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Department of Agriculture, Food & the Marine,
Aquaculture and Foreshore Management Division,

National Seafood Centre,

Clonakilty,

Co. Cork

3rd March 2026

Submission pursuant to the provisions of Article 5 (2) of Directive 2011/92/EU

A Chara,

Thank you for referring this notification to An Taisce in accordance with Section 10 of the Aquaculture (Licence Application) Regulations, 1998 (SI No 236 of 1998).

An Taisce has reviewed the 14 new licence applications for aquaculture development in Lough Swilly, licence numbers T12- 284, T12- 330A, T12- 330B, T12- 330C, T12- 339A, T12- 339B, T12- 339C, T12- 343A, T12- 462A, T12- 1020, T12- 1021, T12- 1022, T12- 1027 and T12- 1028.

Additionally, we note 4 other sites which are listed as undergoing licencing in Lough Swilly in the AA Screening document. While these are not listed on the DAFM website as currently undergoing public consultation, we will note their licence numbers here for inclusion in our comments to be considered by the Department if and as appropriate. They are licence numbers T12-211C, T12-288B, T12-288C and T12-343A.

We wish to make the following observation.

1. AA Screening Decision

The screening decision for the SPA bird species relies heavily on spatial overlap to determine potential impact. For example, Greenland White Fronted Geese, Greylag Geese, Teal and Whopper Swan, among others, were all screened out with the rationale:

'There is no overlap between the breeding or foraging habitats'

However, it is unclear what data underpins this conclusion. It does not appear that any bird surveys were specifically conducted for this assessment, nor does the screening conclusion cite specific extant data sources which were relied upon.

Clearly, bird species can be impacted by more than just overlap of their breeding or foraging habitat. Husbandry and harvesting activity may cause disturbance to waterbird species, both from the area of the cultivation and as a result of the access route for that site. Where such activity is intensive, and/or the species is very sensitive to such impacts, significant energetic and/or displacement impacts may occur. No analysis appears to have been provided assessing the occurrence of these screened out species in proximity to either the area of cultivation or the access route. The screening decision relies entirely on the lack of overlap, but does not indicate where the species occur, what their sensitivity is to flushing, and how increased activity may impact on them.

Gittings & O'Donoghue (2012)[1] categorised species' responses to oyster cultivation and reported considerable variation. Notably, Shelduck, Ringed Plover, Lapwing, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, and Great Black-backed Gull showed negative responses, while Grey Plover and Knot exhibited an exclusion response (i.e. complete avoidance of oyster trestle blocks). Species showing the strongest negative associations with trestles tended to be those that feed in large, tightly packed flocks (e.g. Knot, Sanderling, Dunlin). Gittings & O'Donoghue (2016)[2] suggested that these negative behavioural responses may arise because trestles interfere with flock cohesion, making it difficult for individuals in large flocks to maintain contact as they become dispersed across multiple lines of trestles. Another possible reason for waterbirds to avoid trestles is that the perceived predation risk may be higher within the trestle blocks due to the trestles interfering with sightlines causing increased vigilance and reduced foraging time.

[1] Gittings,T. & O'Donoghue, P.D. (2012). The effects of ontertidal oyster culture on the spatial distribution of waterbirds. Report prepared for the Marine Institute, Atkins, Cork.
[2] Gittings, Tom & O'Donoghue, Paul. (2016). The effects of intertidal oyster culture on the spatial distribution of waterbirds. Wader Study. 123. 10.18194/ws.00050.

Greenland White-fronted geese, for example, are one of the most sensitive goose species in Ireland to disturbance impacts and there is evidence suggesting that this species avoids human activity more than other geese. Table 4 in the NIS provides some assessment of avoidance behaviour, but only for sites which actually overlap the foraging area. This does not account for disturbance by human, boat or maintenance activity within a specific distance of the forage area.

As outlined by the NPWS in their AA guidance:

> *"The findings and conclusions of the screening process should be documented, with the necessary supporting evidence and objective criteria. This is of particular importance in cases where the AA process ends at the screening stage because the conclusion is that no significant effects are likely"*

We are of the view that the necessary supporting evidence and objective criteria have not been provided in this instance. The competent authority must be able to determine (to the requisite standard of proof) that significant environmental effects are not likely. Where a competent authority decides to permit a project without AA, it must give clear reasons as to why it was certain as to the absence of significant effects, and that there was no reasonable scientific doubt as to the possibility that the project would significantly affect a European site (Case C-721/21 Eco Advocacy, paragraph 43).

Additionally, we are aware of local IWEBS surveyors who have provided evidence in their own submission to the Department on these licences that Greenland White-fronted geese are in fact located southwest of T12/339A, T12/339B and T12/339C, highlighting internationally significant numbers of geese using this site. This has not been identified within the NIS and is an extremely worrying and problematic lacuna. In Kelly v An Bord Pleanála & Ors. [2013 No 802 J.R.], with reference to Commission v Spain c-404/09, the High Court held in para. 36 that the competent authority must carry out an AA for a plan or project in light of the best scientific knowledge in the field and that the final determination of the competent authority must include complete, precise and definitive findings. The case repeated the conclusion of the CJEU at para. 44 in Case C-258/11, namely that an AA:

> "*cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt*."

This test has not only been established in Irish law but further developed in recent case law, with reference to the Kelly judgment, in Connelly v ABP [2018] IESC 31 (paras. 8.15 & 8.16) and Foley v EPA & Ors and Hayes v EPA & Ors [2022] IEHC 470 (para. 118). This credible local knowledge which has been provided to the Department as part of this consultation, highlighting significant holes in the data and assessment would indicate the AA screening has not relied upon complete, precise and definitive data.

Additionally, the same lack of reasoned conclusion would be applied to the screening out of the River Leannan for Freshwater Pearl Mussel and Salmon, both of which are qualifying

interests. While the aquaculture may not prevent access for the salmon, which are inextricably linked to the freshwater pearl mussel life cycle, it does not assess the potential impact of increased water pollution on salmon fitness and population. We are of the view that the impacts of water quality as a result of increased deposition of pseudofaeces and siltation from oyster and mussel cultivation have not been adequately assessed. Although it is generally assumed that organic outputs fall to the sea floor directly beneath the trestles, and only cause localised enrichment, this is for small scale projects, and it is difficult to accurately predict the impacts of aquaculture as it intensifies and expands. Studies suggest that the environmental effects associated with oyster cultivation, such as increase in organic and silt composition become more severe in areas of large-scale cultivation as the water velocity can be decreased by the presence of the trestles (Nugues et al. 1996)[3].

Additionally, Estuaries are undergoing 'alarming declines' in water quality, according to the EPA, and Lough Swilly is only at moderate WFD status. 16 new licences are listed in Table 1 of the Marine Institute AA screening document, not including finfish applications. Indeed, Table 3 in the NIS articulates this very risk:

> *"Shellfish culture may result in increased enrichment due to production of faeces and pseudofaeces. The degree to which the material disperses away from the location of the culture depends on the density of culture stock on or above the seafloor and the current regime in the vicinity. Cumulative impacts on the seabed, especially in areas where dispersion of pseudofaeces is low, may occur over time. A number of features of the site and culture practices will govern the speed at which pseudofaeces are assimilated or dispersed by the site."*

As such, the impact of this on water quality should be considered as a potential pressure on the integrity of these QIs of the upstream River Leannan SAC, and these QIs should be screened in for additional assessment on these grounds.

2. 15% Threshold

Significance is determined in Section 4.3.4 of the NIS according to a number of criteria, one of which is the percentage overlap, with a reliance on 15% as a threshold:

> *"For the assessment, the 15% threshold detailed in Point 4 above applies to the habitats or MCTs that are overlapped by likely disturbing aquaculture activities considered in-combination with all other likely disturbing activities (e.g. fisheries, dredging)."*

[3] Nugues, M.M., Kaiser, M.J., Spencer, B.E. and Edwards, D.B. (1996), Benthic community changes associated with intertidal oyster cultivation. Aquaculture Research, 27: 913-924. https://doi.org/10.1046/j.1365-2109.1996.t01-1-00821.x

The source of this 15% threshold is unknown. The Commission framework on which it is allegedly based has not been included in the application documents, and it has not been possible to examine it. More fundamentally, it is not referred to in Article 17 of the Habitats Directive. It is also not referred to in Article 6(3) of the Habitats Directive which sets out the obligation for Appropriate Assessment. And it is not anywhere referred to in the case law of the EU Court of Justice. In short, we believe the ongoing reliance by certain State bodies on an allowable disturbance threshold of 15% in Natura 2000 sites is not compliant with the Habitats Directive. On the contrary, several judgements of the Court of Justice clearly set out very specific requirements in relation to site specific considerations and the thresholds of scientific certainty required for each of the different tests required to be addressed under Article 6(3) as clarified by the CJEU. The court's consideration of the case specific context for how effects need to be considered relies in large part on the specific ecological considerations at issue for the habitat or species at issue, and the nature of impacts.

For example, in Case C258/11 Sweetman, the loss of approximately 1% of the protected habitat was considered to be an adverse effect on the integrity of the site. Furthermore, in assessing the potential effects of a plan or project, their significance must be established in the light, inter alia, of the characteristics and specific environmental conditions of the site concerned by that plan or project as clarified by the CJEU in case c-127/02 Waddenzee. So both the project and site characteristics are required to be considered which is quite opposite to the very generic approach proposed with this 15% rule by the NPWS.

We note that the percentage overlap was used repeatedly throughout the NIS as a co-indicator of risk, for example Section 5.1.1.2 of the NIS for Intertidal mixed sediment with polychaetes:

> *'Furthermore, the level of overlap for these licensed sites is small (1.6km2 or 0.2% of the total feature). Therefore, there will be no adverse effects on the conservation objectives for intertidal mixed sediments with polychaetes from bag and trestle aquaculture.'*

And for Subtidal mixed sediment with polychaetes and bivalves in Section 5.1.1.3:

> *'The overlap is small, 5.21 km2 (0.4%) and the chance of disturbing siltation is low. Therefore, there will be no adverse effects on conservation objectives for the subtidal mixed sediment with polychaetes and bivalves MCT from intertidal bag and trestle culture.'*

And for Thyasira lexuosa habitat:

> *'The total overlap from bottom mussel on this MCT is 17.7% which, without considering any in-combination effects, exceeds the 15% threshold which is considered significant adverse effects. We, therefore, conclude that for bottom mussel culture on Muddy fine sand with Thyasira flexuosa there will be significant adverse effects* '

We submit that overreliance on an acceptable percentage disturbance is an unlawful approach to risk assessment under the Habitats Directive, and percentage overlap should not be relied upon when drawing conclusions for Appropriate Assessment.

3. Mud Community Complex

We note in the assessment of mud community complex that smothering is indicated as having a significant risk:

> *"Five of the sites are for bag and trestle culture on intertidal areas. One of these is currently licenced north of Inch Island. This MCT is not sensitive to siltation from faecal deposition from cultured individuals.* ***It has a high sensitivity however to smothering which would occur from positioning oyster trestles on the site.*** *This would not be a permanent change however and the area of smothering would be limited to the legs of the trestles themselves and have a small total footprint in the site. Pressure from smothering occurs whether or not trestles are in use therefore abandoned structures are still contributing to this pressure. The total area of licensed intertidal bag and trestle culture is 9.85km2 which is less than 1% of the total area of this MCT. Therefore, we conclude that there will be no adverse effects from intertidal aquaculture on mud community complex. We also recommend that licensees ensure that trestles which are not in use are cleared away from this MCT and no trestles are left abandoned in the area to ensure that the contribution to smothering comes from only trestles in use."*

We would question the limiting of the definition of smothering to being the area directly under the legs of the trestle. Table 3 defines smothering thus:

> *'Smothering (addition of materials biological or non-biological to the surface)'*

But Table 6 appears to limit the definition of smothering to purely being non-biological. In other similar pressure tables for NIS assessments for aquaculture, smothering is always defined as biological and non-biological. As such, we would suggest that as a preliminary matter, the exact definition of smothering should be determined in order to ascertain if the screening out of the mud community complex based on the footprint of the trestle legs was ecologically robust or not.

4. Native Oyster

This NIS outlines the following risks:

> *"The Ostrea edulis (native oyster) dominated community forms 5 large patches through-out the landward side of Lough Swilly SAC (Figure 3). There are two sites which slightly overlaps 1.1% of this MCT (Table 12). The sensitivity scores for this habitat are medium*

*to very high for almost all of the pressures occurring from shellfish aquaculture. In particular, t**he MCT is listed as very high for siltation and smothering and very high for the introduction of pathogens** as well as the effects of non-native species which will be dealt with in a later section. Given this sensitivity we recommend that there is no overlap between aquaculture activities and this MCT. **We conclude, therefore, that there will be a risk of adverse impacts on this MCT**."*

But then concludes:

"The level of overlap is small with both overlapping licences. We recommend that the boundaries for both licenses be amended to ensure no overlap with this MCT will occur. The marine community type maps which were published in 2011 need to be ground-truthed in this area for accuracy. Marine Institute survey data for the Ostrea edulis beds could, in part, be used for this purpose. If these measures are implemented then we can conclude that there will be no adverse effects on this MCT."

We would observe that while avoiding overlap is clearly welcome, it does not evidence that this is enough to prevent all the other pressures occurring from shellfish aquaculture, including siltation, smothering and the introduction of pathogens. Although it is generally assumed that organic outputs fall to the sea floor directly beneath the trestles, and only cause localised enrichment, this is for small scale projects, and it is difficult to accurately predict the impacts of aquaculture as it intensifies and expands. Studies suggest that the environmental effects associated with oyster cultivation, such as increase in organic and silt composition become more severe in areas of large-scale cultivation as the water velocity can be decreased by the presence of the trestles (Nugues et al. 1996)[4].

As such, we would observe that simply avoiding overlap is not enough to provide the necessary evidence for the decision maker to conclude, beyond reasonable scientific doubt, that there will be no adverse impact on the native oyster. The necessary legal test has not been met in this instance.

5. Water Framework Directive Assessment

We submit that the impacts of water quality as a result of increased deposition of pseudofaeces from oyster and mussel cultivation have not been adequately assessed for Water Framework Directive (WFD) obligations. Although it is generally assumed that organic outputs fall to the sea floor directly beneath the trestles, and only cause localised enrichment, this is for small scale projects, and it is difficult to accurately predict the impacts of aquaculture as it intensifies and expands. Studies suggest that the environmental effects associated with oyster cultivation, such as increase in organic and silt composition become

[4] Nugues, M.M., Kaiser, M.J., Spencer, B.E. and Edwards, D.B. (1996), Benthic community changes associated with intertidal oyster cultivation. Aquaculture Research, 27: 913-924. https://doi.org/10.1046/j.1365-2109.1996.t01-1-00821.x

more severe in areas of large-scale cultivation as the water velocity can be decreased by the presence of the trestles (Nugues et al. 1996)[5].

We note that there is no WFD specific assessment included with these licences, and we submit that there is a legal obligation to consider the impact of this licensing on WFD objectives. The recent ECJ ruling on Case C-461/13[1] on the dredging for navigation of the river Weser in Germany found that:

> "*Article 4(1)(a)(i) to (iii) of [the WFD] must be interpreted as meaning that the Member States are required — unless a derogation is granted — to refuse authorisation for an individual project where it may cause a deterioration of the status of a body of surface water or where it jeopardises the attainment of WFD objectives.*"

Furthermore, we note that Lough Swilly is currently assigned a moderate a status by the EPA for Water Framework Directive purposes. Given Lough Swilly is already failing in its WFD objectives, the decision maker must evidence how, in licensing multiple new and renewal aquaculture sites, this will not jeopardise the attainment of good WFD status. We do not see this analysis within the application paperwork. We would highlight that Article 5 of the Surface Water Regulations 2009 requires a public authority, in the performance of its functions, not to undertake those functions in a manner that knowingly causes or allows deterioration in the chemical or ecological status of a body of surface water.

6. Out of Date Bird Data

We would note that the NIS is relying on NPWS data from 2009/2010. This data is now at least 16 years old. The NIS then concludes, based on this 16 year old data:

> *"However, given the location of the flocks and the size and location of the intertidal trestles there is unlikely to be any overlap in the distribution, and adverse effects on the conservation objectives for Knot and Greenshank can be ruled out.* "

The credibility of basing this AA conclusion on such old data must be critically assessed by the decision maker. It is highly likely that the bird numbers and location have significantly changed in the intervening years, and updated bird data should be used to underpin any appropriate assessment conclusion which is drawn for these and other bird species, and the potential impact on the integrity of the SAC.

The Conclusion and Recommendation in the NIS highlights this failing:

> *"Flock maps from NPWS BWS survey for intertidal waders were generated in 2009/10. These data should be updated particularly within and around the north of Inch Island region and the Carraleena areas where there is large aquaculture licences for bottom*

[5] Nugues, M.M., Kaiser, M.J., Spencer, B.E. and Edwards, D.B. (1996), Benthic community changes associated with intertidal oyster cultivation. Aquaculture Research, 27: 913-924. https://doi.org/10.1046/j.1365-2109.1996.t01-1-00821.x

mussel and Pacific Oyster culture on trestles. It would also useful to revisit the Marine Community Types map to clarify to what extent areas are subtidal and intertidal."

As highlighted above, an AA "*cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt*.". This recommendation is a clear admission that the data upon which they are relying is outdated and as such the ecological and legal robustness of relying on this for the protection of a European protected site must be critically assessed by the decision maker.

7. SPA Bird Impacts

We note the following statement in the NIS:

"Therefore, adverse effects on Dunlin conservation objectives from intertidal aquaculture cannot be ruled out, particularly in the Ballybegley area where the new applications T12-339 A, B and C, T12-1027 and T12-1028 occur:

And similarly for Bar-tailed Godwit :

"Therefore, we cannot rule out adverse effects to Bar-tailed Godwit from intertidal oyster trestles and activities in Lough Swilly SPA or in the nearby Lough Foyle SPA."

However, the recommendation which follows is this:

"Intertidal aquaculture in the Ballybegley area of Lough Swilly SPA has the potential to displace and disturb Dunlin and Bar-tailed Godwit populations. Affects, on the Dunlin conservation objective "no significant decrease in the number or range of areas used by the species"; or the Bar-tailed Godwit conservation objective "No significant decrease in the range, timing or intensity of use of areas by Bar-tailed godwit" cannot be ruled out. Given the decreasing population trend of Dunlin in particular ***a precautionary approach to any new licences in this area should be taken****."* [our emphasis]

To be clear, what this NIS conclusion means for the decision maker is that these licences cannot be lawfully granted, unless article 6(4) IROPI is invoked. Licences T12-339 A, B and C, T12-1027 and T12-1028 must be lawfully refused, given the requirements of Article 6(3) of the Habitats Directive. Any favourable licencing decision on these, based on the extant assessment and information provided, would be subject to legal challenge.

The NIS also recommends:

"Extensive bottom mussel culture in the intertidal region has the potential to displace intertidal waders, particularly Curlew, Dunlin, Greenshank and Redshank from foraging habitat. They have the potential to affect the conservation objectives "no significant decrease in the number or range of areas used by the species". Licensing of bottom

mussel in the intertidal area should be treated with caution, given the decreasing trends for Dunlin, Redshank and Curlew, species which would suffer habitat loss due to the addition of seed mussel."

Again, we would highlight that the NIS has indicated that favourable licencing of these areas would potentially impact on the conservation objectives of the SPA. No suitable mitigation has been provided, as such, it is incumbent on the decision maker to lawfully refuse licences for any bottom culture mussel cultivation in the intertidal region. Specifically, this appears to apply to licence applications T12-037A1 and T12-251B. However, both these sites appear to have been licenced already. The former being a very large area of bottom cultured mussels (145.32 ha in area). Given the recommendation in this NIS, it is incumbent on the Department to urgently review these licences in light of this recommendation and the legal obligations under Article 6(2) of the Habitats Directive which requires that Member States take appropriate steps to avoid significant deterioration of habitats or disturbance of species in SACs.

8. Brent Geese

The NIS provides the following:

"There has only been one record in 2003 of Brent geese utilising Lough Swilly SPA during the winter therefore we can conclude that this species does not use Lough Swilly SPA. Therefore, there will be no significant adverse effects to the conservation objectives from the proposed activities."

This is manifestly erroneous, as large flocks of Brent Geese forage along the shores of Lough Swilly each winter, as evidenced by the summary from I-WeBS taken from Birdwatch Ireland (Table 1).

Table 1: I-WeBS survery data for Lough Swilly from Birdwatch Ireland

Sp Name	1% national	1% international	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Mean
Light-bellied Brent Goose	350	400	424*	613	578	770*	717	656	830*	478	690.2
Grey Heron	25	5000	59*	91*	64*	49*	66	61	82*	55*	62.6
Black Tern									2*		0.4
Pink-footed Goose			42	93*	42	293*	228*	77	314*	205*	223.4
Red-throated Diver	20	3000	34	29	16*	50	21*	10	35*	46	32.4

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Local I-WeBS surveyors have indicated that Brent Geese forage regularly along the shores of Ballybegley and the Quay Shore where the proposed trestles are mapped. As outlined above, an AA must contain precise and definitive findings, the NIS has clearly failed in that regard for Brent Geese, and further information must be sought by the decision maker prior to any decision being taken on these licences.

9. Non-native species

The NIS outlines that:

> *"Apart from the 'fine sand community complex' all marine community types found within the Estuaries QI in Lough Swilly are listed as having a high sensitivity to the introduction of non-native species."*

Feral gigas oyster populations are highlighted as being particularly problematic in Lough Swilly, indeed one of the applications intended on relying on these wild populations in order to populate their trestles:

> *"Seed for the three T12-339 sites (A, B, C) will be sourced from within the bay by dredging 'wild' pacific oysters and relaying them on to trestles in the licenced sites for conditioning and sustainable supply of raw product. These oysters will be a mixture of diploid and triploid individuals sourced from within The Lough from an IFI regulated fishery."*

The NIS references a recommendation from a study which suggested the following for sites where you have co-occurrence of native and pacific oysters, which occurs in Lough Swilly:

> *"given the possible effects of the spread of Pacific Oyster might have on the Native Oyster population, eradication of M. gigas where co-occurring arises, along with continuous monitoring of sites."*

And they conclude the following:

> *"Given the current presence of feral M.gigas within Lough Swilly SPA it is likely that any new applications will contribute to the problems in the Lough. Adverse effects to the conservation objectives for marine community types therefore, cannot be ruled out."*

The mitigation provided is the use of triploid seed, however the efficacy of this for dealing with the problem at hand is not evidenced. With the NIS providing just this by way of reassurance:

> *"Triploid oysters are, for the most part, considered reproductively sterile."*

No independent research is provided to underpin the scientific efficacy of this approach, and without knowing if this provides a 100% efficacy the risk cannot be effectively assessed by the decision maker. We would argue that the lack of evidence of efficacy of this as a mitigation measure is a legal lacuna, and given the risks highlighted to all the QI marine habitats, bar one, found in the estuaries, no decision should be made until this is established. Abiding by the precautionary approach, and in line with the study cited, consideration must be given to no further cultivation of any pacific oysters in in Lough Swilly.

10. Value of the Site as Migratory Staging Post

Lough Swilly is a staging post for tens of thousands of wintering birds each winter. All of Irelands wintering Greenland white-fronted geese population stop at Lough Swilly upon arrival to Ireland and before migrating back to their breeding grounds in order to feed on the agricultural lands along Lough Swilly. In addition, geese from outside of Ireland including Scotland make landfall in Lough Swilly during migration. Many thousands of birds use Lough Swilly as a first stop migrating south and last stop going north, with birds from all over Ireland, UK, France and Western Europe relying on it. The impact of this intensification of aquaculture cultivation on the site as a staging post for thousands of migrating birds does not appear to have been adequately assessed.

We should be grateful if you would provide to us in due course: an acknowledgement of this submission; the nature of the decision; the date of the decision; in the case of a decision to grant an approval, any conditions attached thereto, and the main reasons and considerations on which the decision is based; and, where conditions are imposed in relation to any grant of approval, the main reasons for the imposition of any such conditions.

Is mise le meas,



Dr. Elaine McGoff, Head of Advocacy

An Taisce – The National Trust for Ireland