



Appropriate Assessment Conclusion Statement for aquaculture activities at Site T08/115 in Galway Bay Complex SAC (Site Code: 000268) and Inner Galway Bay SPA (004031)

This conclusion statement relates to the application for an Aquaculture Licence at Site T08/115 on the foreshore in Aughinish Peninsula, Co. Clare. The proposed project in the Application for an Aquaculture Licence was considered under the requirements of the European Communities (Birds and Natural Habitats) Regulations 2011 and the Habitats and Birds Directives (2009/147/EC and 92/43/EEC). The Site is within the bounds of the Galway Bay Complex Special Area of Conservation (“**SAC**”) and Inner Galway Bay Special Protected Area (“**SPA**”). The Appropriate Assessment reports (Marine Institute, 2019; Atkins, 2019), the Appropriate Assessment Conclusion Statement (DAFM, 2020) produced in relation to aquaculture activities in both the Galway Bay SAC and SPA were considered when compiling this conclusion statement. The Technical Advisor Interim Report produced by Eco Eireann (Eco Eireann, 2021) and the Addendum to the Technical Advisor’s Report produced by its own technical advisor (ALAB, 2022) were also considered when compiling this conclusion statement.

Aquaculture Activity

The application is for the cultivation of Native and Pacific Oysters using Bags and trestles, float and bag, moulded baskets and longlines on Site T08/115A, totalling 17.754 hectares, on the foreshore in Aughinish Peninsula, Co. Clare.

Galway Bay Complex SAC

Galway Bay Complex is designated as a Special Area of Conservation (SAC) (Site Code 000268) under the Habitats Directive. Galway Bay Complex SAC is a large site situated on the west coast of Ireland, comprising the entire marine area of inner Galway Bay, extending from the north shore (Silverstrand west of Galway city) to Tawin in the middle of the bay to a point on

the south shore west of Ballyvaughan in County Clare. The marine area is designated as a large shallow inlet and bay and for intertidal mud and sand flats not covered by seawater at low tide. The bay supports a variety of sub-tidal and intertidal sedimentary and reef habitats including habitats that are sensitive to pressures, which might arise from fishing and aquaculture, such as maerl (coralline algae) and seagrass beds. The area is also designated for and supports significant numbers of Harbour Seal and Otter while salmon and sea lamprey, designated in the Lough Corrib SAC which flows into the north east corner of the Bay, migrate through the Bay as smolts and as mature animals returning from sea.

Conservation Objectives for these habitats and species (within the Galway Bay Complex SAC) were identified by National Parks and Wildlife Service (NPWS) and relate to the requirement to maintain habitat distribution, structure and function, as defined by characterizing (dominant) species in these habitats. For designated species the objective is to maintain various attributes of the populations including population size, cohort structure and the distribution of the species in the Bay. Guidance on the conservation objectives is provided by NPWS.

A full assessment was carried out in the Marine Institute Report (2019) on the likely interactions between aquaculture operations and the feature of the Annex 1 habitats Mudflats and Sandflats not covered by seawater at low tide (1140), Large Shallow Inlets and Bay (1160) and Reefs (1170). In addition, a number of other habitat features were screened and excluded from further consideration as no spatial overlap or likely interaction with aquaculture activities (existing or proposed) was expected to occur. These included (1150) Coastal lagoons, (1220) Perennial vegetation of stony banks, (1310) *Salicornia* and other annuals colonising mud and sand (1330) Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) and (1410) Mediterranean salt meadows (*Juncetalia maritimi*). The Marine Institute assessment also looked particularly at habitats and species that are key contributors to biodiversity and which are sensitive to disturbance as these should be afforded a high degree of protection i.e. thresholds for impact on these habitats is low and any significant anthropogenic disturbance should be avoided. In Galway Bay these habitats included (1160) *Zostera* dominated community complex and (1160) Maerl dominated community.

The likely effects of the aquaculture activities were considered in light of the sensitivity of the constituent communities of these Annex 1 habitats. The likely interactions between the proposed aquaculture activities and the Annex II Species Harbour Seal (*Phoca vitulina*) and Otter (*Lutra lutra*) were also assessed by the Marine Institute report (2019).

Appropriate Assessment of the SAC in relation to Site T08/115

The Marine Institutes Report (2019) found that the majority of activities, at the current, proposed or likely future scale and frequency of activity are consistent with the Conservation

Objectives. The general exceptions which effect Site T08/115 are the introduction of, or further spread of non-native species and potential impacts on harbour seal.

The presence of non-native species *Didemnum* sp. in Galway Bay is acknowledged and in particular, is associated with structures used to culture oysters (trestles). The AA Report recommended that best practice should be employed to ensure that structures and netting are kept clean at all times and that any biofouling be dealt and disposed of in a responsible manner such that it is removed from the marine environment and does not pose a risk to the conservation features of the site. The draft Code of Practice produced by Invasive Species Ireland' is recommended as a suitable reference for appropriate management actions.

Notwithstanding that current levels of feral Pacific oyster recruitment in Galway Bay are considered relatively low, the Marine Institute Report (2019) recommended that operators be encouraged to increase their use of triploid oysters in order to mitigate the risk of successful reproduction.

The Marine Institute Report recommended that acceptable sources of seed (in terms of alien species risk) are identified for aquaculture culture operations and that all future movements of all shellfish stock (mussels, oysters and clams) in and out of Galway Bay Complex SAC should adhere to relevant fish health legislation.

The current levels of licensed aquaculture (existing) are considered non-disturbing to harbour seal conservation features in all areas of the SAC. In relation to new licence applications and given the potential broad range of Harbour Seal within the SAC, the Marine Institute Report noted that the risk of disturbance to Harbour Seals should be assessed on the basis of the nature of the culture type and location relative to seal sites. Harbour seals have been recorded in the Aughinish bay to the southeast of Aughinish island hauled out and resting (Biodiversity Ireland, Checked 01/04/22) at a distance of more than 1km to the proposed site. It is considered that the proposed site is not in close proximity to any areas mapped as important breeding, resting or haul out sites for harbour seal and therefore is not considered to pose a significant risk of disturbance.

In relation to Site T08/115 specifically, the Appropriate Assessment Conclusion Statement prepared by DAFM (2020) stated that:

“Site T08/115A, was found to also have the invasive seaweed *Sargassum muticum* within the site. Aquaculture activities would likely result in dislodging of this species and dispersal beyond the boundaries of the site. Furthermore, it is likely that the macro-alga will settle on the culture species in bags or baskets, i.e., oysters, which could act as a vector if they are relocated to other grow out areas both within and outside Galway Bay. Due to the invasive nature of the *Sargassum muticum* the use of site T08/115A and its environs would only

increase the spread within the bay. The site was also found to be characterised by the presence of extensive and evenly spaced boulders interspaced by long 'pathways' comprised of muddy sand. These boulder fields, in places, had clear boundaries marked on corners with standing stones. Toward the southern end of the site the substrate consists of mobile sands which border the main channel into Aughinish and Corranroo Bays. Throughout the site individuals of the native oyster, *Ostrea edulis*, were also found. The presence of the native oyster could leave them susceptible to inadvertent harm or harvest within an aquaculture site. The presence of so many boulders throughout the site if licensed would most likely require the removal of some in places. Such activity could result in considerable harm to the intertidal habitat. "

Assessment of the Site by Eco Eireann (Eco Eireann, 2021) found that the proposed site is not in proximity to any areas mapped as sensitive Maerl or *Zostera* habitat, with the closest mapped location being on the northern side of the Aughinish peninsula directly north of the proposed site. It also considered that conclusions in the DAFM AA Conclusion Statement (2020) as quoted above, relating to invasive species and acceptable Triploid seed can be dealt with via licencing conditions relating to the movement of stock and equipment in and out of the site and the sourcing of seed. It also found that the Report's concerns regarding the presence of Native oysters was unfounded.

The Board's technical advisor recommends adding conditions to the licence prohibiting the movement of rocks or boulders within the Site and prohibiting the relaying of stock in other sites in Galway Bay.

Having regard to the above, it is expected that the proposed development will not negatively impact on the Conservation Objectives of the SAC.

Inner Galway Bay SPA

The Special Conservation Interests (SCIs) of the Inner Galway Bay SPA include: All the SCI species of the Inner Galway Bay SPA, which are: Light-bellied Brent Goose, Wigeon, Teal, Shoveler, Golden Plover, Lapwing, Ringed Plover, Curlew, Bar-tailed Godwit, Turnstone, Dunlin, Redshank, Sandwich Tern, Common Tern, Black-headed Gull and Common Gull. The Sandwich Tern and Common Tern SCIs refer to breeding populations. Cormorant is listed as separate SCIs for its breeding and non-breeding/wintering populations. All the other SCIs refer to non-breeding/wintering populations.

The 2019 Marine Institute/Atkins assessment also included the following SCIs of other SPAs: the non-breeding/wintering Shoveler, breeding Common Scoter and breeding Common Gull

SCIs of the Lough Corrib SPA; and the non-breeding/wintering Wigeon, Golden Plover and Black-tailed Godwit SCIs of the Rahasane Turlough SPA.

The conservation objectives for the Cormorant, Sandwich Tern and Common Tern breeding populations in Inner Galway Bay are to maintain their favourable conservation status, which are defined by there being no significant decline in the abundance of the breeding population, the productivity rate, the distribution of breeding colonies and prey biomass available, and no significant increase in barriers to connectivity and disturbance at the breeding site.

The conservation objectives for the non-breeding SCI species at Inner Galway Bay are to maintain their favourable conservation condition, which are defined by there being stable or increasing long-term population trends and no significant decrease in numbers or range of areas used within Inner Galway Bay.

The wetland habitats within the Inner Galway Bay SPA and the waterbirds that utilise this resource are an additional SCI (the wetlands and water birds SCI). The conservation objective for the wetlands and water birds SCI is to maintain its favourable conservation condition, which is defined by there being no significant decrease in the permanent area occupied by wetland habitats. The Conservation Objectives define the favourable conservation condition of the wetlands and waterbirds SCI at Inner Galway Bay purely in terms of habitat area. None of the activities being assessed will cause any change in the extent of wetland habitat. Therefore, the activities being assessed were deemed not likely to have any significant impact on this SCI.

The 2019 Atkins report found that all of the SCI species for the Inner Galway Bay SPA make significant use of subtidal and/or intertidal habitat within the SPA and were, therefore, carried forward for full Appropriate Assessment. Many of the SCI species listed for the other SPAs were screened out because they do not use subtidal and/or intertidal habitat and/or were considered unlikely to make significant use of the Inner Galway Bay SPA due to their typical foraging ranges. The SCI species retained for full Appropriate Assessment from the other SPAs were Shoveler, Golden Plover and Common Gull (Lough Corrib SPA) and Wigeon, Golden Plover and Black-tailed Godwit (Rahasane Turlough SPA).

Appropriate Assessment of the SPA in relation to Site T08/115

It was concluded by the Atkins report (2019) that full development of the application aquaculture sites, at the time of writing of the Appropriate Assessment, may cause significant displacement impacts to a number of species covered by the assessment, particularly Light-bellied Brent Goose, Ringed Plover and Curlew. This impact was mainly due to two large application aquaculture sites on either side of the Aughinish Island causeway, including the appealed site T08/115A and another site T09/519A, which proposed to occupy the main areas of intertidal and shallow subtidal habitat within the Aughinish I-WeBS Subsite (OH449). This

potential impact is explored in detail in Section 6.3 of Eco Eireann’s Interim Technical Advisor report (2021) and is summarised in Table 1 below.

Table 1: Inner Galway Bay SPA Appropriate Assessment Conclusions and Technical Advisor Comments

	Conclusion	TA Comments
Conclusion 1	Full development of the existing licensed sites is unlikely to cause significant displacement impacts to any of the species covered by this assessment.	The Appropriate Assessment has shown that at the existing levels within Galway Bay, aquaculture activities are considered <u>unlikely to cause significant disturbance or displacement.</u>
Conclusion 2	Full development of the application sites may cause significant displacement impacts to a number of species covered by this assessment, particularly Light-bellied Brent Goose, Ringed Plover and Curlew. This is mainly due to the two large sites on either side of the Aughinish Island causeway (T08/115A and T09/519A).	The proposed site (T08/115A) is located on the southern side of the Aughinish Causeway, which has been noted for significant numbers of both Brent Goose and Curlew, with the majority of Ringed Plover being located on the northern side of the causeway on open sandflat habitat. Therefore, it is considered that full development of the proposed site T08/115A <u>may have a significant impact on Brent Goose and Curlew populations within the Inner Galway Bay SPA but not Ringed Plover.</u>
Conclusion 3	The significance of potential disturbance impacts arising from boat movements to Red-breasted Merganser, roosting Great Northern Diver and high tide waterbird roosts cannot be fully assessed at this stage due to the lack of detailed information about the timing and intensity of husbandry activity and associated use of access routes. However, to minimise impacts to Great Northern Diver it is proposed that boat activity be restricted around one hour before dusk to	The Appropriate Assessment considered that husbandry activity in oyster trestle cultivation sites takes place at low tide, so this activity and associated access to/from the sites will not cause disturbance to high tide roosts. However, all the other aquaculture activities included in the assessment (including hanging bag, hanging basket and floating tray oyster cultivation, which are proposed as part of the proposed site T08/115A) may involve husbandry activity around the high tide period, leading to potential disturbance of high-tide roost locations. There is a significant hightide roost site in close proximity to the north-west corner of the

	shortly after dawn, while it is proposed that the proximity of boat movements to high tide roosts should be restricted to avoid disturbance to roosting birds.	proposed site, therefore the proposed site has the potential to negatively impact this roost site through husbandry and access activities at high tide, although the initial application indicated that only tractor access will be utilised and this could not be carried out during high tide and <u>so this potential disturbance can be discounted.</u>
--	--	---

As noted in Table 1 above Light-bellied Brent Goose and Curlew have been identified within the Appropriate Assessment as having potentially significant calculated cumulative displacement impacts (i.e. > or = 5%). This was due to the presence of the appealed site (T08/115A) and another much larger application aquaculture site (T09/519A (79ha) which was refused by DAFM at the same time as the appealed site, both of which were located within the I-WeBS Aughinish subsite (OH449).

Updated displacement calculations within the Aughinish I-WeBS subsite incorporating all licensed aquaculture sites and the Site (T08/115) highlights that with the inclusion of the proposed aquaculture site the displacement impacts do not reach the 5% significance threshold for displacement for either of the species assessed (Table 2).

Table 2: Calculated Potential Displacement Impact of Licensed and the Appealed Site within the Inner Galway Bay SPA

Species	Analysis	Inner Galway Bay SPA 2006/07 – 2010/11	Inner Galway Bay SPA 2011/12 – 2016/17
Light-bellied Brent Goose	Licensed and appealed site	3.63%	3.45%
Curlew	Licensed and appealed site	3.39%	3.93%

From the recalculated potential displacement impact in Table 2 above it is evident that with the inclusion of the appealed site the potential displacement impacts do not reach the 5% significance threshold for displacement within the SPA for either of the species assessed. This is discussed in further detail in Section 6.3 of the Eco Eireann Report (2020).

These updated displacement impact calculations show that the potential displacement for Light-bellied Brent Goose and Curlew is below the 5% significance threshold, in both datasets used for the analysis, at both the subsite and SPA level. Therefore, it is expected that the proposed development will not significantly impact on the conservation objectives of the Inner Galway Bay SPA.

Summary of Mitigation Measures and Management Actions to be implemented at Site T08/115:

- A licence condition requiring the adherence to best practice relating to the control of non-native species *Didemnum* sp. in Galway Bay will be included, requiring that any biofouling must be dealt with and disposed of in a responsible manner such that it is removed from the marine environment and does not pose a risk to the conservation features of the site.
- A licence condition requiring that the licence granted for Pacific Oysters will be for the use of triploid seed only will apply.
- A licence condition requiring strict adherence to the identified access routes in order to minimise species/ habitat disturbance will apply
- A licence condition will prohibit the relaying of stock at other sites in Galway Bay SAC to reduce the potential spread of non-native species.
- A licence condition will require that the operator shall comply with any Code of Practice developed in agreement with NPWS or any other relevant State bodies pertaining to Galway Bay SAC/Inner Galway Bay SPA.

Overall Conclusion

The finding of this Appropriate Assessment Conclusion Statement is that the proposed activity, given the mitigations listed, is consistent with the Conservation Objectives for these Natura sites.

Having regard to all of the foregoing, it is expected that the proposed activity at the Site does not have the potential for significant effects and is not likely to have a significant deleterious effect, either individually, or in combination with other plans or projects, on Special Conservation Interest species or conservation objectives for the SPA site and the habitats and species of the SAC site and as such, will not adversely affect the integrity of the SPA or SAC site concerned either individually or in combination with other plans or projects.