

Appropriate Assessment Conclusion Statement by the Licensing Authority for aquaculture activities in Gweedore Bay and Islands Special Area of Conservation (SAC)
(Natura 2000 site)
Updated – November 2016

This Conclusion Statement outlines how it is proposed to license and manage aquaculture activities in the above Natura site in compliance with the EU Habitats Directive. Aquaculture licence applications, if approved, will be licensed in accordance with the standard terms and conditions as set out in the aquaculture licence templates. These are available for inspection at:

<http://www.agriculture.gov.ie/fisheries/aquacultureforeshoremanagement/aquaculturelicensing/>

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

An Article 6 (Habitats) Assessment and specifically an Appropriate Assessment (Article 6 (3)) of aquaculture in Gweedore Bay and Islands has been carried out by the Marine Institute on behalf of the Department of Agriculture, Food and the Marine. The Appropriate Assessment assessed the potential ecological impacts of aquaculture activities in and adjacent to Gweedore Bay and Islands SAC. From an aquaculture perspective, the information upon which this assessment is based is the definitive list of applications and existing licences for aquaculture available at the time of assessment.

1. Description of the Aquaculture Projects

The projects involve the renewal of existing aquaculture activity and the licensing of new aquaculture sites within the Gweedore Bay and Islands SAC (twenty-five aquaculture sites were applied for in total). There are currently ten licensed sites within inner Gweedore Bay, for the cultivation of the Pacific oyster on trestles in intertidal areas. In addition, there are currently twelve new, applied for sites for oyster production within this SAC, ten at Gweedore Bay and two at Kincasslagh Bay. There is also a single, applied for site for the culture of clams/cockles intertidally on the seafloor in Kincasslagh Bay. An application for a trial licence for oyster production using floating bags in Gweedore Bay is no longer being pursued by the applicant. A new licence application for oyster production in Kincasslagh Bay has been withdrawn by another applicant.

2. Description of Ecological and Environmental issues including Conservation Objectives for the SAC

The Gweedore Bay and Islands SAC is situated on the west Donegal coast and is designated as a Special Area of Conservation (SAC) under the Habitats Directive. Conservation Objectives for this bay were identified by NPWS (2015a) and relate primarily to the requirement to maintain habitat distribution, structure and function, as defined by the characterising (dominant) species in these habitats. For designated species, the objective is to maintain various attributes of the populations including population size, habitats quality and the distribution of the species in the Bay.

Conservation Objectives for Gweedore Bay and Islands SAC (001141)

The Appropriate Assessment of aquaculture in relation to the Conservation Objectives for Gweedore Bay and Islands SAC is based on Version 1 of the objectives (NPWS 2015a - Version 1 March 2015) and supporting documentation (NPWS 2015b, 2015c and 2015d - Version 1 February 2015). The spatial data for conservation features was provided by NPWS.

The Conservation Objectives are that the natural condition of the designated features should be preserved with respect to their area, distribution, extent and community distribution. Habitat availability should be maintained for designated species and human disturbance should not adversely affect such species. The features, objectives and targets for each of the qualifying interests within the SAC are listed in Table 4.1 of the Appropriate Assessment.

Qualifying Interests of the SAC

The SAC is designated for a number of habitats and species (NPWS 2015a), as listed in Annex I and Annex II of the Habitats Directive. The likely interaction between aquaculture activity and the conservation features (habitats and species) of the Gweedore Bay and Islands SAC were considered in the Appropriate Assessment. A screening exercise resulted in fifteen habitats and two species (listed below) being excluded from further consideration in the assessment as aquaculture activities (existing and/or proposed) do not overlap or likely interact with the particular features or species referenced:

- 1150 Coastal lagoons
- 1220 Perennial vegetation of stony banks
- 1395 Petalwort (*Petalophyllum ralfsii*)
- 1410 Mediterranean salt meadows (*Juncetalia maritimi*)
- 1833 Slender Naiad (*Najas flexilis*)
- 2110 Embryonic shifting dunes
- 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
- 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)
- 2140 Decalcified fixed dunes with *Empetrum nigrum*
- 2150 Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)
- 2170 Dunes with *Salix repen ssp. argentea* (*Salicion arenariae*)
- 2190 Humid dune slacks
- 21A0 Machairs (in Ireland)
- 3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- 4030 European dry heaths
- 4060 Alpine and Boreal heaths
- 5130 *Juniperus communis* formations on heaths or calcareous grasslands

The remaining habitats and species were considered in the Appropriate Assessment and could not be screened out, as follows:

- Constituent communities and community complexes recorded within the qualifying interest Annex I marine habitats (i.e. 1170 - Reefs), listed in NPWS (2014c) and consisting of:
 - Reef community complex
 - *Laminaria*-dominated community complex

- The Gweedore Bay and Islands SAC is designated for the Otter (*Lutra lutra*). The species is listed in Annex IV (a) of the Habitats Directive and is afforded strict protection.

3. Article 6(3) Assessment of Gweedore Bay and Islands SAC

The function of the Appropriate Assessment is to determine if the ongoing and proposed aquaculture activities are consistent with the Conservation Objectives for the Natura site or if such activities will lead to deterioration in the attributes of the habitats and species over time and in relation to the scale, frequency and intensity of the activities. NPWS (2015a) provide guidance on interpretation of the Conservation Objectives which are, in effect, management targets for habitats and species in the SAC. This guidance is scaled relative to the anticipated sensitivity of habitats and species to disturbance by the proposed activities. Some activities are deemed to be wholly inconsistent with long term maintenance of certain sensitive habitats while other habitats can tolerate a range of activities. For the practical purpose of managing sedimentary habitats, a 15% threshold of overlap between a disturbing activity and a habitat is given in the NPWS guidance. Below this threshold, disturbance is deemed to be non-significant.

Disturbance is defined as that which leads to a change in the characterising species of the habitat (which may also indicate change in structure and function).

Screening of adjacent Natura sites for ex-situ effects

There are three other SAC sites and one SPA site proximate to the existing and proposed aquaculture activities, as follows:

- Aran Island (Donegal) Cliffs SAC (000111)
- Rutland Island and Sound SAC (002283)
- Ballyness Bay SAC (001090)
- West Donegal Coast SPA (004150)

A preliminary screening was carried out on these adjacent Natura 2000 sites to establish the likely interaction with aquaculture activities based primarily upon the likelihood of spatial overlap. With the exception of the Harbour seal (*Phoca vitulina*) which is a designated species for the Rutland Island and Sound SAC, it was deemed that there are no ex situ effects and the qualifying features of the adjacent Natura sites were screened out.

The Appropriate Assessment concluded that the Harbour seal may migrate into the Gweedore Bay and Islands SAC and could interact with aquaculture activities. This species is therefore included as a feature in the Appropriate Assessment of aquaculture activities at this Natura site.

Findings of the Article 6(3) Appropriate Assessment

In the Gweedore Bay and Islands SAC, of the twenty-three aquaculture sites to be considered (licensed and applications), there are four oyster production licensed sites that have spatial overlap with the habitat conservation feature (Reefs -1170). In addition, there are four new, applied for sites (also for oyster production) that have spatial overlap with the same habitat conservation feature (Reefs).

The Appropriate Assessment finds that the aquaculture activities, at the current and proposed or likely future scale and frequency of activity are consistent with the Conservation Objectives.

Aquaculture and Habitats:

Reefs: A full assessment was carried out on the likely interactions between existing and proposed aquaculture operations and the feature of the Annex 1 Habitat Reefs (1170). The likely effects of the aquaculture activities in terms of species, structures and access routes were considered in light of the sensitivity of two constituent community types recorded within the qualifying interest of Reefs, i.e. 'Laminaria-dominated community complex' and 'Reef community complex'. The 'Laminaria-dominated community complex' was shown to have no overlap with aquaculture activities and was excluded from further analysis.

Spatial analysis indicates that combined existing and proposed cultivation activity overlap with approximately 0.71% of the habitat feature (1170) Reefs and 0.84% of the constituent community type Reef community complex (below the 15% threshold disturbance is deemed to be non-significant). However, the aquaculture activities are unlikely to overlap with the Reef, given the nature of this habitat, and any such overlap is likely to be due to mapping anomalies.

The risk posed by intertidal clam/cockle culture can be discounted, as it does not spatially overlap with conservation features and any impacts are likely to be confined to the footprint of the licence area. The risk of establishment of clams is also considered low in this area given the short water residence time in the bay. Furthermore, the operations are totally reliant on hatchery seed and are fully contained at all stages of the production cycle.

In summary, the Appropriate Assessment concluded, based upon the spatial overlap and sensitivity analysis, that existing and proposed aquaculture activities (including access route activity) individually and/or in-combination do not pose a risk of significant disturbance to the conservation of the habitat feature of Reefs or the constituent community types of Reef community complex and *Laminaria*-dominated community complex.

Aquaculture and Species:

Otter (*Lutra lutra*): The likely interaction between the existing and proposed aquaculture activities and the Annex II Species Otter were assessed. The objectives for this species in the SAC focus upon maintaining the good conservation status of the population. Shellfish culture operations are likely to be carried out in daylight hours and the interaction with the otter is likely to be minimal given that otter foraging is primarily crepuscular. The Appropriate Assessment found that aquaculture activities did not present a barrier to migration or to the freshwater attributes of the otter. The current levels of licensed shellfish culture and applications are considered non-disturbing to otter conservation features.

Harbour Seal (*Phoca vitulina*): An assessment of the effects of aquaculture production on the Harbour seal migrating into the Gweedore Bay and Islands SAC were also examined. The adjacent Rutland Island and Sound SAC is designated for this species. The objectives for the Harbour seal relate primarily to the requirement to maintain various attributes including population size and the distribution of the species. It is acknowledged in the Appropriate Assessment that the favourable conservation status of the Harbour seal has been achieved (NPWS 2013b, 2013c) given current levels of aquaculture production within both the Gweedore Bay and Islands SAC and the Rutland Island and Sound SAC. The current levels of licensed shellfish culture and applications within Gweedore Bay and Islands SAC are considered non-disturbing to the site specific Conservation Objectives for the Harbour seal within the Rutland Island and Sound SAC.

In-Combination Effects:

A number of in-combination effects resulting from a range of activities such as fisheries (including pot fishing for lobster and crab), intertidal seaweed harvesting and pollution pressures were considered in the Appropriate Assessment. The conclusion is that none, when considered in conjunction with shellfish culture activities, will result in a significant disturbance to the conservation features of the Gweedore Bay and Islands SAC.

Introduction of non-native species:

The existing and proposed oyster culture and the proposed clam/cockle culture may present a risk in terms of the introduction of non-native species such as the Pacific oyster (*Crassostrea gigas*) and the Manila clam (*Ruditapes philippinarum*). However, the risk of establishment is considered low for both non-native species in culture, given a number of factors, including lack of suitable habitat, intertidal culture and short residence times.

4. Habitats issues raised during the Aquaculture Licensing process for Sites in this SAC

A number of scientific issues relevant to the Appropriate Assessment were raised during the aquaculture licensing consultation process. These issues have been considered by the Department and its scientific advisors and are addressed below:

(i) The risk of the proposed new access routes in Kincasslagh Bay to the coastal Annex I habitats of saltmarsh, dunes and Machair (a priority habitat) requires further information as it is unclear if these habitats will be traversed by new routes. It is also unclear if there will be storage areas adjacent to these access routes.

Response: *The risk of the proposed access routes to the 'Machair' habitat in Kincasslagh Bay has been considered. While the access routes identified in Kincasslagh Bay do appear to run through some 'Machair' habitat, the routes chosen will follow existing tracks to the shore and new routes will not be created. All of the staging/storage areas will be on private property or on public piers and will not be located on any Annex I Habitat. No other routes will traverse coastal habitats. It is likely that any potential overlap with coastal habitats identified from the figures in the Appropriate Assessment report is due to mapping anomalies. It should also be noted that the aquaculture licence application to cultivate oysters on an area of foreshore in Keadue Strand, Kincasslagh, has been withdrawn.*

(ii) While the increased risk of the introduction of alien species through the use of half-grown oysters is mentioned it is unclear if these are used at this site and at what stage they may be introduced into the site.

Response: *The reference to half-grown oysters in the report is used in a generic fashion as part of the Natura Impact Statement to identify potential risks associated with oyster culture. The Licensing Authority is not aware of any plans to introduce half-grown oysters into the Gweedore Bay and Islands SAC and it was not identified in the profile provided by BIM.*

(iii) The risk of establishment of the clam/cockle and Pacific oyster at this site is acknowledged as being low. Similarly the area of overlap of the access tracks and the Reef habitat is small. In the case of the former activity, monitoring is suggested and for the latter, the importance of strict adherence to

access routes is highlighted. Further information was requested on the methods by which this will be achieved and assessed.

Response: *Mitigation measures and management actions which are required to be implemented as a consequence of the Appropriate Assessment process are normally achieved by the creation and oversight of specific licence conditions. For example, any licences issued for sites in this SAC will contain a condition requiring strict adherence to identified access routes.*

(iv) The EU Guidance document for aquaculture in Natura areas states that “the Appropriate Assessment should contain complete, precise and definitive conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the site concerned.” Without detailed descriptions and implementation plans of the mitigation measures, such “precise and definitive conclusions” cannot be made.

Response: *This Conclusion Statement contains a summary of mitigation measures and management actions that are being implemented as a consequence of the findings in the Appropriate Assessment report.*

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:

- *A Licence condition requiring strict adherence to the identified access routes over intertidal habitat in order to minimise 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 Aquaculture and Foreshore Licences containing terms and conditions which reflect the enhanced environmental protection now required under EU and National law.*

Conclusion

The Licensing Authority is satisfied that from a habitats perspective, given the conclusions of the Appropriate Assessment process, a decision can be taken in favour of licensing existing and proposed clam/cockle and oyster culture operations in Gweedore Bay and Islands SAC.

Accordingly, the Licensing Authority is satisfied that the proposed licensing is not likely to have a significant effect on the integrity of the Gweedore Bay and Islands SAC.