

Appropriate Assessment Conclusion Statement for aquaculture activities in the Ballymacoda (Clonpriest & Pillmore) SAC (Site Code: 00077) and Ballymacoda Bay SPA (Site Code: 004023)

This Conclusion Statement outlines how aquaculture activities are being licensed in the above Special Area of Conservation (SAC) and Special Protection Area (SPA) - in compliance with the Birds and Habitats Directives. Aquaculture in these Natura sites will be licensed in accordance with the standard licence terms and conditions as set out in the aquaculture licence templates. These are available for inspection on the Department's website at:

<https://www.agriculture.gov.ie/seafood/aquacultureforeshoremanagement/aquaculturelicensing/aquacultureandforeshorelicencetemplates/>

Furthermore, the licences will also incorporate specific conditions to accommodate Natura requirements, as appropriate, in accordance with the principles set out in this document.

The SAC and SPA reports were prepared by RPS and APEM, respectively for the Marine Institute on behalf of the Department of Agriculture, Food and the Marine. This Appropriate Assessment assessed the potential ecological impacts of aquaculture activities on Natura features in both the SAC and the SPA.

The information upon which the Appropriate Assessment is based is the definitive list of applications and extant licences for aquaculture available at the time of assessment. This information was provided by the Department of Agriculture, Food and the Marine.

Aquaculture activity in the SAC and SPAs

Ballymacoda (Clonpriest & Pillmore) SAC: Aquaculture activity focuses on the cultivation of the Pacific oyster (*Crassostrea gigas*) on trestles in intertidal areas of the bay.

Ballymacoda Bay SPA: The Aquaculture Profile (BIM, 2016) notes that there have been licences issued dating back to 1997 for oysters and clams but none of these are now active. The specific activities assessed are a series of renewal licence applications and the new licence applications within Ballymacoda Bay are almost wholly within the SPA. The existing licences that are for renewal occupy 6.12% of the SPA. The applications for new licences are wholly within the SPA and represent 31.85% of the SPA. The renewal and new application licence locations and access routes are all in the outer section of Ballymacoda Bay. The species of shellfish licensed for cultivation are the Pacific oyster (*Crassostrea gigas*) and the blue mussel (*Mytilus edulis*). Currently only oyster is cultivated.

Reference	Type	Area (Ha)	Species
T05/395	Renewal	11.5974	Oysters
T05/482A	Renewal	7.9266	Oysters
T05/482B	Application	6.2278	Oysters
T05/491A	Renewal	14.74	Oysters
T05/517A	Application	72.4636	Oysters and mussels
T05/517B	Application	32.2091	Oysters and mussels
T05/545	Application	11.2439	Oysters
T05/575	Application	21.0806	Oysters
T05/595	Application	11.7418	Oysters

Ballymacoda (Clonpriest & Pillmore) SAC

Ballymacoda (Clonpriest & Pillmore) SAC is located 6km southwest of Youghal town, Co. Cork. The SAC site encompasses the lower tidal area of the Womanagh River and extends to the low tide mark at inner Youghal Bay. The inner estuarine area of the site is well sheltered with sediment types varying from muds to muddy sands while the relatively more exposed outer seaward area is typified by fine rippled sands.

Qualifying Interests:

The SAC is designated for the following habitats and species (NPWS 2015a), as listed in Annex I and Annex II of the Habitats Directive: Estuaries (1130), Mudflats and sandflats not covered by seawater at low tide (1140), Salicornia and other annuals colonizing mud and sand (1310), Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) (1330).

In Ballymacoda (Clonpriest & Pillmore) SAC there are three renewal applications and a further five new applications (total nine sites). The likely interaction of aquaculture activity occurring at licensed sites, application sites and access routes with the conservation features (habitats and species) of the site was considered. An initial screening exercise resulted in a number of habitat features and species being excluded from further consideration. None of the aquaculture activities (existing and/or proposed) overlaps or likely interacts with the following features or species, and therefore the following Qualifying Interests were excluded from further consideration in the assessment; Estuaries (1130), Salicornia and other annuals colonizing mud and sand (1310) and Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) (1330).

A full assessment was carried out on the likely interactions between aquaculture operations and the feature Annex 1 habitat Mudflats and sandflats not covered by seawater at low tide (1140). The likely

effects of existing and proposed aquaculture activities were considered in light of the sensitivity of the constituent community of the Annex 1 habitat 1140. It was shown to overlap with current and proposed intertidal oyster namely; Sand with polychaetes and bivalves community complex.

Screening of Adjacent SACs for ex-situ effects:

The Ardmore Head SAC (002123) and Great Island Channel SAC (001058) are located to the east and west of Ballymacoda (Clonpriest & Pillmore) SAC respectively. A preliminary screening was carried out on the likely interaction with aquaculture activities based primarily upon the likelihood of spatial overlap. As it was deemed that there are no ex-situ effects and no effects on features in adjacent SACs both Ardmore Head SAC (002123) and Great Island Channel SAC (001058) sites were screened out.

Conclusions and recommendations:

- Based upon the scale of spatial overlap of current and proposed aquaculture activities and the relatively high tolerance levels of the habitats and associated species, the general conclusion is that current activities are non-disturbing to the Qualifying Interest habitat of 1140 Mudflats and sandflats not covered by seawater at low tide and its constituent communities.
- The movement of stock in and out of the Ballymacoda (Clonpriest & Pillmore) SAC should adhere to relevant fish health legislation and follow best practice guidelines (e.g. <http://invasivespeciesireland.com/cops/aquaculture/>). The risk of introduction of alien taxa with ½ grown oysters from France will be mitigated by the standard licence conditions relating to Alien Species.
- On the basis of spatial overlap and sensitivity analysis, that the current and proposed intertidal aquaculture activities, both individually and in-combination, do not pose a risk of significant disturbance to the habitat features of Ballymacoda (Clonpriest & Pillmore) SAC.

Ballymacoda Bay SPA

Ballymacoda Bay SPA (Site code 004023) stretches north-east from Ballymacoda to within several kilometres of Youghal, Co. Cork. It comprises the estuary of the Womanagh River, a river draining a large agricultural catchment.

The Appropriate Assessment (AA) examined the aquaculture activities within Ballymacoda Bay SPA (Site Code: 004023) alone as well as 'in combination' with other activities in and around the Bay. A preliminary 'coarse' screening was applied based on the distance from the aquaculture activities to SPAs with an initial threshold set at 15 km. The purpose of this was to screen out SPAs that were so

distant from the location of the aquaculture activities being assessed that detailed consideration of such SPAs and their SCIs were not required.

Qualifying Features

The species that are the SCI (qualifying interest features) are Wigeon, Teal, Ringed Plover, Golden Plover, Grey Plover, Lapwing, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed godwit, Curlew, Redshank, Turnstone, Black-headed Gull, Common Gull, Lesser Black-backed Gull.

In addition, the wetland habitats contained within the Ballymacoda Bay SPA are identified to be of conservation importance for non-breeding (wintering) migratory waterbirds. Therefore the wetland habitats are considered to be an additional SCI.

Screening

In addition to Ballymacoda Bay SPA other SPAs within 15 km of the aquaculture activities in Ballymacoda Bay: Blackwater Estuary SPA (Site code 004028), Ballycotton Bay SPA (Site code 004022), Helvick Head to Ballyquin SPA (Site code 004192) were screened.

It is also noted that Ballycotton Bay, Ballymacoda Bay and the Blackwater Estuary are also Ramsar sites listed for their migratory waterbird populations but that designation did not form part of this assessment.

The SCI bird species, grouped by breeding / feeding ecology, of those SPAs were assessed. An evaluation was made of any routes / pathways to any of the pressures generated by aquaculture activities.

Of the four referenced SPAs only Ballymacoda Bay SPA (Site code 004023) was screened in for detailed assessment at the individual SCI bird species level because the aquaculture activity is within the SPA and the species have a habitat use or feeding ecology that gives rise to potential impacts.

The remaining three sites were screened out for detailed assessment at the individual SCI bird species level because the aquaculture activity is distant from the SPA and / or there is not a route / pathway through which any of the pressures generated by aquaculture activities will become manifest.

Description of the aquaculture projects including size, scale and objectives

The aquaculture projects within Ballymacoda Bay SPA relate to both licence renewal of existing aquaculture activity and the licensing of new aquaculture activity.

There are 6 new applications, occupying 31.85% of the SPA.

There are 3 renewal applications, occupying 6.12% of the SPA.

All aquaculture activity (both new & renewal applications) involve the cultivation of either oysters, mussels or a combination of both. All licences (new & renewals) are within the SPA with the exception of part of T05/491A which extends beyond the eastern flank of the SPA.

The aquaculture activities relate to one method of cultivation only, the bag and trestle method within the intertidal zone.

Description of Ecological and Environmental issues

Intertidal shellfish cultivation has the potential to cause alteration to the suitability of intertidal habitat for bird usage through the placement of physical structures (the trestles) on the intertidal habitat.

Intertidal shellfish cultivation has the potential to cause disturbance to birds through the associated human activity gaining access to, and maintaining, the shellfish in bags on the trestles. Such access and maintenance occurs during the low tide periods and as a result does not affect high tide roosts and waterbirds (e.g. diving ducks) that might feed over the area of the trestles when they are covered at high tide.

Conservation Objectives

- To maintain the favourable conservation condition Special Conservation Interest (SCI) species in Ballymacoda Bay SPA.
- To maintain the favourable conservation condition of the wetland habitat in Ballymacoda Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it.

Findings of the Assessment

Stand alone effects

- The assessment identified the potential for significant adverse impact on a number of the SCI species of the Ballymacoda Bay SPA, with the potential for that adverse impact varying dependent on whether the renewal applications are considered alone, the new applications are considered alone or the two categories of application are considered together.
- The renewal applications alone have the potential to result in significant adverse impact on the following SCI species of the Ballymacoda Bay SPA: Sanderling, Black-tailed Godwit.
- The new applications alone have the potential to result in significant adverse impact on the following SCI species of the Ballymacoda Bay SPA: Wigeon, Ringed Plover, Grey Plover, Sanderling, Black-tailed Godwit, Bar-tailed Godwit.

- The renewal applications and the new applications considered together have the potential to result in significant adverse impact on the following SCI species of the Ballymacoda Bay SPA: Wigeon, Ringed Plover, Grey Plover, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Common Gull.
- The following SCI species of the Ballymacoda Bay SPA are not subject to a potential adverse impact under any aquaculture licence scenario: Teal, Golden Plover, Lapwing, Curlew, Redshank, Turnstone, Black-headed Gull, Lesser Black-backed Gull.
- In addition the SCI 'wetland habitat' is not subject to a potential adverse impact under any aquaculture licence scenario.

As a result of the conclusion that some of the SCI species are potentially subject to adverse impacts as a result of the aquaculture licence applications, consideration should be given to further more detailed study, site specific mitigation measures (i.e. in addition to those applied to all licences) and monitoring.

In-combination effects

A screening process has been applied in this in-combination section of the assessment. Consideration has been given to the potential for in-combination effects to occur.

The record of disturbance generating activities during the low and high tide counts was divided in to the following types:

Aircraft

Aquaculture machinery and activities associated with intertidal aquaculture

Horse riding

Bait-diggers

Vehicles

Shooting

Walking, including with dogs

Predators (foxes and raptors)

The assessment of in-combination effects screened in and considered the following activities occurring in and around Ballymacoda Bay:

- Coastal recreation

It is considered that recreational disturbance in-combination with the new licence applications and the renewal applications together with the new licence applications will not give rise to a significant impact.

- Bait digging

At recorded levels it is considered unlikely that bait digging will have measurable impacts in terms of disturbance and removal of food resources and is not considered to give rise to a significant impact in-combination with the aquaculture activities.

- Fisheries and shellfisheries

It is considered that there is not likely to be any in-combination impacts between fishery and aquaculture activities.

Therefore no in-combination impacts were identified.

Findings and recommendations of the Article 6(3) Appropriate Assessment of Ballymacoda (Clonpriest & Pillmore) SAC and Ballymacoda Bay SPA

In summary, it is concluded, on the basis of spatial overlap and sensitivity analysis, that the current and proposed intertidal aquaculture activities, both individually and in-combination, do not pose a risk of significant disturbance to the habitat features of Ballymacoda (Clonpriest & Pillmore) SAC. However, the risk posed by the introduction of ½-grown oysters from France cannot be discounted.

Within Ballymacoda Bay SPA it is advised that the licensing of all activities (renewals and applications), would result in what is considered significantly high levels of displacement for 8 shorebird species, and the levels are such that there are no likely clear mitigation measures applicable that would result in acceptable levels of disturbance.

The renewal of existing licences alone is feasible on the basis that the two SCI species that might be subject to significant displacement, i.e., Sanderling and Black-tailed Godwit, are considered of 'favourable' conservation status. In addition, monitoring has indicated that mean counts in the SPA, over the last five years, for Sanderling are almost twice the 'baseline population' level and almost 1.5 times the baseline population level for Black-tailed Godwit. Furthermore, as pointed out in Annex II, if the most recent I-WeBS 5-year-mean peak is considered for Sanderling, the percentage displacement as a consequence of the proposed licensing regime would likely decrease to 10%. It is important to note that any positive licensing actions should be conditional on review of monitoring outputs.

Issues arising from statutory/public consultation

1. The author acknowledges the recommendation that new applications not be licensed given the likely impact on the conservation objectives for several species at this SPA. It offers the following comments and it is hoped that these will be considered by the Department of Agriculture, Food and the Marine in its decision-making process.

The Department accepts this.

2. The potential of renewal applications to cause significant adverse impacts to two of the listed waterbird species, Sanderling and Black-tailed Godwit is highlighted by in the Appropriate Assessment report and the draft Appropriate Assessment Conclusion Statement. The draft Appropriate Assessment Conclusion Statement then infers that the renewal of these licences will not adversely affect the conservation objectives targets for these species because one of the two attribute targets (population trend) for both species is currently considered to be favourable. However, both conservation objective attributes (population trends and distribution) need to be considered in tandem in order to ascertain favourable condition.

In the AA reports, the threshold for identifying significance levels of disturbance for shore birds (i.e. 5%) is not considered an absolute cut-off but a value, if exceeded, that would require further consideration be given to the relevant SCI. Given the very conservative nature with which this is calculated we can be very confident of no negative interactions if less than 5% displacement is calculated. In this instance, while the displacement levels of Sanderling were identified as high (20%) for renewals, the fact is the population estimates for this species are considered very good relative to the baseline level. Furthermore, the status of the species at the site is 'favourable' thus allowing the Department's scientific advisors to form the opinion that the birds are in good status at the site, but that their ongoing levels should be monitored. IWeBS is considered an appropriate mechanism to monitor status.

It should also be noted that the report highlighted by NPWS does reference the fact that Sanderling were found (in large numbers) in the same count sector as the location of the aquaculture operations. NPWS also highlight in their report that assessing the impact of aquaculture activities was not determined as the counts were not conducted at times coincident with activities at the aquaculture sites. This speaks to the AA analysis which was extremely conservative and assumed total exclusion of Sanderling from the aquaculture sites. However, it should be noted that observations from Sanderling behaviour at other locations (e.g. Donegal) are that the birds will flock right against trestle locations. This possibly explains the high numbers observed in the same sector as the aquaculture operations. In their supporting documentation they also highlight that the primary disturbance observed within the site and this sector was people walking with dogs.

To summarise, Sanderling and Black-tailed Godwit, are considered of 'favourable' conservation status. In addition, monitoring has indicated that mean counts in the SPA, over the last five years, for Sanderling are almost twice the 'baseline population' level and almost 1.5 times the baseline population level for Black-tailed Godwit.

3. While the author accepts the mitigation measures as outlined in the draft Conclusion Statement, including the review of monitoring outputs, it had some concerns.

The Department's response is that renewal licences will include a specific condition such that continued licensing at the site will be conditional upon favourable bird monitoring results. A decline in status will lead to specific investigations in order to identify the most likely cause(s).

Summary of Mitigation Measures and Management Actions that are being implemented as a consequence of the findings in the Appropriate Assessment report

Taking account of the recommendations of the Appropriate Assessment, as well as additional technical/scientific observations, the following measures are being taken in relation to licensing aquaculture in this SAC/SPA:

- A Licence condition requiring strict adherence to the identified access routes over intertidal habitat in order to minimise species/ habitat disturbance;
- A Licence condition requiring full implementation of the measures set out in the draft Marine Aquaculture Code of Practice prepared by Invasive Species Ireland;
- The use of updated and enhanced Aquaculture and Foreshore Licences containing terms and conditions which reflect the environmental protection required under EU and National law;
- All aquaculture licences are subject to standard licence conditions, which cover, among other things, any further actions that might be required in the event of deterioration of conservation status of species/habitats at site level that is directly attributable to aquaculture operations.
- Given the potential impacts of the renewal of existing aquaculture on some species it is proposed that a monitoring programme be carried out to determine if there is any displacement as a consequence of the proposed licensing regime. This will be feasibly achieved by reference to the annual I-WeBS counts.
- Given the potential impacts of the proposed new aquaculture sites (T05/482B, T05/517A, T05/517B, T05/545, T05/575, T05/595) on protected bird species, for example, the potential disturbance on Wigeon, Ringed Plover, Grey Plover, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Common Gull, it is not proposed to licence these sites.

Proposed Licensing

The Licensing Authority is satisfied that, given the conclusions and recommendations of the Appropriate Assessment process, a decision can be taken in favour of licensing existing aquaculture operations in Ballymacoda (Clonpriest & Pillmore) SAC and Ballymacoda Bay SPA, subject to other licensing considerations and monitoring.

The Licensing Authority is satisfied that, given the conclusions of the Appropriate Assessment process, the proposed new aquaculture activities are likely to have a significant effect on the integrity of the Ballymacoda Bay SPA. Accordingly, it is proposed to make a negative determination in relation to all the new proposed aquaculture activities.

Conclusion

Accordingly, the Licensing Authority is satisfied that the licensing of existing aquaculture operators is not likely to significantly and adversely affect the integrity of Ballymacoda (Clonpriest & Pillmore) SAC and Ballymacoda Bay SPA. However, the licensing of new aquaculture operators would be likely to have a significant effect on the integrity of Ballymacoda SPA.

