

# **Proposed oyster cultivation activities in accordance with the requirements of Article 6(3) of the EU Habitats Directive**

## **SCREENING STAGE ASSESSMENT**

**Prepared for: Aquaculture Licence Appeals Board**

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## **SCREENING STAGE ASSESSMENT WITH RESPECT TO THE SPA NETWORK**

*Abstract:* This Habitats Directive Assessment report has been prepared to consider the potential impacts of the proposed oyster cultivation activities at Braade Strand and nearby intertidal areas near Bunbeg in Gweedore Bay, Co. Donegal, specifically on the bird conservation interests at nearby *Natura* 2000 sites. This includes four site renewals, one variation and five new site licence applications. To inform the assessment a desktop study was completed. Details of the proposed development, including construction plans were further considered in this Habitats Directive Assessment. The potential for impact upon *Natura* 2000 sites and their qualifying interests is evaluated. It is not possible to rule out the possibility that usage by the Common Gull SCIs of the West Donegal Islands and Inishbofin, Inishdooley and Inishbeg SPAs and the Lesser Black-backed Gull SCI of the Inishbofin, Inishdooley and Inishbeg SPA of the proposed aquaculture development area at Gweedore Bay for feeding and/ or roosting will not be negatively affected. Therefore, it is recommended that the assessment progress to a stage 2 Appropriate Assessment.

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## 1. INTRODUCTION

Olivia Crowe was commissioned by the Aquaculture License Appeals Board (ALAB) to produce a Habitat’s Directive Assessment for the proposed oyster cultivation activities at Braade Strand and nearby intertidal areas at Bunbeg, within Gweedore Bay in Co. Donegal, specifically with respect to the bird conservation interests in the area. A screening assessment is undertaken to establish if any proposed plan or project is likely to have a significant effect on any site that has been designated under the E.U. Habitats Directive (92/43/EEC), *i.e.* a Special Area of Conservation (SAC), or the E.U. Birds Directive (2009/147/EC), *i.e.* a Special Protection Area (SPA). Collectively, SACs and SPAs are known as *Natura* 2000 sites. The conservation objectives for *Natura* 2000 sites have been published by the National Parks & Wildlife Service (NPWS) with reference to the habitats and species for which the sites are designated. These conservation objectives are considered when carrying out screening and appropriate assessments for plans and projects that might impact upon *Natura* 2000 sites.

A screening assessment is part of an appropriate assessment process that consists of up to four stages, where each stage follows on from the preceding one. In Stage 1, a screening process is undertaken to identify whether significant impacts on a *Natura* 2000 site are likely to arise from the project or plan in question. If significant impacts are likely to occur, then the process moves on to Stage 2 where an appropriate assessment (AA) considers potential mitigation measures for adverse impacts. If it is considered that mitigation measures will not be able to adequately minimise potential adverse impact on a *Natura* 2000 site then an assessment of alternative solutions is considered in Stage 3. This may then be followed by Stage 4 of the process in the event

that adverse impacts remain and the proposed activity or development is deemed to be of Imperative Reasons of Overriding Public Interest (IROPI), allowing an assessment of compensatory measures to be considered. The outcome of a Stage 2 and higher assessment is presented in a report known as a *Natura* Impact Statement (NIS).

This report presents the outcome of a Stage 1 screening assessment to identify whether significant impacts are likely to arise from the proposed development on the *Natura* 2000 sites in the locality, specifically with respect to the EU Special Protected Areas designated for birds. The following guidelines were used in the completion of this assessment;

- Assessment of Plans and Projects Significantly Affecting *Natura* 2000 Sites – European Commission Methodical Guidance on the provisions of Article 6(3) and 6(4) of the ‘Habitats’ Directive 92/43/EEC (European Commission 2001)
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG 2009)

## **2. STAGE 1: SCREENING**

### **2.1 BRIEF DESCRIPTION OF THE PROJECT & SITE**

The project involves the renewal of existing aquaculture activity and the licensing of new aquaculture sites at Braade Strand and within intertidal areas near Bunbeg within Gweedore Bay (twenty-five aquaculture sites were applied for in total) in west Donegal (Fig. 1). The area is tidal and shallow, and the bay completely drains during low spring tides exposing extensive sandflats.

Gweedore Bay is important for the on-growing of Pacific Oyster *Crassostrea gigas*. 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 ten new, applied for sites for oyster production within this site (Fig. 2). Most of the sites are located in the vicinity of Braade Strand, with a further three applications located slightly further to the north along the channel, near Bunbeg. The total area of proposed and existing aquaculture sites is expected to occupy 58 hectares of intertidal habitats.

Current oyster cultivation within Gweedore Bay is intensive culture, with oyster seed cultivated using the bag and trestle method within the intertidal zone, either to half or fully-grown. This method uses steel table-like structures which rise from the shore to above knee-height, arrayed in double rows and with wide gaps between the paired rows to enable access (Marine Institute 2016). The production cycle begins when seed is brought from France to the site either in spring or late summer each year. Oysters are thinned out and graded as the oysters grow. Farms are accessed typically during low spring tides using vans or tractors, and preparatory works are undertaken on site.

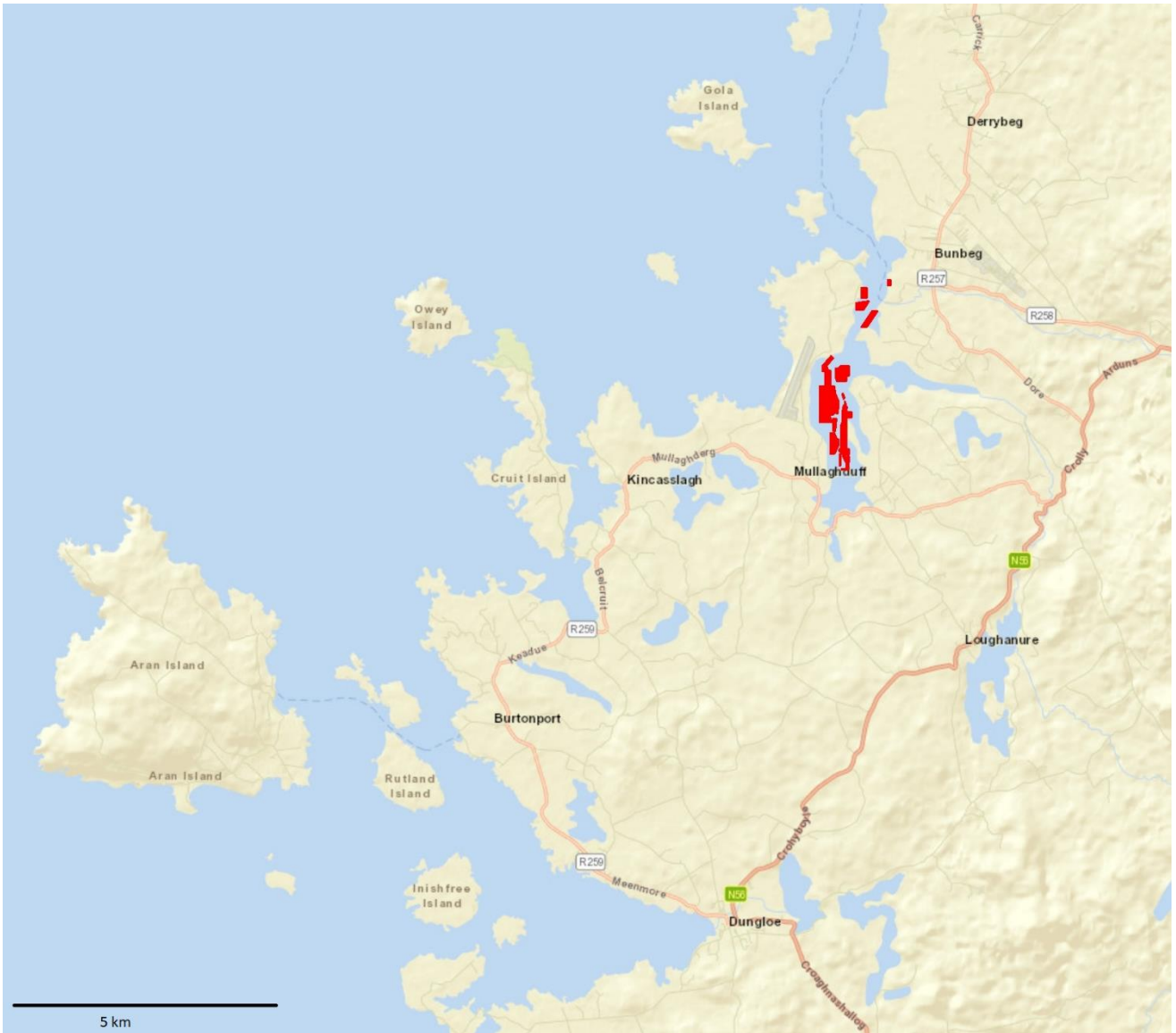


Figure 1. Location of the proposed and existing aquaculture sites at Gweedore Bay in west Donegal.





Figure 2. Proposed (blue) and already existing/renewal (red) oyster cultivation sites in Gweedore Bay.

## 2.2 BRIEF DESCRIPTION OF THE *NATURA* 2000 SITES

The existing and proposed aquaculture sites occur within the Gweedore Bay and Islands SAC. They also occur in close proximity to the West Donegal Coast SPA, and one of the existing/renewal applications (193B) is within this SPA.

In total, there are eight SACs within 15 km of the aquaculture sites:

- Gweedore Bay & Islands SAC (001141) 0 m
- Fawnboy Bog/Lough Nacung SAC (000140) 467 m
- Cloghernagore Bog And Glenveagh National Park SAC (002047) 4837 m
- Rutland Island And Sound SAC (002283) 7618 m
- Gannivegil Bog SAC (000142) 10996 m
- Aran Island (Donegal) Cliffs SAC (000111) 11771 m
- Ballyness Bay SAC (001090) 11913 m
- Termon Strand SAC (001195) 12276 m

There are six SPAs within 15 km:

- West Donegal Coast SPA (004150) 0 m
- Derryveagh And Glendowan Mountains SPA (004039) 2011 m
- West Donegal Islands SPA (004230) 2675 m
- Falcarragh to Meenlaragh SPA (004149) 12030 m
- Illancrone and Inishkeeragh SPA (004132) 12799 m
- Inishbofin, Inishdoeey and Inishbeg SPA (004083) 14482 m

There is one NHA (Corveen Bog) and 12 pNHAs within 15 km:

- Corveen Bog NHA (001108)
- Gweedore Bay And Islands (001141) 0 m
- Fawnboy Bog/Lough Nacung (000140) 467 m
- Cronaguiggy Bog (001176) 3704 m
- Crolly Bridge Woods (001102) 3852 m
- Cloghernagore Bog And Glenveagh National Park (002047) 4837 m
- Gannivegil Bog (000142) 10992 m
- Aran Island (Donegal) Cliffs (000111) 11765 m
- Ballyness Bay (001090) 11917 m
- Termon Strand (001195) 12263 m
- Inishkeeragh (000152) 12801 m
- Illancrone (000148) 13453 m
- Inishbofin (Donegal) (000150) 14482 m

The present assessment is focussed specifically on Special Protection Areas (SPAs) designated under the EU Birds Directive that were identified in that report, and on the potential impacts of this proposed development on their Special Conservation Interests (SCIs).



### 2.2.1 Special Protection Areas (Birds Directive)

In accordance with guidelines recommended by Department of Environment, Heritage & Local Government (DoEHLG) (2009), *Natura* 2000 sites located within or adjacent to a plan or project area, and those within the zone of the development which is generally recommended as those sites within 15 km of the proposed development, should be considered, and with some exceptions these guidelines are suitable for many developments. However, the guidance also stipulates that *Natura* 2000 sites more than 15 km may need to be considered depending on the likely impacts of the project or plan (e.g. where water quality may affect water-dependent habitats or species).

For the purpose of this assessment, all SPAs located within 15 km of the proposed development site were considered in the first instance, and a total of six SPAs were identified (Table 1). The NPWS site synopses for these sites are presented in the Appendix. A review of *Natura* 2000 sites outside the 15 km limit was also undertaken, given that some sites that have been designated for breeding seabirds, and some of the seabird SCIs of these SPAs have known documented foraging ranges that extend well beyond 15 km of their immediate breeding colonies that could potentially occur in the vicinity of the aquaculture sites. The proposed and existing aquaculture sites are located in a large area of intertidal sandflats.

The SPAs in the vicinity of Gweedore Bay have been designated for a diversity of bird species with varying habitat requirements. Gittings (2018) neatly grouped species for which SPAs close to Gweedore Bay are designated in terms of their broad habitat requirements, and a summary of the review of SCIs (Table 2) presents these species within these groups. This assessment shows the possible occurrence of seven species in the aquaculture area (highlighted in green in Table 2), and Gittings (2018) provides additional information and research that supports these findings. These species are Common Gull, Lesser Black-backed Gull, Herring Gull, Red-throated Diver, Golden Plover, Merlin and Peregrine. However, of these, there is potential negative impact on Common Gull and Lesser Black-backed Gull only. Of the remaining species:

- Herring Gull: There is a high likelihood of spatial overlap with aquaculture activities, and previous studies have actually demonstrated positive impacts of trestles (Gittings & O'Donoghue 2016).
- Red-throated Diver: The specific breeding locations are unavailable due to the sensitivity of this species to disturbance and extremely low remaining population in Ireland (up to 6 pairs). They feed mostly in open waters, and it is expected that the likelihood of spatial overlap between breeding individuals and the aquaculture sites would be very low.
- Golden Plover: The SPA has been designated for breeding population, which remains largely in uplands habitats. There are no known records from the breeding season. It is expected that the likelihood of spatial overlap between breeding birds and the aquaculture sites would be very low.
- Merlin: Intertidal habitats are of known importance to foraging Merlin in winter, where large flocks of wintering waders occur. During the breeding months, their distribution is more confined to their inland breeding areas (Balmer *et al.* 2013), and they are less frequently reported from coastal locations, presumably at least in part because the availability of waders is very low outside the winter period. While Gweedore Bay is within the foraging range of breeding sites used by Merlin, it does not typically support large numbers of waders, and the likelihood of spatial overlap is expected to be very low.
- Peregrine: The locations of suitable breeding habitat within the SPAs for which Peregrine is listed (Derryveagh and Glendowan Mountains SPA and West Donegal Coast SPA) are some distance from

the aquaculture sites, and based on their known foraging ranges it is expected that spatial overlap would be very low.

The following SPAs are designated in part for Common Gull and/ or Lesser Black-backed Gull, and the aquaculture sites are within the known foraging ranges of both species:

- West Donegal Islands SPA (004230): Three colonies of Common Gull, 4-7 km from the nearest aquaculture site at Gweedore Bay.
- Inishbofin, Inishdooney and Inishbeg SPA (004083): Common Gull and Lesser Black-backed Gull colonies located 17 km from the nearest aquaculture site at Gweedore Bay.

Both species are regularly found in intertidal habitats for feeding and/ or roosting, and both species have been recorded in close proximity to the aquaculture sites (Bird Atlas 2007-2011 details presented on the website of the National Biodiversity Data Centre<sup>1</sup>, accessed 25/03/19). There is no available information that demonstrates that there is no effect of oyster trestles on either species, and a precautionary assumption is made that the trestles will have a negative effect on the availability of foraging habitat. Furthermore, Gittings (2018) identified that the trestles are possibly located in the intertidal areas that are most productive within Gweedore Bay and in areas most likely to be used for feeding. Therefore it cannot be ruled out that the development of aquaculture sites within Gweedore Bay will have a negative effect on the Common Gull SCI of the West Donegal Islands SPA, and on both the Common Gull and the Lesser Black-backed Gull SCIs of Inishbofin, Inishdooney and Inishbeg SPA.

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<sup>1</sup> <https://maps.biodiversityireland.ie/Map>

**Table 1. Summary of designated SPAs and their conservation interests.**

Site Name	Designation & Site Code	Key Conservation Reasons and Objectives	Minimum Distance to Site
West Donegal Coast SPA	SPA (004150)	<p>The West Donegal Coast SPA comprises separate sections of the Co. Donegal coastline and extends from Muckros Head in the south, northwards to Slieve League, Malin Beg, Rocky Point, Glen Head, Slieve Tooley, Maghera, Loughros Point, Dunmore Head, Aran Island, Magheradrumman, Carrickfin, Carnboy, Bunbeg, Magheragallan, Lunniagh, as far as Carrick, to the south of Bloody Foreland. The site includes the high coast areas and sea cliffs of the mainland and Aran Island, the land adjacent to the cliff, areas of sand dunes/machair at Maghera, Mullaghderg, Braade/Carrickfin/Carnboy, Magheragallan and Lunniagh/Carrick, and also several areas further inland of the coast at Croaghmuckros and Slieve League, north of Glencolumbkille and south of Dunmore Head. A low-lying area of land on the coast at Bunbeg used by roosting Chough is also included. The high water mark forms the seaward boundary, except at Tormore Island where the adjacent sea area to a distance of 500 m from the cliff base is included. Most of the site is underlain by granite and quartzite, though various other, particularly metamorphic, rock types also occur; rocks of Carboniferous age are found at Muckros Head.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Chough <i>Pyrrhocorax pyrrhocorax</i>, Peregrine <i>Falco peregrinus</i>, Fulmar <i>Fulmarus glacialis</i>, Cormorant <i>Phalacrocorax carbo</i>, Shag <i>P. aristotelis</i>, Herring Gull <i>Larus argentatus</i>, Kittiwake <i>Rissa tridactyla</i> and Razorbill <i>Alca torda</i>.</p>	Partially located within the proposed development
Derryveagh And Glendowan Mountains SPA	SPA (004039)	<p>Derryveagh and Glendowan Mountains SPA is an extensive upland site in north-west Co. Donegal, comprising Glenveagh National Park, a substantial part of the Derryveagh and Glendowan Mountains and a number of the surrounding lakes. Much of the site is over 300 m above sea level, rising to a peak of 678 m at Slieve Snaght. The solid geology is predominantly quartzite. The substrate over much of site is peat, with blanket bog and heath comprising the principal habitats.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Red-throated Diver <i>Gavia stellata</i>, Merlin <i>Falco columbarius</i>, Peregrine, Golden Plover <i>Pluvialis apricaria</i> and Dunlin <i>Calidris alpina</i>.</p>	2.0 km from proposed development
West Donegal Islands SPA	SPA (004230)	West Donegal Islands SPA consists of a series of small to moderate-sized islands lying between 700 m and 3.5 km off the north-west coast of Co. Donegal. It includes the islands of Gola, Inishmeane, Inishsirrer (the three largest), Umfin, Go, Allagh, Torglass, Tornacolpagh	2.7 km from proposed

Site Name	Designation & Site Code	Key Conservation Reasons and Objectives	Minimum Distance to Site
		<p>and Tororraun, as well as a number of smaller rocky islets. The islands are low-lying, the highest point being Knockaculleen on Gola (68 m). The site, which includes the intervening and surrounding seas to 200 m from the shorelines, is highly exposed to Atlantic swells. The predominant habitat of the islands is grassland, with both wet and dry types represented; small areas of dune grassland also occur. Small lakes occur on Inishsirr and Gola. The rocky shorelines have areas of boulders, shingle and coarse sand, and grade into submarine reefs, which are common in the shallow surrounding seas. The islands are uninhabited other than some summer dwellings on Gola and Inishmeane.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shag, Barnacle Goose <i>Branta leucopsis</i>, Corncrake <i>Crex crex</i>, Common Gull <i>Larus canus</i> and Herring Gull.</p>	development
Falcarragh to Meenlaragh SPA	SPA (004149)	<p>Falcarragh to Meenlaragh SPA is located on the eastern and western sides of Ballyness Bay on the north-west coast of Co. Donegal. This large site follows the coastline from Falcarragh to Meenlaragh and encompasses three areas of mixed agricultural grassland.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Corncrake.</p>	12.0 km from proposed development
Illancrone and Inishkeeragh SPA	SPA (004132)	<p>Illancrone and Inishkeeragh are two marine islands situated 8 to 9 km west of the town of Dunglow and south of Aranmore Island, Co. Donegal. Illancrone comprises areas of rock, shingle and short grassland. Inishkeeragh is a medium-sized, low-lying island surrounded by extensive intertidal rocks and, although now uninhabited, previous occupation has resulted in the island being divided into a system of enclosed fields. These fields have now reverted to unimproved dry grassland grazed by sheep.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Barnacle Goose, Common Tern <i>Sterna hirundo</i>, Arctic Tern <i>S. paradisaea</i> and Little Tern <i>Sternula albifrons</i>.</p>	12.8 km from proposed development
Inishbofin, Inishdooley and Inishbeg SPA	SPA (004083)	<p>Inishbofin, Inishdooley and Inishbeg SPA consists of three small to medium-sized islands located between 1 km and 4 km off the north-west coast of Co. Donegal. Inishbofin is inhabited during the summer months. The marine waters between and around the islands, to a distance of approximately 200 m, are included within the site.</p>	14.5 km from proposed development

Site Name	Designation & Site Code	Key Conservation Reasons and Objectives	Minimum Distance to Site
		The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Barnacle Goose, Corncrake, Common Gull, Lesser Black-backed Gull <i>Larus fuscus</i> and Arctic Tern.	

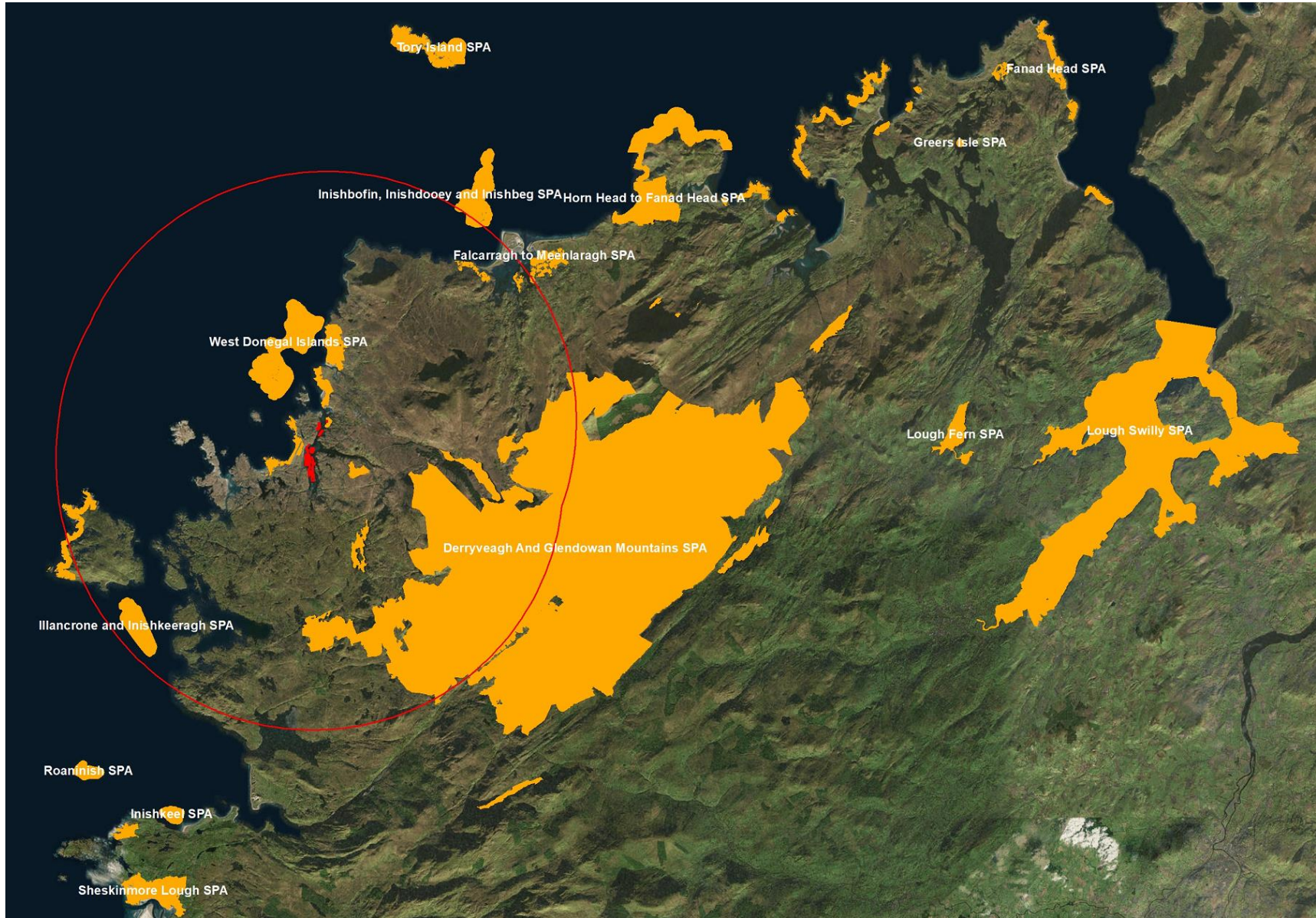


Figure 3 Designated Sites Map, illustrating the location of the proposed and existing aquaculture sites together with the 15 km buffer (red), and the location of nearby SPAs.



Table 2. Qualifying interests of nearby SPAs, indicating the proximity of the proposed development to the nearest SPA for which the species is listed, as well as ecological characteristics that would reflect the occurrence of these species within the proposed development area (known usage of intertidal habitats and foraging range)

Group	Species		Distance to closest SPA	Regular usage of intertidal habitats	Within foraging range*
Geese	Barnacle Goose	<i>Branta leucopsis</i>	2.7	N	Y
	Greenland White-fronted Goose	<i>Anser albifrons flavirostris</i>	21	Y	N
Breeding seabirds	Fulmar	<i>Fulmarus glacialis</i>	0	N	Y
	Cormorant	<i>Phalacrocorax carbo</i>	0	Y	N
	Shag	<i>P. aristotelis</i>	0	N	Y
	Puffin	<i>Fratercula arctica</i>	21	N	Y
	Razorbill	<i>Alca torda</i>	0	N	Y
	Guillemot	<i>Uria aalge</i>	21	N	Y
	Little Tern	<i>Sternula albifrons</i>	12.8	Y	N
	Common Tern	<i>Sterna hirundo</i>	12.8	Y	N
	Arctic Tern	<i>S. paradisaea</i>	12.8	Y	N
	Kittiwake	<i>Rissa tridactyla</i>	0	N	Y
	Common Gull	<i>Larus canus</i>	2.7	Y	Y
	Lesser Black-backed Gull	<i>L. fuscus</i>	14.5	Y	Y
	Herring Gull	<i>L. argentatus</i>	0	Y	Y
Upland breeding birds	Red-throated Diver	<i>Gavia stellata</i>	2	Y	Y
	Golden Plover	<i>Pluvialis apricaria</i>	2	Y	Y
	Dunlin	<i>Calidris alpina</i>	2	Y	Y
	Merlin	<i>Falco columbarius</i>	2	Y	Y
Peregrine	Peregrine	<i>F. peregrinus</i>	0	Y	Y
Terrestrial species	Chough	<i>Pyrrhcorax pyrrhcorax</i>	0	N	N
	Corncrake	<i>Crex crex</i>	2.7	N	N

\* Based on assessment by Gittings (2018)

### 3. ASSESSMENT OF SIGNIFICANCE

#### 3.1 IMPACTS ON THE *NATURA* 2000 NETWORK (SPECIFICALLY SPAS)

The potential impacts of the proposed development of the aquaculture sites at Gweedore Bay on nearby *Natura* 2000 sites are assessed using the following factors:

- size and scale;
- land-take;
- distance from the *Natura* 2000 site or key features of the site;
- Likely connectivity/pathways from the proposed development to *Natura* 2000 sites;
- resource requirements (water abstraction etc.);
- emissions (disposal to land, water or air);
- excavation requirements;
- transportation requirements;
- duration/timing of construction, operation, decommissioning, etc;
- reduction of habitat area;
- disturbance to key species;
- habitat or species fragmentation;
- reduction in species density;
- changes in key indicators of conservation value (water quality etc.);
- climate change;
- key relationships that define the structure of the sites; and
- key relationships that define the function of the site.

<p><b>Brief description of the project or plan</b></p>	<p>The project involves the renewal of existing aquaculture activity, specifically for the cultivation of the Pacific oyster on trestles, in intertidal areas and the licensing of new aquaculture sites within the Gweedore Bay. Most of the sites are located in the vicinity of Braade Strand, with a further three renewal applications located slightly further to the north along the channel, near Bunbeg. The total area of proposed and existing aquaculture sites is expected to occupy 58.0 ha. This includes:</p> <ul style="list-style-type: none"> <li>• Ten currently licensed sites within both the channel and inner Gweedore Bay .</li> <li>• In addition, there are currently ten new, applied for sites for oyster production, all within inner Gweedore Bay.</li> </ul>
<p><b>Brief description of the <i>Natura</i> 2000 sites</b></p>	<p>The development occurs within the Gweedore Bay &amp; Islands SAC (001141). It also occurs in close proximity to the West Donegal Coast SPA (004150), and one of the existing/renewal applications (193B) is located within this SPA. The SPAs occurring within a 15km radius of the site are as described above in <b>Table 1</b>.</p>
<p><b>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the <i>Natura</i> 2000 sites</b></p>	<ul style="list-style-type: none"> <li>• Development of aquaculture sites within the intertidal zone</li> <li>• Use of vehicles while servicing the site</li> </ul>
<p><b>Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the <i>Natura</i> 2000 site by virtue of:</b></p> <ul style="list-style-type: none"> <li>• size and scale;</li> <li>• land-take;</li> <li>• distance from the <i>Natura</i> 2000 site or key features</li> </ul>	<ul style="list-style-type: none"> <li>• Part of the proposed development (0.5 ha) is located within the West Donegal Coast SPA</li> </ul> <p>A number of indirect risks were identified by Marine Institute (2016), some of which may eventually impact on the abovementioned SCIs, including:</p> <ul style="list-style-type: none"> <li>• Risk of alien species arriving in seed or stock sourced from outside Ireland, and also the risk from the oyster culture itself in terms of the risk of non-native <i>Crassostrea gigas</i>.</li> <li>• Altered hydrology in the vicinity of the trestles caused by reduced water flow and allowing suspended material (including faeces) to fall</li> </ul>

<p>of the site;</p> <ul style="list-style-type: none"> <li>• resource requirements (water abstraction etc.);</li> <li>• emissions (disposal to land, water or air);</li> <li>• excavation requirements;</li> <li>• transportation requirements;</li> <li>• duration of construction, operation, decommissioning, etc.;</li> <li>• other</li> </ul>	<p>out onto the sea floor, and these sediments could result in the development of infaunal communities distinct from the rest of the site.</p> <ul style="list-style-type: none"> <li>• Compaction of sediment caused by vehicular traffic during operations.</li> </ul>
<p>Describe any likely changes to the site arising as a result of:</p> <ul style="list-style-type: none"> <li>• reduction of habitat area</li> <li>• disturbance to key species;</li> <li>• habitat or species fragmentation;</li> <li>• reduction in species density;</li> <li>• changes in key indicators of conservation value (water quality etc.);</li> <li>• climate change</li> </ul>	<p>The proposed development will result in the potential loss of 58.0 ha of intertidal habitat that may be used for feeding by the SCI species under consideration, namely Common Gull and Lesser Black-backed Gull.</p> <p>Disturbance activities caused during the servicing of the site may affect the both gull species.</p> <p>An increase in recreational disturbance in the area may impact on gull numbers using the site for roosting and/ or feeding.</p>
<p>Describe any likely impacts on the <i>Natura 2000</i> site as a whole in terms of:</p> <ul style="list-style-type: none"> <li>• interference with the key relationships that define the structure of the site</li> <li>• interference with key relationships that define the function of the site</li> </ul>	<p>The proposed development will alter the nature of the benthic habitats due to changes in hydrology and possible increased siltation in parts, and possibly also due to the loss of sediment (including faeces) from the trestle areas. These changes may result in altered usage by waterbirds generally, which may in turn affect the distributions of the SCI gull species.</p>
<p>Provide indicators of significance as a result of the identification of effects set out above in terms of:</p> <ul style="list-style-type: none"> <li>• Loss</li> <li>• Fragmentation</li> <li>• Disruption</li> <li>• Disturbance</li> <li>• Change to key elements of the site (e.g. water quality etc.)</li> </ul>	<p>The development will potentially result in a loss of foraging habitat used by Common and Lesser Black-backed Gulls, and may thereby impact on nearby colonies that are designated as SPAs.</p>
<p>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.</p>	<ul style="list-style-type: none"> <li>• Very little information exists about the precise movements of the abovementioned species when away from their breeding colonies (foraging etc.).</li> <li>• So the extent of impacts likely to be caused by the loss of available foraging habitat and the disturbance caused by increased activities at the site on the SCIs of nearby SPAs is largely unknown.</li> </ul>

### 3.2 CUMULATIVE AND IN-COMBINATION EFFECTS

Perhaps the greatest effects are caused by other aquaculture developments along the Donegal coastline<sup>\*</sup>. There are applications for Manila Clam cultivation in nearby Kinclassagh Bay. There are currently applications for oyster cultivation in Ballyness Bay located approximately 10-15 km (straight-line distance) to the northeast of the aquaculture sites at Gweedore Bay, and at Loughros Beg, approximately 30 km to the south, as well as at several other locations elsewhere along the Donegal coastline (Mulroy Bay, Lough Swilly and Donegal Bay). These developments impact on some of the same SPAs and their SCIs.

The Technical Advisor's Report noted the following other coastal/maritime activities taking place in Gweedore Bay:

- The immediate area around Donegal Airport, Carrickfinn Beach and Portarthur Beach are regularly used by walkers and cyclists.
- Activities at Gweedore Bay's beaches include swimming, kayaking, boating, windsurfing and other land-based activities such as football and kite flying etc.
- Kayaking and some walking also occur in Gweedore Bay itself, particularly around the northern part of the bay. Rock-climbing occurs on Gola and Cruit Islands nearby.
- The Gweedore Bay area is also popular for recreational, diving, sailing, and boat tours with views of the sea cliffs, cliff arches and the island coasts.
- The nearby Derryveagh Mountains attract thousands of walkers per year mainly to climb Mt Errigal and for views of the nearby Poison Glen.
- Sea angling, including boat fishing in the central Gweedore Bay channel, the "Gola Roads" between Gola and Inishinny Islands, and to the west of Gola Island, and shore angling from Bunbeg Harbour.
- River angling in the Clady and Gweedore rivers.
- Inshore fishing activity, mainly pot fishing for lobster and brown crab, with line and net fishing further offshore.

The added impacts imposed by activities result from either increased disturbance, or depletion of food resources, the latter from angling activities. Both Common and Lesser Black-backed Gull are reasonably tolerant of disturbance activities, but increased intensity of pressures caused by recreational activities could impact on key roosting or feeding areas of one or both of the SCIs. Angling may result in the depletion of prey, especially Lesser Black-backed Gull which is reliant on fish within its diet.

Most other developments in the area relate to small-scale coastal domestic applications, most of which are dated and have been completed.

## 4. CONCLUSION

Taking into consideration all of the material that has been prepared to date, and in reviewing the nearby SPAs and their SCIs, it is not possible to rule out the possibility that usage by the Common Gull SCIs of the West

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<sup>\*</sup> <https://www.agriculture.gov.ie/seafood/aquacultureforeshoremanagement/aquaculturelicensing/aquacultureforeshorelicenceapplications/donegal/>

Donegal Islands and Inishbofin, Inishdooney and Inishbeg SPAs and the Lesser Black-backed Gull SCI of the Inishbofin, Inishdooney and Inishbeg SPA of the proposed aquaculture development area at Gweedore Bay for feeding and/ or roosting will not be negatively affected. Therefore, it is recommended that the assessment progress to a stage 2 Appropriate Assessment.

The reasons for this conclusion are summarised as follows:

1. The proposed development of aquaculture sites within Gweedore Bay will result in the loss of 58 ha of intertidal habitats potentially used by the abovementioned SCIs for feeding and/ or roosting.
2. Several cumulative impacts have been identified that may, in combination with the above development, exacerbate further the impacts on the SCIs. They include:
  - a. Additional proposals for aquaculture development (largely oyster cultivation) elsewhere and in relatively close proximity to the Gweedore Bay aquaculture sites.
  - b. High levels of recreational disturbance which if not regulated may temporarily or even permanently displace the SCIs from the area.
  - c. Sea and river angling which could potentially affect prey availability, especially for Lesser Black-backed Gull which is reliant on fish prey.

## 5. REFERENCES

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## **6. APPENDIX**

Site synopses relating to the six SPAs located within 15 km of the proposed aquaculture development:

- 004039 Derryveagh And Glendowan Mountains SPA
- 004083 Inishbofin, Inishdoeey and Inishbeg SPA
- 004132 Illancrone and Inishkeeragh SPA
- 004149 Falcarragh to Meenlaragh SPA
- 004150 West Donegal Coast SPA
- 004230 West Donegal Islands SPA



**SITE NAME: DERRYVEAGH AND GLENDOWAN MOUNTAINS SPA**

**SITE CODE: 004039**

Derryveagh and Glendowan Mountains SPA is an extensive upland site in north-west Co. Donegal, comprising Glenveagh National Park, a substantial part of the Derryveagh and Glendowan Mountains and a number of the surrounding lakes. Much of the site is over 300 m above sea level, rising to a peak of 678 m at Slieve Snaght. The solid geology is predominantly quartzite. The substrate over much of site is peat, with blanket bog and heath comprising the principal habitats.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Red-throated Diver, Merlin, Peregrine, Golden Plover and Dunlin.

This site is one of only a few locations where Red-throated Diver breed in Ireland and the birds also use a number of lakes within the site for feeding. A survey in 2010 recorded 6 pairs at the site. The extensive bog and heath habitats provide excellent foraging habitat for both Peregrine (5-6 pairs in 2002) and Merlin (estimated 6-11 pairs). Peregrine nest on the crags and cliffs, whilst Merlin nest in the heather or in old crows' nests in trees. The site is very important for breeding Golden Plover and Dunlin (subsp. *schinzii*) with 18 and 5 pairs respectively recorded in 2002.

Red Grouse is also widespread on the bogs and Ring Ouzel, a rare species of the uplands, breeds sparingly, with at least 2 pairs recorded in a 2002 survey. Several pairs of Whinchat, a scarce Irish species, breed within the site. Goosander is also a regular visitor to the lakes, though breeding within the site has not been proved.

Snowy Owl has also attempted to breed within the site - a clutch of eggs was laid but these did not hatch. Wood Warbler is present annually, with perhaps three pairs occurring. Redstart has bred on at least one occasion but there have been few sightings in recent years and it is not known if breeding occurs regularly.

Glenveagh National Park is the central location for the Golden Eagle re-introduction programme, which commenced in 2000. With time, this species may become successfully re-established as a breeding species in Ireland.

The site is of high ornithological importance with nationally important breeding populations of five species. Of particular note is that five of the species that occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Red-throated Diver, Peregrine, Merlin, Golden Plover and Dunlin (subsp. *schinzii*). A large proportion of Lough Barra Bog, a Ramsar Convention site and a Statutory Nature Reserve, is within the Derryveagh and Glendowan Mountains SPA.

7.7.2014

**SITE NAME: INISHBOFIN, INISHDOOEY AND INISHBEG SPA**  
**SITE CODE: 004083**

Inishbofin, Inishdooley and Inishbeg SPA consists of three small to medium-sized islands located between 1 km and 4 km off the north-west coast of Co. Donegal. Inishbofin is inhabited during the summer months. The marine waters between and around the islands, to a distance of approximately 200 m, are included within the site.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Barnacle Goose, Corncrake, Common Gull, Lesser Black-backed Gull and Arctic Tern.

Inishbofin, Inishdooley and Inishbeg SPA supports a nationally important wintering population of Barnacle Goose (322 individuals – 4 survey mean between 1993 and 2003). The birds use the islands for both feeding and roosting but at times also commute to other sites in the region.

The site also supports a breeding population of Corncrake (13 pairs - five year mean peak between 2003 and 2007, based on records of calling males). Inishbofin, Inishdooley and Inishbeg SPA is one of a suite of sites along the western seaboard that is regularly utilised by nationally important numbers of breeding Corncrake.

Corncrake winter in southern and eastern Africa, migrating northwards to arrive on their breeding grounds from early April onwards, departing again in August and September. They require the cover of tall vegetation throughout their breeding cycle and are strongly associated with meadows which are harvested annually, where they nest and feed. Annual cutting of these meadows creates a sward which is easy for the birds to move through. Other habitats, which can provide cover for Corncrake in the early and late stages of the breeding season, are also important for this species.

Corncrake is listed on the 2010 International Union for Conservation of Nature (IUCN) Red List of Threatened Species. This is due to population and range declines of more than 50% in the last 25 years across significant parts of its range.

Inishbofin, Inishdooley and Inishbeg SPA also supports nationally important breeding populations of Common Gull (25 pairs on Inishdooley in 2002), Lesser Black-backed Gull (81 pairs on Inishdooley in 2002) and Arctic Tern (44 pairs on Inishbofin and 28 pairs on Inishdooley in 1995).

Inishbofin, Inishdooley and Inishbeg SPA is of high ornithological importance as it supports a nationally important population of Corncrake, a globally threatened species. The site also supports nationally important populations of wintering Barnacle Goose and breeding Common Gull, Lesser Black-backed Gull and Arctic Tern. Also of note is that three of the regularly occurring species are listed on Annex I of the E.U. Birds Directive, i.e. Barnacle Goose, Arctic Tern and Corncrake.

18.2.2011

**SITE NAME: ILLANCRONE AND INISHKEERAGH SPA**  
**SITE CODE: 004132**

Illancrone and Inishkeeragh are two marine islands situated 8 to 9 km west of the town of Dunglow and south of Aranmore Island, Co. Donegal. Illancrone comprises areas of rock, shingle and short grassland. Inishkeeragh is a medium-sized, low-lying island surrounded by extensive intertidal rocks and, although now uninhabited, previous occupation has resulted in the island being divided into a system of enclosed fields. These fields have now reverted to unimproved dry grassland grazed by sheep.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Barnacle Goose, Common Tern, Arctic Tern and Little Tern.

Both islands are particularly important as breeding sites for seabirds. The following species were recorded from the site in 1995: Common Tern (59 pairs), Arctic Tern (224 pairs), Little Tern (13 pairs) and Sandwich Tern (1 pair). The Arctic Tern colony on Illancrone has been known since 1954 and, in 1984, was the largest known nesting colony for the species in Co. Donegal (132 pairs). Other seabird species recorded from Inishkeeragh include Common Gull (150 individuals in 1984), Herring Gull (100 individuals in 1984), Lesser Black-backed Gull (20 individuals in 1984) and Roseate Tern (3 pairs on Illancrone in 1984 and 2 pairs on Inishkeeragh in 1969).

The site also supports a nationally important Barnacle Goose flock (235 - mean of four counts between 1993 and 2003) which uses the islands for feeding over the winter.

Illancrone and Inishkeeragh SPA is of considerable conservation significance for the colonies of breeding seabirds and the Barnacle Goose flock that use it. Many of the species recorded from the site are listed on Annex I of the E.U. Birds Directive, i.e. Barnacle Goose, Common Tern, Arctic Tern, Little Tern, Sandwich Tern and Roseate Tern.

23.9.2009

**SITE NAME: FALCARRAGH TO MEENLARAGH SPA**

**SITE CODE: 004149**

Falcarragh to Meenlaragh SPA is located on the eastern and western sides of Ballyness Bay on the north-west coast of Co. Donegal. This large site follows the coastline from Falcarragh to Meenlaragh and encompasses three areas of mixed agricultural grassland.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Corncrake.

Falcarragh to Meenlaragh SPA supports a breeding population of Corncrake (9 pairs - five year mean peak between 2003 and 2007, based on records of calling males).

Falcarragh to Meenlaragh SPA is one of a suite of sites along the western seaboard that is regularly utilised by nationally important numbers of breeding Corncrake.

Corncrake winter in southern and eastern Africa, migrating northwards to arrive on their breeding grounds from early April onwards, departing again in August and September. They require the cover of tall vegetation throughout their breeding cycle and are strongly associated with meadows which are harvested annually, where they nest and feed. Annual cutting of these meadows creates a sward which is easy for the birds to move through. Other habitats, which can provide cover for Corncrake in the early and late stages of the breeding season, are also important for this species.

Corncrake is listed on the 2010 International Union for Conservation of Nature (IUCN) Red List of Threatened Species. This is due to population and range declines of more than 50% in the last 25 years across significant parts of its range.

Falcarragh to Meenlaragh SPA is of high ornithological importance as it supports a nationally important population of Corncrake, a globally threatened species.

Corncrake is also listed in Annex I of the E.U. Birds Directive.

5.11.2014

## **SITE NAME: WEST DONEGAL COAST SPA**

### **SITE CODE: 004150**

The West Donegal Coast SPA comprises separate sections of the Co. Donegal coastline and extends from Muckros Head in the south, northwards to Slieve League, Malin Beg, Rocky Point, Glen Head, Slieve Tooey, Maghera, Loughros Point, Dunmore Head, Aran Island, Magheradrumman, Carrickfin, Carnboy, Bunbeg, Magheragallan, Lunniagh, as far as Carrick, to the south of Bloody Foreland. The site includes the high coast areas and sea cliffs of the mainland and Aran Island, the land adjacent to the cliff, areas of sand dunes/machair at Maghera, Mullaghderg, Braade/Carrickfin/Carnboy, Magheragallan and Lunniagh/Carrick, and also several areas further inland of the coast at Croaghmuckros and Slieve League, north of Glencolumbkille and south of Dunmore Head. A low-lying area of land on the coast at Bunbeg used by roosting Chough is also included. The high water mark forms the seaward boundary, except at Tormore Island where the adjacent sea area to a distance of 500 m from the cliff base is included. Most of the site is underlain by granite and quartzite, though various other, particularly metamorphic, rock types also occur; rocks of Carboniferous age are found at Muckros Head.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Chough, Peregrine, Fulmar, Cormorant, Shag, Herring Gull, Kittiwake and Razorbill.

Vegetated sea cliffs are the predominant habitat of the site; these occur along its length and support a good variety of plant species typical of the habitat, including some rarities. The cliff tops support heath, blanket bog or coastal grassland. The northern section of the site includes several areas of machair. Apart from the sea cliffs and machair, the site includes areas of dry heath, wet heath, blanket bog, upland acid grassland, dense Bracken (*Pteridium aquilinum*), scrub, semi-improved and improved pasture grassland, fixed and mobile dune grassland, freshwater marsh, streams, oligotrophic lakes, bedrock shores and islets.

The site supports an important population of breeding Chough, a Red Data Book species that is listed on Annex I of the E.U. Birds Directive; 40 breeding pairs were recorded from the site in the 1992 survey and 58 in the 2002/03 survey.

Concentrations of breeding pairs occur on the Glencolumbkille Peninsula, from Killybegs in the south to Loughros Beg Bay in the north and on Aran Island. On Aran the exposed maritime situation coupled with sheep grazing has resulted in large areas of short sward suitable for foraging Chough. Flocking activity is centred on some of the extensive sand dune systems present; flocks of 76, 22 and 40 birds were recorded at Carrick, Dooey and Sheskinmore respectively in October 2004. At Sheskinmore, which is included in a separate SPA, larger flocks of as many as 140 birds have been previously reported. Up to 40 birds have been recorded roosting at Glen Head near Glencolumbkille and feeding in that area during September 2004.

Flock birds feeding at Sheskinmore were roosting at nearby Dunmore Head during October 2004 and a communal roost site associated with dune feeding exists near Bunbeg, Gweedore within sight of the dunes at Magheragallan.

The site supports a nationally important Peregrine population (6 pairs in 2002). The site also holds nationally important populations of Fulmar (1,879 pairs), Cormorant (71 pairs in 1999 and 2006), Shag (86 pairs), Herring Gull (229 pairs), Kittiwake (1,037 pairs) and Razorbill (322 pairs). Other species that occur include Black Guillemot (155 individuals), Guillemot (366 pairs), Great Black-backed Gull (15 pairs) and Lesser Black-backed Gull (2 pairs) – all seabird data from 1999 except where indicated. The most important breeding seabird colony in the site is at Tormore Island, a small precipitous grassy sea stack rising to a peak

of 139 m, on the north side of the Glencolumbkille Peninsula. Puffin has been recorded breeding on Tormore in the past, with an estimated 3,000 birds in 1970, though such high numbers are no longer considered to occur. Small groups of Barnacle Goose, also an E.U. Birds Directive Annex I species, occasionally graze on the sward on top of the stack. Twite and Ring Ouzel, both Red-listed species are also known to occur within the West Donegal Coast SPA.

The West Donegal Coast SPA contains nationally important breeding populations of Chough, Peregrine and six seabird species: Fulmar, Cormorant, Shag, Herring Gull, Kittiwake and Razorbill. The presence of Chough and Peregrine, species that are listed on Annex I of the E.U. Birds Directive, is of note.

30.5.2015



**SITE NAME: WEST DONEGAL ISLANDS SPA**  
**SITE CODE: 004230**

West Donegal Islands SPA consists of a series of small to moderate-sized islands lying between 700 m and 3.5 km off the north-west coast of Co. Donegal. It includes the islands of Gola, Inishmeane, Inishsirr (the three largest), Umfin, Go, Allagh, Torglass, Tornacolpagh and Tororrageun, as well as a number of smaller rocky islets. The islands are low-lying, the highest point being Knockaculleen on Gola (68 m).

The site, which includes the intervening and surrounding seas to 200 m from the shorelines, is highly exposed to Atlantic swells. The predominant habitat of the islands is grassland, with both wet and dry types represented; small areas of dune grassland also occur. Small lakes occur on Inishsirr and Gola. The rocky shorelines have areas of boulders, shingle and coarse sand, and grade into submarine reefs, which are common in the shallow surrounding seas. The islands are uninhabited other than some summer dwellings on Gola and Inishmeane.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shag, Barnacle Goose, Corncrake, Common Gull and Herring Gull.

The West Donegal Islands SPA supports a nationally important wintering population of Barnacle Goose (272 individuals - four survey mean between 1993 and 2003). The birds use the islands for both feeding and roosting, though at times may commute to other islands off the Donegal coast, such as Inishkeeragh and Inishdooyey.

The site supports a breeding population of Corncrake (13 pairs - five year mean peak between 2003 and 2007, based on records of calling males). The West Donegal Islands SPA is one of a suite of sites along the western seaboard that is regularly utilised by nationally important numbers of breeding Corncrake.

Corncrake winter in southern and eastern Africa, migrating northwards to arrive on their breeding grounds from early April onwards, departing again in August and September. They require the cover of tall vegetation throughout their breeding cycle and are strongly associated with meadows which are harvested annually, where they nest and feed. Annual cutting of these meadows creates a sward which is easy for the birds to move through. Other habitats, which can provide cover for Corncrake in the early and late stages of the breeding season, are also important for this species.

Corncrake is listed on the 2010 International Union for Conservation of Nature (IUCN) Red List of Threatened Species. This is due to population and range declines of more than 50% in the last 25 years across significant parts of its range.

The West Donegal Islands SPA also supports nationally important breeding populations of Shag (40 pairs on Gola Island in 1999 and 30 pairs on Inishsirr in 2000), Common Gull (20 pairs on Gola Island in 1999 and 55 pairs on Inishsirr and Inishmeane in 2000) and Herring Gull (65 pairs on Gola Island in 1999 and 25 pairs on Inishsirr in 2000). Arctic Tern is known to nest on Inishsirr and possibly at times on Inishmeane. Common Tern may also be present; a total of 25 pairs were present in the 1995 National Tern Survey.

The West Donegal Islands SPA is of high ornithological importance as it supports a nationally important population of Corncrake, a globally threatened species. The site also supports nationally important populations of wintering Barnacle Goose and breeding Shag, Common Gull and Herring Gull. Also of note is that three of the regularly occurring species are listed on Annex I of the E.U. Birds Directive, i.e. Barnacle Goose, Arctic Tern and Corncrake.

15.6.2011