

Email received from Kevin Hodnett, DAFM 16.11.2020

Dear Mary,

I refer to your email of 23rd September and attachments contained therein.

Your email invited this Department to make submissions as provided for under Section 46(1)(a) of the 1997 Fisheries (Amendment Act).

The Marine Institute are as you aware, the scientific advisors to the Department of Agriculture, Food and the Marine in relation marine matters. I have consulted with Marine Institute in relation to the documents provided by you and am advised as follows:

1. Natura Impact Statement (NIS)

The NIS was prepared by the consultants Watermark aqua-environmental on behalf of MOWI Ireland in response to a request issued by the Aquaculture Licences Appeals Board (ALAB) to Mowi Ireland on 20th June 2019.

The NIS considers the potential impacts of the proposed salmon farm at Shot Head on the conservation objectives for fulmar, gannet and guillemot, where one or more of these species are present in all six identified SPA sites that are considered to be connected to the Shot Head site. The SPAs considered include:

- Beara Peninsula SPA (Site Code 004155)
- The Bull and the Cow Rocks SPA (Site Code 004066)
- Deenish Island and Scarriff Island SPA (Site Code 004175)
- Iveragh Peninsula SPA (Site Code 004514)
- Skelligs SPA (Site Code 004007)
- Puffin Island SPA (Site Code 004003)

The Sheep's Head to Toe Head SPA site is not included in the scope of the NIS as the SCI interests for that site (Chough, Peregrine) were considered to not be at risk and were screened out at Stage 1 (the AA Screening process).

The NIS presents a summary of knowledge with respect to: biology and distribution, feeding, foraging and scavenging behaviour, breeding and population status and the protected status of Gannet, Fulmar and Guillemot populations in Ireland, and also considers their population status and trends throughout their respective ranges. The status and trends of populations in Ireland and the southwestern populations associated with six SPA's in the area surrounding Bantry Bay in particular are considered.

Section 2 of the NIS individually investigates the proximity of the colonies and foraging ranges for the three SCI species, to the densest assemblages of marine cage aquaculture activity in Europe (Scottish west coast and Norway) and refers to the status and trends of SCI populations that can be considered connected to the aquaculture sites, by virtue of their foraging ranges. The specific (generic) conservation Objectives for each designated site are stated at Section 2.7.

Section 3 reviews present levels of knowledge relating to the distribution, status and life histories of the three species concerned and assesses the likely scale of impacts from the development of the Shot Head site on the conservation objectives for relevant species.

Section 4 reviews the relationships between the subject seabirds and the Shot Head site in isolation and in combination with other aquaculture activity in Bantry Bay as a whole. The subject species foraging ranges, potential connectivity to Bantry Bay aquaculture sites and confirmation of degree of obstruction to foraging are considered, analysed and evaluated. The document also describes and reviews the relative impact potential to seabirds of finfish pen and longline shellfish installations in Bantry Bay, including spatial impacts, attraction and predation effects, effects of artificial lighting and disturbance effects.

Potential mitigations used in fin fish aquaculture to eliminate or minimise the scale and/or frequency of occurrence of a range of potential sources of impacts are described. These include, *inter alia*:

- Appropriate bird netting mesh size covering entire pen.
- Regular net checks and maintenance.
- Bird net maintenance including correct net tension.
- Use of visual bird deterrents (model hawks/owls).
- Design of railings, floats, net rings to reduce roosting sites.
- With the exception of the use of visual bird deterrent,

The NIS notes that the mitigations described are employed as standard practice across all marine sites operated in Ireland by the applicant.

At Stage 2 (NIS), the impact of a project or plan alone and in combination with other projects or plans on the integrity of the Natura 2000 site is considered with respect to the conservation objectives of the site and to its structure and function.

The NIS concludes that no far-field or near field impacts are expected to arise, either from the proposed CIFT Shot Head site in isolation, or in combination with any other current floating aquaculture operations in Bantry Bay.

When standard mitigations operated by modern salmon farming enterprises are combined with modern husbandry practices and farming technologies, the NIS concludes that impacts on seabird species have been minimised and are at a level where they do not impact SCI populations as demonstrated by the population status and trends for SCI species in Ireland and in the region of the proposed Shot Head farm in particular.

Observations

It is noted that the AA report prepared by MERC concludes that the NIS reaches objective and clear conclusions in relation to risks to achieving and maintaining the generic conservation objectives for each SPA site based on consideration of scientific and/or empirical evidence in relation to SCI ecology and biology, marine cage aquaculture and potential direct and indirect impacts of marine aquaculture on seabirds. The NIS recognises the deficit of data with respect to actual levels of interaction of marine cage farming on SCI species and notes that much of the evidence that is available concerning direct impacts e.g. seabed mortality, is more than 30 years old and relates to a period since when husbandry practices and farming technologies have changed dramatically.

The Department and the Marine Institute agree with this conclusion. It is noted however, that the NIS does not consider other potential sources of impact that have potential to give rise to in-combination effects and which might amplify any effects associated with the operation of the Shot Head site.

2. Appropriate Assessment Report

The Appropriate Assessment Report was prepared by MERC Environmental Consultants. The report was commissioned by the Aquaculture Licences Appeals Board (ALAB) for the purpose of ALAB's Appropriate Assessment (AA) in relation to the potential for a proposed salmon farm at Shot Head to cause adverse impacts on the conservation objectives for Special Conservation Interests (SCI's) of a number of sites designated as Special Protection Areas (SPA's).

The report notes that although Bantry Bay is not a designated Natura 2000 site and that the proposed salmon farm is not located within a Natura 2000 site a number of SPA sites are considered to be connected to the proposed development in that Bantry Bay provides a common foraging area for SCI's. The foraging range of Gannet, Fulmar and Guillemot with breeding populations within six SPA's (Bull and Cow Rocks, Skellig, Beara Peninsula, Deenish Island and Scariff Island, Iveragh Peninsula, Puffin Island) includes the open coastal waters of Bantry Bay. Gannet, Fulmar and Guillemot are SCI species within at least one of the five SPA's. Fulmar breeding sites are also present along the northern shore of Bantry Bay within Beara Peninsula SPA.

Section 5.1 of the report considers the use of Bantry Bay by Fulmar, Guillemot and Gannet based on available published data. The results of surveys from both boat based transects and land based watches using standard survey methods provide data on species richness, density and seabird distribution in Bantry Bay. While surveys were completed between 2001 and 2004 it is concluded that the distribution are considered likely to occur today. Seabirds were recorded in low densities throughout Bantry Bay, with highest densities in the outer bay. The inner bay supported a higher diversity of species, with the occurrence of both inshore and offshore species. Tracking data shows that tagged Gannets from the Bull Rock used Bantry Bay for foraging, providing a clear connection between this SPA and the Bay. Other records for Bantry Bay show its use by Fulmar (including breeding), Guillemot and Gannet (both non breeding).

Information in the ecology of Special Conservation Interest species is presented in Section 5.2 of the report.

Section 6 of the report considers the potential impacts on SCI species. The following issues were considered and assessed:

Disturbance

Disturbance effects are considered in Section 6.1 of the report. It was considered that disturbance (episodic and repetitive, rather than on going/permanent) by boat traffic and activity at the salmon cage site is most likely to affect Guillemot. Flexibility in habitat use and tolerance of boat traffic indicate that Gannet and Fulmar are at low risk of disturbance and/or displacement effects. Cumulative impacts from vessel traffic disturbance are considered below.

Displacement

Displacement effects, in relation to potential reduction of available foraging habitat is considered in Section 6.2 of the report.

The area of Bantry Bay is estimated varyingly at between 37,000 and 42,000ha, depending on where the outer (seaward) boundary of the site is positioned and whether intertidal areas are taken into account. Using a mean estimate of 40,000ha as representing the area of foraging habitat potentially available to seabirds in Bantry Bay, the proposed fish farm reduces the area of available foraging habitat in Bantry Bay by 0.106%, assuming that seabirds are excluded permanently from the entirety of the proposed licensed 42.5 ha, which will not be the case.

Entanglement effects

Entanglement effects are considered in Section 6.3 of the report. It was noted that piscivorous seabirds are known to predate penned fish at marine salmon farms and that top nets are used to mitigate against loss of stock. Top nets, where they are not maintained correctly, present an entanglement risk to seabirds (including Gannets) trying to escape from salmon pens accessed through gaps or tears in the top net. Gannets have been recorded as a predatory seabird at caged salmon farms, however Cormorant, Heron (and seals) are more regularly recorded. It is considered that there is no evidence that entanglement causing mortality occurs routinely, however data in relation to entanglement related mortality of salmon farms using modern husbandry techniques and farming technology is lacking. While Gannet predation appears to be an occasional event at salmon cages, it does occur and with this there is a risk of mortality owing to entanglement.

Lighting associated effects

Lighting associated effects are considered in Section 6.4 of the report. It is noted that the only lighting that will be used on the proposed farm is required by law for the purposes of navigational safety. The corners of the proposed farm site will be marked with navigational buoys fitted with flashing yellow lights. Additional individual pen markers will also be deployed (flashing yellow) on individual pens. Navigational markers are standard features in coastal waters used to mark the presence of a wide range of structures including fish farms, sewer outfalls and other possible hazards to navigation. None of the proposed navigational lighting will provide constant light and lighting is intermittent, yellow flashing LED light. Therefore, they are not known to act to attract seabirds in their own right while seabirds may use floating navigation buoys as rafting sites. It was concluded that there is no evidence that lighting presents a collision risk to seabirds that are attracted to floating navigational buoys on which they are located. Furthermore, it was noted that Gannet and Guillemot are not normally night feeders or flyers. Fulmar do feed at night, but this generally takes place well offshore. Mussel longline sites are also equipped with navigational lights, under the terms of their licenses. Overall it was considered that available evidence supports the likelihood that no material risks to seabirds exists due to the use of lighting on the proposed Shot Head site.

Appraisal of the significance of effects

The assessment of the likely significant effects of the proposed installation and operation of the salmon farm at Shot Head on the SCIs is presented in Section 7 of the report. As described above, disturbance and loss/reduction of available foraging habitat may reduce foraging success for wintering and/or breeding birds, with implications for breeding success and productivity. The impact of mortality arising from entanglement

may also affect breeding success and productivity which in turn could cause long term colony population level effects. The assessment concluded that:

- The impacts of disturbance and loss of foraging habitat resulting from the construction and operation of the proposed salmon farm at Shot head are considered highly unlikely to have a significant effect on foraging opportunities for the Gannet SCI in Bantry Bay. Significant impacts on breeding success and productivity in connected SPA populations are therefore, not considered likely.
- The impacts of disturbance and loss of foraging habitat resulting from the construction and operation of the proposed salmon farm at Shot head are considered not likely to have a significant effect on foraging Fulmar in Bantry Bay. Significant impacts on breeding success and productivity in connected SPA populations are therefore not considered likely. Based on the literature Fulmar predation at salmon farms is rarely recorded, thus the risk of entanglement and mortality has not been considered.
- Guillemot may be displaced from potential foraging habitat by the proposed salmon cages. The fish farm development will lead to a reduction of 0.106% in the available foraging habitat in Bantry Bay. This is not considered to be a significant loss of potential foraging habitat. Boat activity may cause temporary displacement of Guillemots during movements to and from the fish farm site. It is likely that displaced Guillemot will forage elsewhere (moderate flexibility in prey and large foraging range) and it is likely that this displacement effect will not be significant, given the availability of extensive areas of open waters in Bantry Bay. Overall, Guillemot are recorded in low densities in Bantry Bay and not all Guillemot are likely to be from the connected to the Iveragh Peninsula SPA. Significant impacts on breeding success and productivity in connected SPA populations are not considered likely. While the lack of specific data for Guillemot use of the north shore of Bantry Bay (Shot Head to Bere Island) does not alter the findings of this assessment, in the context of overall management of seabird populations, the ongoing need for further data on seabird use and distribution within Bantry Bay is apparent.

The report also considered in-combination effects and impacts on SCI species arising from a number of human activities in Bantry Bay including commercial fishing, aquaculture, navigation and marine transport, marine leisure/recreation. Other activities including the use by the Irish Naval service operate a naval firing range from its base on Bere Island, agriculture, quarrying for aggregate and activities associated with onshore human use were also considered. The assessment of these activities are presented in Section 7.2 of the report. It was concluded that:

- The proposed Shot Head farm together with all commercial fishing activity is highly unlikely to produce in-combination effects that will impact on SCI species or the conservation objectives for any designated site.
- The proposed Shot Head farm together with all aquaculture activity is considered highly unlikely to cause in-combination effects that will impact on SCI species or the conservation objectives for any designated site. No significant source-pathway-target vectors have been identified whereby SCI species may be affected by present and proposed levels of additional farming activity.

- The proposed Shot Head farm together with all marine navigation and vessel movement activity is considered highly unlikely to cause in-combination effects that will impact on SCI species or the conservation objectives for any designated site. Proportionately, the development of the Shot Head site will cause a small increase in the total number of vessel movements in Bantry Bay. Vessel movements will not be within any SPA site and will be along established navigable corridors that are used extensively by existing aquaculture service and fisheries vessels. Existing levels of navigation and marine traffic are not known to cause significant displacement or disturbance and the SCI species demonstrate a high degree of tolerance to vessel traffic. Accordingly, no significant source-pathway-target vectors have been identified whereby SCI species may be adversely affected by likely increased levels of vessel traffic in combination with any other effect.
- There is no evidence that marine tourism and leisure activity generally present additional risks of in-combination effects and impacts to SCI species and conservation objectives for any SPA.
- interactions between other activities currently taking place and the SCI species are highly unlikely to lead to any adverse in-combination effect.

The assessment concludes that there are no significant lacunae and that risks to SCI species have been identified and appraised. The reasoned conclusion of this process is that the proposed Shot Head farm development will not impact adversely on SCI species or conservation objectives for connected SPA sites.

Observations

Notwithstanding the lack of consideration of in-combination effects in the NIS report, prepared on behalf of the applicant, the MERC (ALAB) report fully assesses cumulative and in-combination effects of all activities likely to occur in Bantry Bay on the relevant SCI species. This adequately addresses the lacunae in information as identified.

The Department and the Marine Institute fully agree with the overall conclusion presented in the in the AA report prepared by MERC. This supports and confirms the Marine Institute's conclusions presented in both the AA Screening Matrix and in the response previously submitted by the Marine Institute to ALAB on 28th March 2018, further to a request made under the provisions of Section 47 of the 1997 Fisheries (Amendment) Act and also in the subsequent amendment submitted to ALAB by the Marine Institute on 24th April 2018.

If you require any further information or clarification in relation to the above please do not hesitate to contact me.

Regards,

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Príomhoifigeach Cúnta
Assistant Principal

Aquaculture and Foreshore Management Division

An Roinn Talmhaíochta, Bia agus Mara

Department of Agriculture, Food and the Marine

Oifigí an Rialtais, An tIonad Náisiúnta Bia Mara, An Cloichín, Cloich na Coillte, Co. Chorcaí, P85 TX47.

Government Buildings, National Seafood Centre, Clogheen, Clonakilty, Co Cork, P85 TX47