforceable framework to ensure that any elevated risk to the Endrick Water SAC as a result of this Proposal can be identified and mitigated thus ensuring that any adverse effect on the integrity of the site will be avoided. In addition to adherence to the EMP process, managing risk to the Endrick Water SAC qualifying feature can be further mitigated by full adoption of the current Scottish Technical Standards and embedded best practice to mitigate the risk of equipment failure and subsequent farmed salmon escapes.

We therefore advise that on the basis of the appraisal carried out to date, if the Proposal is carried out strictly in accordance with the revised EMP, our conclusion is that the Proposal will not adversely affect the integrity of the Endrick Water SAC:

1. Under the revised EMP, the Applicant will undertake a programme of wild fish monitoring to measure levels of sea lice infestation pressure on wild salmonids in coastal waters within a zone of 30km from the Management Area (Section 5.1 of the EMP). For the avoidance of doubt, we recommend that a planning condition is applied to any consent that states that the site is not stocked until the monitoring plan has been agreed, including a requirement to monitor the juvenile salmon population.
2. The Applicant will keep a weekly record of estimated total lice emissions which will be used to calculate a ‘lice load’ in the Management Area (Section 5.2 of the EMP).

¹ <https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra>

3. The Applicant will carry out sea lice dispersion modelling as part of the plan. This will be used to guide the monitoring strategy (Section 5.3 of the EMP).
4. The Applicant will work with the Argyll District Salmon Fishery Board to design an appropriate acoustic tracking study which aims to address information gaps associated with the migration of salmon smolts (Section 5.4 of the EMP).
5. An additional monitoring programme will be designed and implemented to produce data on the health of wild salmonid populations in the Endrick Water SAC (Section 5.6 of the EMP).
6. The EMP commits the Applicant to meet with stakeholders at least twice per complete production cycle. Meetings will be scheduled to take place prior to the wild smolt migration periods and one meeting to be held at the end of the production cycle (Section 6.3 of the EMP). In addition to this, we recommend that as part of the end of cycle review, the site will not be restocked until the review has been agreed by Argyll and Bute Council in consultation with NatureScot.
7. The Applicant will adhere to the Scottish Technical Standard for aquaculture equipment to reduce the risk of equipment failure and the subsequent occurrence of any significant escape of farmed salmon escapes.

In view of the above, we consider that, with the implementation of mitigation in the form of the revised EMP and our suggested planning conditions, all of the Conservation Objectives for the site will be met for the Atlantic salmon qualifying interest and there will be no adverse effect on the integrity of the SAC from the Proposal either on its own or in-combination with other developments.

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

Further information on our appraisal to inform the appropriate assessment

Extensive scientific literature² exists which demonstrates the negative impacts of aquaculture-derived sea lice on the early marine survival of post-smolt Atlantic salmon (and sea trout, which may remain resident within the Inner and Outer Clyde) and the proximity of marine finfish aquaculture units³.

Site Condition Monitoring of the Endrick Water SAC showed that the Atlantic salmon qualifying interest was in unfavourable condition (for both juvenile and adult fish) in 2005 and 2011. The most recent assessments of adult Atlantic salmon carried out by Marine Scotland Science, to fulfil their reporting obligations under The Conservation of Salmon (Scotland) Regulations 2016, determined that, for 2019, the Endrick Water SAC met the criteria for inclusion in Category 2 (where the population has a 60-80% probability of meeting its Conservation Limit and may require management action to reduce exploitation).

The rod catch for the whole of Scotland, which is frequently used as a proxy for population trend, showed that the 2018 rod catch was at the lowest level since records began in 1952. Atlantic salmon, both nationally, and within the Endrick Water SAC, are therefore considered to be vulnerable.

Atlantic salmon are anadromous and undertake extensive migrations between freshwater and marine habitats. Smolt migration is associated with high mortality and is thus considered a critical life stage in the Atlantic salmon life history. Currently, only approximately 5% of smolts who make this journey return to freshwater as adults.

Smolts originating from the Lomond catchment (which includes the Endrick Water SAC) and the Clyde catchment (which includes the rivers Clyde, Gryfe, Black Cart Water and White Cart Water) migrate to their

² <https://www.gov.scot/publications/scottish-marine-freshwater-science-volume-6-number-2-spatio-temporal/pages/8/>

³ Middlemas S.J., Fryer R.J., Tulett D. & Armstrong J.D. (2013) Relationship between sea lice levels on sea trout and fish farm activity in western Scotland. *Fisheries Management and Ecology*, **20**, 68–74.]. And <https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Research/Aqint/troutandlice>

oceanic feeding grounds in the Norwegian Sea and West Greenland via the Inner and Outer Clyde. This means that these fish will pass through the main channel and southwards past the east coast of Bute and the islands of Little and Great Cumbrae (possibly including the Fairlie Roads) as they pass into the Arran Basin and outer Firth of Clyde.

Appraisal in view of the conservation objectives

The conservation objectives⁴ of the Endrick Water SAC are:

“To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying species that the following are maintained in the long term:

1. *Population of the species, including range of genetic types for salmon, as a viable component of the site*
2. *Distribution of the species within the site*
3. *Distribution and extent of habitats supporting the species*
4. *Structure, function and supporting processes of habitats supporting the species*
5. *No significant disturbance of the species.”*

The key conservation objective that, without appropriate mitigation, may be compromised as a result of this Proposal is:

1. *Population of the species, including range of genetic types for salmon, as a viable component of the site*

The potential effects of sea lice dispersed from the fish farm and genetic introgression, should escaped farmed salmon breed with wild salmon from the Endrick Water SAC, need to be mitigated to ensure that this conservation objective will be maintained.

Whilst we do not know the exact migration route of Atlantic salmon post-smolts emigrating from the Endrick Water SAC, there is potential for them to pass through lice dispersion plumes emanating from the Proposal. On this basis, our advice is that there is a likely significant effect and appropriate assessment is required. In reaching this conclusion, we acknowledge that there is potential for interactions to occur between sea lice arising from the Proposal and Atlantic salmon post-smolts emigrating from the Endrick Water SAC.

However, our view is that the Proposal would not adversely affect the integrity of the SAC as we consider that short term elevated lice levels will not compromise Conservation Objective 1: *‘Population of the species, including range of genetic types for salmon, as a viable component of the site’*. However, persistent elevated lice levels recurring during periods of the smolt run could, in the long-term, compromise this conservation objective. A key element of the EMP approach is to ensure that the Local Planning Authority (LPA) has a mechanism in place to influence the future management of the farm once planning consent has been granted. This is achieved through the commitment not to restock the site until the review process has been agreed with the LPA. We are satisfied that the EMP approach that we currently advocate provides the LPA with an enforceable framework to ensure that they have an early warning mechanism that gives them the ability to: a) identify any potentially elevated risk to the SAC that would be posed by the continued operation of the site, and b) influence / enforce on-farm management so as to mitigate that potential risk. Should the LPA deem that: a) past management has not been effective, b) the risk to the population is too high and / or c) that there are no additional measures that would be suitable to address any potentially elevated risk, then they have an enforceable mechanism in place to limit further production at the site. In doing so they can

⁴ Endrick Water SAC – Conservation Objectives. Available at: <https://sitelink.nature.scot/site/8252>.

ensure that the proposal will not compromise the conservation objectives, thus ensuring that it will not adversely affect the integrity of the SAC.

The revised EMP submitted by the Applicant in combination with the suggested planning conditions provides Argyll and Bute Council, as Competent Authority, with an enforceable framework to ensure that any elevated risk to the Atlantic Salmon feature of the Endrick Water SAC can be mitigated, thus ensuring that the population of the species as a viable component of the site can be maintained in the long term. The EMP and associated monitoring and review process provides an early warning approach to identify any elevated risk to the wild Atlantic salmon qualifying feature and ensures there is an enforceable framework in place to mitigate the risk before any adverse effect on site integrity (AESI) can occur.

To ensure the risk of genetic introgression is mitigated we would advise that adherence to the Scottish Technical Standards for aquaculture equipment is a mandatory requirement.

Endrick Water Site of Special Scientific Interest (SSSI)

Our advice on the Endrick Water SAC also applies to the Endrick Water Site of Special Scientific Interest.