

# **Proposed development of a salmon farm at Shot Head, Bantry Bay 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 development of a salmon farm at Shot Head in Bantry Bay specifically on the bird conservation interests at nearby *Natura* 2000 sites. 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. This assessment has identified a number of SPAs in the area that are designated for breeding seabirds, and it is possible (based on published foraging ranges) that several of the listed species may occur in the vicinity of the proposed development. Indeed, previously published surveys have indicated the presence of several of these species in the area. It is concluded that impacts on the SCIs of nearby SPAs cannot be ruled out, and that the assessment must proceed to 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 development of a salmon farm at Shot, Head in Bantry Bay, Co. Cork 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, SAC's and SPA's 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 proposed farm would include one production site located near Shot Head on the northern shoreline of Bantry Bay. The proposed site is 42.5 hectares in size and would contain 16 No. 41 m cages with 15 m deep nets, with an additional two cages for management of disease treatments. The cages would be held in position in a 9 x 2 cage array (subject to an approved licence modification request) by a submerged mooring grid. A feed barge would be deployed on the shoreward side of the site and would be used to feed the stock automatically through a pipe distribution system using compressed air.

It is proposed that the Shot Head site would undergo a 2-year production cycle. The site service would be provided by a 15.5 m long multi-cat type vessel used for the transportation of feed and other freight, and for general site duties including maintenance and net changing. The main service vessels will operate from moorings in either Castletownbere Harbour or at the Pontoon Pier at Beal Lough to the east of Castletownbere. The operation of the Shot Head site will involve the use of the Applicant's existing shore-based facilities in Castletownbere.

The project site at Shot Head is located approximately mid-way along the northern shoreline of Bantry Bay, and approximately 2 kilometres east of the inlet at Adrigole (Fig. 1). It offers a location of sufficient depth for salmon farming that is partially sheltered from severe storm and wind conditions by Bear Island to the west and is a site that is not already populated by a fishery or aquaculture resource.



Figure 1. Location of the proposed salmon farm at Shot Head in Bantry Bay, indicating the locations mentioned in the text.

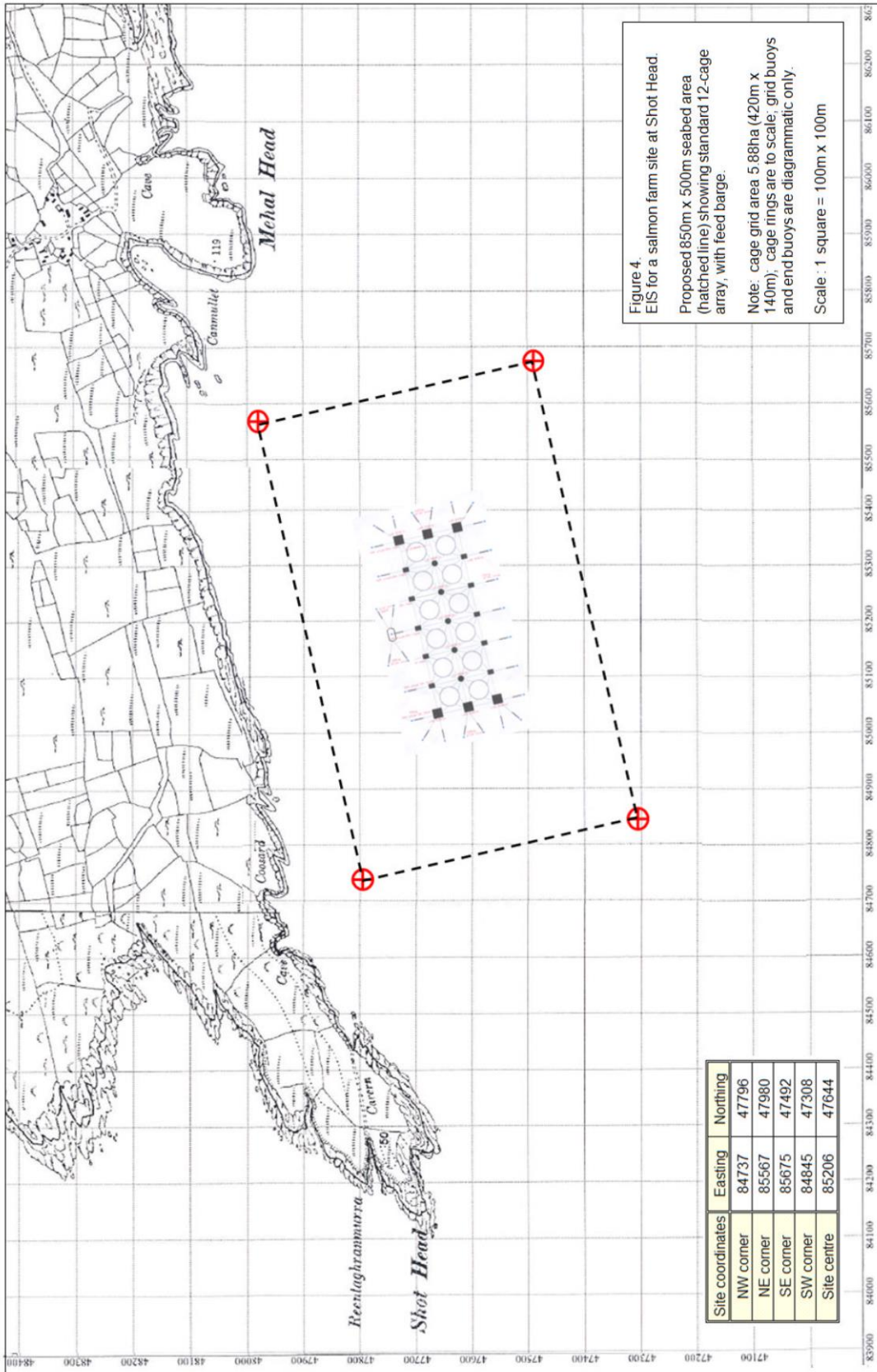


Figure 2. Proposed arrangement of salmon cages at Shot Head (from Environmental Impact Statement (EIS) completed in 2011). Note that the Applicant has submitted a request to modify the licence conditions to accommodate an increase in cage number from 14 to 18.

## 2.2 BRIEF DESCRIPTION OF THE NATURA 2000 SITES

The proposed salmon farm at Shot Head is not located within any designated *Natura* 2000 sites. There are six *Natura* 2000 sites and four NHAs located within the wider Bantry Bay catchment area. Full details relating on these *Natura* 2000 sites are presented in the AA Screening report. 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). In the context of the current proposed development, there is a small number of *Natura* 2000 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 and could potentially choose to feed in the vicinity of the proposed salmon farm site.

For the purpose of this assessment, all SPAs located within 15 km of the proposed development site were considered in the first instance, and thereafter, additional SPAs were considered with increasing distance from the proposed site location and in relation to reported mean foraging ranges of their SCIs as assessed and reported by Gittings (2018). It is acknowledged that foraging ranges can exceed the reported means. These sources were used as a guide on SPAs that may be affected, with other relevant factors in respect of likely impacts also included in the considerations below.

A total of seven SPAs were identified for consideration as part of this screening assessment (Table 1), and these include two SPAs that are located within 15 km of the proposed salmon farm:

- Sheep's Head to Toe Head SPA 004156
- Beara Peninsula SPA 004155

A further five sites support SCIs that could potentially occur in the vicinity based on known foraging ranges:

- Iveragh Peninsula SPA 004154
- Deenish Island and Scariff Island SPA 004175
- The Bull and The Cow Rocks SPA 004066
- Puffin Island SPA 004003
- Skelligs SPA 004007

A summary of the SCIs for these sites, together with reasons for why they are being considered, is presented in Table 2. They include the following (refer to Gittings 2018 for full discussion and rationale for each species):



- Chough *Pyrhocorax pyrrhocorax* and Peregrine *Falco peregrinus* which are predominantly terrestrial and which would not be associated with fish farms.
- A range of seabird species which could potentially overlap with the proposed development based on their published foraging ranges. These include the following species for which spatial overlap is likely:
  1. Fulmar *Fulmarus glacialis*: The proposed development is located within the published foraging range of this species and the following SPAs for which the species is listed: Beara Peninsula SPA, Iveragh Peninsula SPA, Deenish Island and Scariff Island SPA. While highly pelagic in its distribution, there have been several records of this species within Bantry Bay and in the vicinity of Shot Head, including breeding and winter records in the vicinity of Shot Head.
  2. Gannet *Morus bassanus*: The proposed development is located within the published foraging range of this species and the following SPAs for which the species is listed: The Bull & The Cow Rocks SPA, Skelligs SPA. There have been many records within Bantry Bay, and including the Shot Head area. Furthermore, recent tracking studies with broad-scale information available online<sup>1</sup> have demonstrated usage of Bantry Bay by Gannets from The Bull and The Cow Rocks SPA.
  3. Guillemot *Uria aalge*: The proposed development is located within the published foraging range of this species and the Iveragh Peninsula SPA for which the species is listed. Furthermore, Guillemots have been regularly recorded within the wider bay, as well as in close proximity to Shot Head.
- Other species which could potentially overlap with the proposed development based on their published foraging ranges, but which are unlikely to occur within the location of the proposed development include:
  1. Storm Petrel *Hydrobates pelagicus*: Highly pelagic species with very few records within Bantry Bay, the last during ESAS surveys in 1995. It is highly unlikely that there would be spatial overlap between this species and the proposed development site.
  2. Puffin *Fratercula arctica*: The proposed development is located within the published foraging range of this species and the following SPAs for which the species is listed: The Bull & The Cow Rocks SPA. However, this species had not been recorded in Bantry Bay east of Bear Island.
- Species which could potentially overlap with the proposed development based on their published foraging ranges, but which are not likely to be adversely affected by the proposed development include:
  1. Lesser Black-backed Gull *Larus fuscus*.

Therefore, the remainder of this assessment is focussed on the three SCIs which may be potentially impacted by the proposed development, namely Fulmar, Gannet and Guillemot.

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<sup>1</sup><http://seabirdtracking.org/mapper/index.php>

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

Site Name	Designation & Site Code	Key Conservation Reasons and Objectives	Minimum Distance to Site
Sheep's Head to Toe Head SPA	SPA (004156)	<p>The Sheep's Head to Toe Head SPA is large site situated on the south-west coast of Co. Cork. It encompasses the high coast and sea cliffs from Sheep's Head to Mizen Head, Brow Head and Crookhaven in the west and from Baltimore to Tragumna Bay, Gokane Point and the Toe Head peninsula in the east. The site includes the sea cliffs, the land adjacent to the cliff edge, an area further inland to the east of Dunlough Bay, and also areas of sand dunes at Barley Cove and Crookhaven. The high water mark forms the seaward boundary. Most of the site is underlain by Devonian sandstones and mudstones, though Carboniferous rocks are also found on the Sheep's Head and Toe Head peninsulas.</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>Pyrhacorax pyrrhacorax</i> and Peregrine <i>Falco peregrinus</i>.</p>	10.4 km from proposed development
Beara Peninsula SPA	SPA (004155)	<p>The Beara Peninsula SPA is a coastal site situated on the west coast of Co. Cork, south-west of the town of Kenmare. It encompasses the high coast and sea cliff sections of the western end of the peninsula from Reenmore Point/Cod's Head in the north, around to the end of Dursey Island in the west, and as far east as Bear Island in the south. The site includes the sea cliffs, the land adjacent to the cliff edge and several upland areas further inland of the coast about Eagle Hill, Knockgour, Allihies and Firkeel. The high water mark forms the seaward boundary. Most of the site is underlain by Devonian sandstones and siltstones, though Carboniferous rocks are found about Black Ball Head and on Bear Island; small areas of igneous rocks occur at Cod's Head, Dursey Island, Black Ball Head and Bear Island.</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 and Fulmar <i>Fulmarus glacialis</i>.</p>	11.5 km from proposed development

Site Name	Designation & Site Code	Key Conservation Reasons and Objectives	Minimum Distance to Site
Iveragh Peninsula SPA	SPA (004154)	<p>The Iveragh Peninsula SPA is a large site situated on the west coast of Co. Kerry. The site encompasses the high coast and sea cliff sections of the peninsula from just west of Rossbehy in the north, around to the end of the peninsula at Valencia Island and Bolus Head, and as far east as Lamb's Head in the south. The site includes the sea cliffs, the land adjacent to the cliff edge and also areas of sand dunes at Derrynane and Beginish. The high water mark forms the seaward boundary except at Doulus Head/Killelan Mountain where the adjacent sea area to a distance of 500 m from the cliff base is included. The site is underlain by Devonian sandstones, siltstones and mudstones. A small area of igneous rocks (dolerite and gabbro) occurs at Beginish and on the adjacent shore.</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, Peregrine, Guillemot <i>Uria aalge</i>, Fulmar, and Kittiwake <i>Rissa tridactyla</i>. Guillemot and Fulmar have known breeding season foraging ranges in excess of 31.2 km and could potentially occur within the vicinity of the proposed development.</p>	31.2 km from proposed development
Deenish Island and Scariff Island SPA	SPA (004175)	<p>Deenish Island and Scariff Island are small- to medium-sized islands situated between 5 and 7 km west of Lamb's Head off the Co. Kerry coast; they are thus very exposed to the force of the Atlantic Ocean. Scariff is the larger of the two. It is steep-sided all the way around and rises to a peak of 252 m. The highest cliffs are on the south side. The island vegetation is a mix of maritime grassland, areas dominated by Bracken (<i>Pteridium aquilinum</i>) and heathy areas with Ling Heather (<i>Calluna vulgaris</i>). There are the ruins of a monastic settlement and a cottage in the north-east sector of the island. Deenish is less rugged than Scariff, and rises to 144 m in its southern half; the northern half is lower and flatter. The vegetation is mostly grassland, with some heath occurring on the higher ground. Old fields are now overgrown with Bracken and brambles (<i>Rubus</i> spp.). The surrounding seas to a distance of 500 m around the islands are included within the site.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater <i>Puffinus puffinus</i>, Storm Petrel <i>Hydrobates pelagicus</i>, Lesser Black-backed Gull <i>Larus fuscus</i> and Arctic Tern <i>Sterna paradisaea</i>. With the exception of Arctic Tern and Manx Shearwater, all other SCIs could potentially occur within the vicinity of the proposed development.</p>	38.0 km from proposed development

Site Name	Designation & Site Code	Key Conservation Reasons and Objectives	Minimum Distance to Site
The Bull and The Cow Rocks SPA	SPA (004066)	<p>The site comprises two very small rocky islands, the Cow and the Bull, situated 2.5 km and 4 km respectively from Dursey Head off the coast of Co. Cork. The islands, which are composed of vertically stratified sandstone, rise to over 60 m and are generally precipitous. Vegetation is sparse and is a typical maritime flora, mostly comprising a sward of Thrift (<i>Armeria maritima</i>) and Sea Campion (<i>Silene maritima</i>). A few rocky islets occur off the main islands. The surrounding water, between and to a distance of 500 m around each island, is included within the site for the benefit of the breeding seabirds. The Commissioners of Irish Lights maintain a lighthouse on the Bull.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Storm Petrel, Gannet <i>Morus bassanus</i> and Puffin <i>Fratercula arctica</i>. Storm Petrel and Gannet have known breeding season foraging ranges in excess of 42.4 km and could potentially occur within the vicinity of the proposed development.</p>	42.4 km from proposed development
Puffin Island SPA	SPA (004003)	<p>Puffin Island lies approximately 0.5 km off the northern side of St Finan's bay in south-west Co. Kerry. It is a long, narrow island of Old Red Sandstone. The island is almost divided into two halves – the southern half is a long narrow, rocky ridge, rising to 130 m, while the northern half broadens into a grassy plateau though has a high point of 159 m. The island is surrounded by mostly steep cliffs and slopes. The vegetation of the main part of the island is a typical maritime grassy sward, though nine different plant communities have been distinguished, including a small area of Ling Heather (<i>Calluna vulgaris</i>) heath. A Thrift (<i>Armeria maritima</i>) community dominates the slopes. In the past Puffin Island was grazed quite heavily by sheep, and today rabbits are common.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater, Storm Petrel, Lesser Black-backed Gull, Razorbill <i>Alca torda</i> and Puffin. The site is also of special conservation interest for holding an assemblage of over 20,000 breeding seabirds. Storm Petrel and Lesser Black-backed Gull have known breeding season foraging ranges in excess of 53.4 km and could potentially occur within the vicinity of the proposed development.</p>	53.4 km from proposed development

Site Name	Designation & Site Code	Key Conservation Reasons and Objectives	Minimum Distance to Site
Skelligs SPA	SPA (004007)	<p>The site comprises Great Skellig and Little Skellig islands. These highly exposed and isolated islands, which are separated by a distance of 3 km, are located in the Atlantic some 14 km and 11 km (respectively) off the County Kerry mainland.</p> <p>Both islands are precipitous rocky sea stacks, Great Skellig rising to 218 m and Little Skellig to 134 m. Great Skellig supports a sparse maritime flora on shallow soils. Common plant species include Thrift (<i>Armeria maritima</i>), Sea Campion (<i>Silene maritima</i>) and Rock Sea-spurrey (<i>Spergularia rupicola</i>), with patches of Red Fescue (<i>Festuca rubra</i>), Dock (<i>Rumex</i> sp.) and Sea Mayweed (<i>Matricaria maritima</i>) occurring frequently. Its lichen flora is notable for the number of rarities that occur, including several species not recorded elsewhere in Ireland. Little Skellig is largely unvegetated, due both to the low soil cover and to the effect that the nesting birds have on the vegetation. However, Sea Mayweed occurs on ledges that are too small for Gannets, and Tree Mallow (<i>Lavatera arborea</i>), a local species in Ireland, has been recorded.</p> <p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater, Storm Petrel, Gannet, Kittiwake, Guillemot and Puffin. It is also of special conservation interest for supporting an assemblage of over 20,000 breeding seabirds. Based on known foraging ranges, it is possible that Gannet and Storm Petrel could occur in the vicinity of the proposed salmon farm.</p>	58.7 km from proposed development

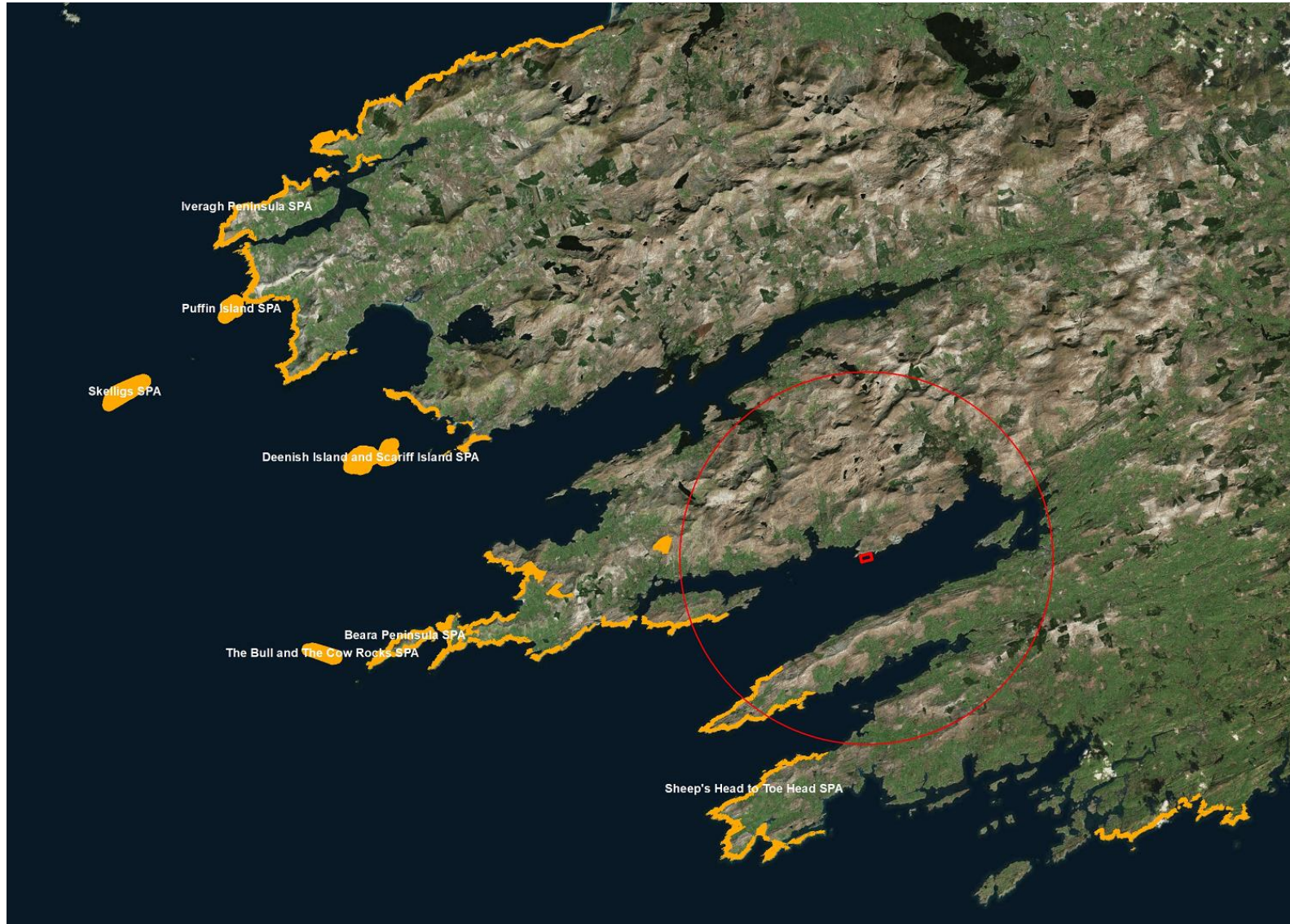


Figure 3 Designated Sites Map, illustrating the location of the proposed salmon farm at Shot Head together with the 15 km buffer (red), and the location of SPAs being considered.

**Table 2. Summary of the SCIs for these sites, together with reasons for why they are being considered.**

Species		Distance to nearest SPA (km)	Mean foraging range (km)**	Occurrence in Bantry Bay***	Occurrence in the vicinity of Shot Head***	Notes
<b>SCIs of SPA sites within 15 km of the proposed development</b>						
*Chough	<i>Pyrhocorax pyrrhocorax</i>	10.4	N/A			
*Peregrine	<i>Falco peregrinus</i>	10.4	N/A			
Fulmar	<i>Fulmarus glacialis</i>	11.5	47.5	1,2,3,4,6	(3)	Present and confirmed breeding nesting near Shot Head (tetrad V84P)
<b>Other SCI species deemed capable of occurring within the vicinity of the proposed development (based on known foraging ranges)</b>						
Storm Petrel	<i>Hydrobates pelagicus</i>	38	>65	1,6	6	
Gannet	<i>Morus bassanus</i>	42.4	99.3	1,2,3,4,5,6	3,5	Present V84E, V84N (breeding season), V84V (winter)
Lesser Black-backed Gull	<i>Larus fuscus</i>	38	71.9	1,2,3,5,6	(3)	Confirmed breeding V84Z
Guillemot	<i>Uria aalge</i>	31.2	37.8	1,2,3,5,6	3,5,6	
Puffin	<i>Fratercula arctica</i>	42.4	40	6	No	

\* Species largely with terrestrial habits, and does not interact with the marine environment

\*\* Source Gittings (2018).

\*\*\* Sources (brackets indicate confirmed breeding in the vicinity) accessed through the National Biodiversity Data Centre online mapping, accessed 25/03/19:

1. First breeding atlas (Sharrock 1976)
2. Second breeding atlas (Gibbons et al. 1992)
3. Third breeding atlas (Balmer et al. 2013)
4. First wintering atlas (Lack 1986)
5. Second wintering atlas (Balmer et al. 2013)
6. European Seabirds at Sea (Pollock et al. 1997)

### 3. ASSESSMENT OF SIGNIFICANCE

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

The potential impacts of the proposed development of the salmon farm at Shot Head 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 development of a salmon farm comprising up to 18 No. 41 m cages with 15 m deep nets at Shot Head. The cages will be held in position in a 9 x 2 cage array by a submerged mooring grid. A feed barge will be deployed on the shoreward side of the site, and will be used to feed the stock automatically through a pipe distribution system using compressed air.</p>
<p><b>Brief description of the <i>Natura</i> 2000 sites</b></p>	<p>The proposed development does not occur within a <i>Natura</i> 2000 site. The <i>Natura</i> 2000 sites occurring within a 15 km radius of the site are as described above in <b>Table 1</b>. Additionally, the SCIs of other SPAs located further than 15 km away may potentially occur in the vicinity of the proposed development and these SPAs have been included also.</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>• Construction and anchoring of the salmon cages</li> <li>• Increased boating in the area, during construction and operation</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 of the site;</li> <li>• resource requirements (water abstraction etc.);</li> <li>• emissions (disposal to land, water or air); excavation requirements;</li> </ul>	<p>The proposed development is not located within any <i>Natura</i> 2000 site, therefore there will be no direct impacts arising from the project regarding size and scale or land-take.</p>



<ul style="list-style-type: none"> <li>• transportation requirements;</li> <li>• duration of construction, operation, decommissioning, etc.;</li> <li>• other</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 loss of 42.5 ha of marine habitat that may be used for feeding by some SCI species associated with SPAs in the vicinity, especially Fulmar, Gannet and Guillemot.</p> <p>Indirect habitat loss or deterioration of any <i>Natura</i> 2000 sites through impacts on the SCIs could occur from the effects of run-off or contaminated discharge into the marine environment during the construction, through pollution during operation phase (e.g. from food material, inorganic waste, veterinary products, mortality disposal), or from vessels servicing the salmon farm during construction and/ or operation. However, these effects were considered in the EIS and it is proposed that Standard Operating Procedures in place at other salmon farms will apply and are appropriate.</p> <p>Activities associated with the construction and operation phases include many factors related to the terrestrial environment (e.g. increased traffic, storage facilities at Castletownbere etc.) which would not affect the SCIs of the nearby SPAs.</p> <p>However, some disturbance is likely from boats moving back and forth between Castletownbere and the site at Shot Head. This disturbance would be most likely to affect locally nesting birds (e.g. terns, gulls, Cormorants).</p> <p>It is possible that these vessels may actually serve as attractants to some seabird species, including the abovementioned Gannet and Fulmer.</p>
<p>Describe any likely impacts on the <i>Natura</i> 2000 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 development will result in the loss of possible foraging habitats outside of the SPAs that are possibly used by some of the SCIs, namely Gannet, Fulmar and Guillemot.</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>	<ul style="list-style-type: none"> <li>• While there will be no loss of habitat within the SPAs, there will be a loss of foraging habitat used by some of the SCIs</li> <li>• It is possible that some species may become entangled in the netting used to cover the cages</li> <li>• Increased boating during construction and operation stages may cause disturbance, but the impacts on the three species mentioned above is likely to be minimal</li> </ul>
<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 disturbance caused by increase boating traffic on the SCIs of nearby SPAs is largely unknown.</li> <li>• Furthermore, there is very little information about entanglement of seabirds in nets used to cover the salmon cages, so it is not possible to estimate the likelihood that an individual is from a nearby SPA</li> </ul>

### 3.2 CUMULATIVE AND IN-COMBINATION EFFECTS

There has been considerable development of aquaculture and salmon farming<sup>2</sup> in the southwest, and cumulatively there would be several farms impacting on the same SCIs. They include a further four fish farm sites located within Bantry Bay (Fig. 4), including Roancarrig which has been operational since the 1970s.

An application for a large-scale mechanical harvesting operation of kelp has been approved and is underway. The licence covers about 1,800 acres.



Figure 4. Locations of other fish farm sites within Bantry Bay.

## 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 potential impacts of the proposed development at Shot Head on Fulmar SCIs (Beara Peninsula SPA, Iveragh Peninsula SPA, Deenish Island and Scariff Island SPA), Gannet SCIs (The Bull and The Cow Rocks SPA and Skelligs SPA) and Guillemot SCI (Iveragh Peninsula SPA). Therefore, it is recommended that the assessment progress to a stage 2 Appropriate Assessment.

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<sup>2</sup> <https://www.marine.ie/Home/site-area/areas-activity/aquaculture/locations-salmonid-farms>

The reasons for this conclusion are summarised as follows:

1. The proposed development of aquaculture sites within Bantry Bay will result in the loss of 42.5 ha of inshore habitat that could potentially be used by the abovementioned SCIs for feeding.
2. Cumulative impacts have been identified that may, in combination with the above development, exacerbate further the impacts on the SCIs. They include additional fish farms in the area (elsewhere in Bantry Bay) and associated levels of disturbance.

## 5. REFERENCES

Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. & Fuller, R.J. 2013. *Bird Atlas 2007-11: The Breeding and Wintering Birds of Britain and Ireland*. BTO, Thetford.

Department of Environment, Heritage & Local Government (DoEHLG). 2009. *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. DoEHLG, Dublin.

European Commission. 2001. *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 DG Environment, Oxford UK.

Lack, P.C. 1986. *The atlas of wintering birds in Britain and Ireland*. T. & A.D. Poyser

Gibbons, D.W., Reid, J.B. & Chapman, R.A. 1993. *The new atlas of breeding birds in Britain and Ireland: 1988-1991*. T. & A.D. Poyser

Gittings, T. 2018. Bird Expert’s Report: *Briefing Note Bird impact assessment: Shot Head*. Unpublished report to the Aquaculture Licencing Appeals Board.

Sharrock, J.T.R. 1976. *The atlas of breeding birds in Britain and Ireland*. T. & A.D. Poyser

## **6. APPENDIX**

Site synopses relating to the SPAs included in this assessment:

- 004003 Puffin Island SPA
- 004007 Skelligs SPA
- 004066 The Bull and The Cow Rocks SPA
- 004154 Iveragh Peninsula SPA
- 004155 Beara Peninsula SPA
- 004156 Sheep's Head to Toe Head SPA
- 004175 Deenish Island and Scariff Island SPA

**SITE NAME: PUFFIN ISLAND SPA**

**SITE CODE: 004003**

Puffin Island lies approximately 0.5 km off the northern side of St Finan's bay in south-west Co. Kerry. It is a long, narrow island of Old Red Sandstone. The island is almost divided into two halves – the southern half is a long narrow, rocky ridge, rising to 130 m, while the northern half broadens into a grassy plateau though has a high point of 159 m. The island is surrounded by mostly steep cliffs and slopes. The vegetation of the main part of the island is a typical maritime grassy sward, though nine different plant communities have been distinguished, including a small area of Ling Heather (*Calluna vulgaris*) heath. A Thrift (*Armeria maritima*) community dominates the slopes. In the past Puffin Island was grazed quite heavily by sheep, and today rabbits are common.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater, Storm Petrel, Lesser Black-backed Gull, Razorbill and Puffin. The site is also of special conservation interest for holding an assemblage of over 20,000 breeding seabirds.

Puffin Island is one of the most important seabird sites in Ireland. In the Seabird 2000 survey, it supported internationally important populations of Storm Petrel (5,177 pairs) and Manx Shearwater (6,329 pairs). Puffin Island is the second most important site in Ireland for Manx Shearwater. The nationally important population of breeding Puffin (5,125 pairs) was the largest recorded in Ireland during the Seabird 2000 survey. The island also supports nationally important populations of Fulmar (447 pairs in 2000), Razorbill (402 pairs in 1985 - incomplete survey in 2000) and Lesser Black-backed Gull (139 pairs in 2000). Other seabirds recorded during the Seabird 2000 survey include Shag (5 pairs), Kittiwake (25 pairs), Guillemot (92 pairs) and Great Black-backed Gull (72 pairs).

Chough also breeds on Puffin Island with up to 3 pairs recorded in 1992 and at least one pair in 2002. During winter the resident population may be joined by other birds that breed on the mainland.

Puffin Island SPA is of international importance for its breeding seabird assemblage. The presence of Chough and Storm Petrel is of particular note as these species are listed on Annex I of the E.U. Birds Directive. The island is owned by BirdWatch Ireland and is managed for conservation. Puffin Island is a Statutory Nature Reserve.

19.5.2015

**SITE NAME: SKELLIGS SPA**

**SITE CODE: 004007**

The site comprises Great Skellig and Little Skellig islands. These highly exposed and isolated islands, which are separated by a distance of 3 km, are located in the Atlantic some 14 km and 11 km (respectively) off the County Kerry mainland. The geology of the islands is of Old Red Sandstone, with a little slate and veins of white quartzite.

Both islands are precipitous rocky sea stacks, Great Skellig rising to 218 m and Little Skellig to 134 m.

Great Skellig supports a sparse maritime flora on shallow soils. Common plant species include Thrift (*Armeria maritima*), Sea Campion (*Silene maritima*) and Rock Sea-spurrey (*Spergularia rupicola*), with patches of Red Fescue (*Festuca rubra*), Dock (*Rumex* sp.) and Sea Mayweed (*Matricaria maritima*) occurring frequently. Its lichen flora is notable for the number of rarities that occur, including several species not recorded elsewhere in Ireland. Little Skellig is largely unvegetated, due both to the low soil cover and to the effect that the nesting birds have on the vegetation.

However, Sea Mayweed occurs on ledges that are too small for Gannets, and Tree Mallow (*Lavatera arborea*), a local species in Ireland, has been recorded.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater, Storm Petrel, Gannet, Kittiwake, Guillemot and Puffin. It is also of special conservation interest for holding an assemblage of over 20,000 breeding seabirds.

The Skelligs comprise one of the most important seabird colonies in the country for populations and species diversity. Great Skellig has an internationally important population of Storm Petrel (9,994 pairs in 2002), with birds nesting both in the stonework associated with the monastic settlement and in natural crevices amongst the scree and rock. Little Skellig is best known for its long established and internationally important Gannet colony, with 29,683 pairs in the last full census in 2004. This is by far the largest colony in Ireland and one of the largest in the world. Great Skellig also has one of the largest Puffin colonies in the country, with 6,000 pairs estimated in 2002. Other seabird species which occur on the islands in nationally important numbers are as follows: Fulmar (830 pairs), Manx Shearwater (902 pairs), Kittiwake (1,035 pairs) and Guillemot (1,652 pairs) – all data from 2002. Razorbill (283 pairs - five year mean between 1998 and 2002) occur but below the threshold of national importance.

Great Skellig is a traditional site for Chough, though the relatively small size of the island supports only one nesting pair. Peregrine has also nested in some years.

The breeding seabirds on the Skelligs have been fairly well documented over the years, with references to the Gannets dating back to the 1700s. Owing to the high

importance of the islands for birds, each has been designated a Statutory Nature Reserve. In addition, the non-governmental organisation, BirdWatch Ireland, holds a long-term lease on Little Skellig.

This site is one of the top five seabird sites in the country and is of international importance on account of both the assemblage of over 10,000 pairs of breeding seabirds and the individual populations of Storm Petrel and Gannet. The site also holds nationally important populations of a further five species of breeding seabird. Also of note is the regular presence of three species, Storm Petrel, Chough and Peregrine, which are listed on Annex I of the E.U. Birds Directive.

18.5.2015

## **SITE NAME: THE BULL AND THE COW ROCKS SPA**

### **SITE CODE: 004066**

The site comprises two very small rocky islands, the Cow and the Bull, situated 2.5 km and 4 km respectively from Dursey Head off the coast of Co. Cork. The islands, which are composed of vertically stratified sandstone, rise to over 60 m and are generally precipitous. Vegetation is sparse and is a typical maritime flora, mostly comprising a sward of Thrift (*Armeria maritima*) and Sea Campion (*Silene maritima*). A few rocky islets occur off the main islands. The surrounding water, between and to a distance of 500 m around each island, is included within the site for the benefit of the breeding seabirds. The Commissioners of Irish Lights maintain a lighthouse on the Bull.

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

The site holds one of the most important seabird colonies in the country, with populations of Storm Petrel and Gannet of at least national importance. The petrels breed on both the Cow and the Bull but have not been censused in recent times. The Seabird 2000 survey estimated that there were 3,500 pairs at the site. The Gannet colony on the Bull is long established and had 3,694 pairs in 2004 – this is the second largest colony in Ireland.

The site also supports a good diversity of other seabird species though these have not been surveyed since at least the early 1990s. The populations of Puffin (200 pairs) and Great Black-backed Gull (280 pairs) may be of national importance. Other species which breed are Cormorant (40 pairs), Kittiwake (350 pairs), Guillemot (938 pairs), Fulmar (40 pairs), Herring Gull (<20 pairs) and Razorbill (88 pairs).

Both islands are extremely inaccessible and difficult to land on and hence are seldom visited.

This site supports important populations of Storm Petrel and Gannet. Storm Petrel is listed on Annex I of the E.U. Birds Directive. Owing to their importance, both islands have been designated as Refuges for Fauna. The Cow is State-owned.

8.7.2014



## **SITE NAME: IVERAGH PENINSULA SPA**

### **SITE CODE: 004154**

The Iveragh Peninsula SPA is a large site situated on the west coast of Co. Kerry. The site encompasses the high coast and sea cliff sections of the peninsula from just west of Rossbehy in the north, around to the end of the peninsula at Valencia Island and Bolus Head, and as far east as Lamb's Head in the south. The site includes the sea cliffs, the land adjacent to the cliff edge and also areas of sand dunes at Derrynane and Beginish. The high water mark forms the seaward boundary except at Doulus Head/Killelan Mountain where the adjacent sea area to a distance of 500 m from the cliff base is included. The site is underlain by Devonian sandstones, siltstones and mudstones. A small area of igneous rocks (dolerite and gabbro) occurs at Beginish and on the adjacent shore.

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

Vegetated sea cliffs dominate the site; these occur along the length of the site and support a good variety of plant species typical of the habitat, including Thrift (*Armeria maritima*), Sea Campion (*Silene vulgaris* subsp. *maritima*), Sea Spleenwort (*Asplenium marinum*) and Rock Sea-spurry (*Spergularia rupicola*). The cliff-tops support heath or coastal grassland. Apart from the sea cliffs themselves, the site includes areas of dry heath, wet heath, upland acid grassland, dense Bracken (*Pteridium aquilinum*), semi-improved and improved pasture grassland, dune grassland, streams, bedrock shores and islets.

The site supports an important internationally population of breeding Chough, a Red Data Book species that is listed on Annex I of the E.U. Birds Directive; 106 breeding pairs were recorded from the site in the 1992 survey and 88 in the 2002/03 survey. The birds are found around the coast from Lamb's head in the south-west to Rossbehy in the north. A small number of pairs are found inland, mainly around the Macgillycuddy's Reeks.

The topography of the Iveragh Peninsula, with its mosaic of grazed semi-improved and improved pastures, extensive inland upland areas of coastal heath and grassland, and sand dune systems in close proximity to breeding cliffs, favours Chough. Particularly high densities of Chough occur at Valencia Island where livestock grazing presents the species with widespread feeding opportunities. Valencia Island held the largest autumn flock, (42 birds), observed in the period 2002 to 2004. Choughs also benefit from the close proximity of the dune systems at Rossbehy in the north and at Inch, where flocks of up to 64 birds have been observed in the autumn. The smaller area of dune habitat at Derrynane is also used, with flocks of up to 33 birds present in October 2003. Communal roosts exist on Lamb's Head near

Derrynane and at the western tip of Valencia Island. Pairs and small flocks of Chough can be found around the coast and in the mountainous uplands of the Iveragh Peninsula throughout the year. Studies have shown that Chough forage mainly within 300 m of the cliff tops used for breeding and these areas have been included in the site.

The site supports an important Peregrine population (5 pairs in 2002). The site also holds nationally important populations of Guillemot (2,860 pairs in 1999-2000), Fulmar (766 pairs in 1999-2000) and Kittiwake (1,150 pairs in 2000). Other species recorded during the Seabird 2000 Survey include Great Black-backed Gull (63 pairs) and Black Guillemot (118 individuals), as well as smaller populations of other breeding seabirds: Razorbill (90 pairs), Herring Gull (30 pairs), Cormorant (33 pairs) and Shag (11 pairs).

The Iveragh Peninsula SPA is of ornithological importance as it supports an internationally important population of Chough and is the second most important site in the country for this species. The site also supports nationally important populations of Peregrine and three species of breeding seabirds Guillemot, Fulmar and Kittiwake. The presence of Chough and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive, is of particular significance.

30.5.2015

## **SITE NAME: BEARA PENINSULA SPA**

### **SITE CODE: 004155**

The Beara Peninsula SPA is a coastal site situated on the west coast of Co. Cork, south-west of the town of Kenmare. It encompasses the high coast and sea cliff sections of the western end of the peninsula from Reenmore Point/Cod's Head in the north, around to the end of Dursey Island in the west, and as far east as Bear Island in the south. The site includes the sea cliffs, the land adjacent to the cliff edge and several upland areas further inland of the coast about Eagle Hill, Knockgour, Allihies and Firkeel. The high water mark forms the seaward boundary. Most of the site is underlain by Devonian sandstones and siltstones, though Carboniferous rocks are found about Black Ball Head and on Bear Island; small areas of igneous rocks occur at Cod's Head, Dursey Island, Black Ball Head and Bear Island.

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

Vegetated sea cliffs dominate the site; these occur along the length of the site and support a good variety of plant species typical of the habitat, including Thrift (*Armeria maritima*), Sea Campion (*Silene vulgaris* subsp. *maritima*), Sea Spleenwort (*Asplenium marinum*) and Rock Sea-spurry (*Spergularia rupicola*). The cliff-tops support heath or coastal grassland. Apart from the sea cliffs themselves, the site includes areas of dry heath, wet heath, blanket bog, freshwater marsh, upland acid grassland, dense Bracken (*Pteridium aquilinum*), scrub, semi-improved and improved pasture grassland, dune grassland, exposed rock, streams, shingle, bedrock shores and islets.

The site supports an internationally important population of breeding Chough, a Red Data Book species that is listed on Annex I of the E.U. Birds Directive; 58 breeding pairs were recorded within the site in the 1992 survey and 54 in the 2002/03 survey. The birds are found along the coast from Bear Island in the south to Reenmore Point/Cod's Head in the north, including Dursey Island. Studies have shown that Chough forage mainly within 300 m inland of the cliff tops used for breeding and these areas have been included in the site. Inland breeding pairs occur in the Slieve Miskish and Caha Mountains, with additional pairs likely to be breeding on other inland cliffs. The area around the old copper mines at Allihies is regularly used by both breeding birds and a wintering flock. Large flocks of Chough occur on Dursey Island, especially in the summer months, as well as in the uplands, in both summer and winter. The largest flocks recorded are on Dursey Island (42 birds in September 2003), Knockgur (30 birds in July 2004) and Eagle Hill (34 birds in September 2003). Choughs roost in small numbers on the Beara Peninsula; two regularly used roosting sites (identified during a study from September 2003 to August 2004) are Dursey Sound (maximum of 17 roosting birds) and Allihies copper mines (maximum of 37 roosting birds).

The habitats and topography present on the Beara Peninsula favour Chough. It is characterised by marginal agricultural land with large tracts of semi-natural vegetation, all in close proximity to cliffs used for breeding. Small improved fields, along with heath, sometimes dominated by Gorse (*Ulex gallii* and *U. europaeus*), and coarse grassland form an intimate mosaic. Many earth and stone banks and walls, remnants of formerly more intricate enclosed field systems, remain throughout the peninsula. The interior of the Beara Peninsula is mountainous, in places rising to over 650 m, with steep-sided valleys and exposed rock.

The site also holds a nationally important population of Fulmar (575 pairs), and populations of other breeding seabirds including: Shag (12 pairs), Herring Gull (20 pairs), Lesser Black-backed Gull (4 pairs), Razorbill (5 pairs) and Black Guillemot (87 individuals in 1999) – all seabird data from 2000. The site is also used by Peregrine (4 pairs in 2002).

The Beara Peninsula SPA is one of the most important sites in the country for Chough, with a breeding population of international importance occurring. It also supports a nationally important population of Fulmar. The presence of Chough and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive, is of particular significance.

30.5.2015

## **SITE NAME: SHEEP'S HEAD TO TOE HEAD SPA**

### **SITE CODE: 004156**

The Sheep's Head to Toe Head SPA is large site situated on the south-west coast of Co. Cork. It encompasses the high coast and sea cliffs from Sheep's Head to Mizen Head, Brow Head and Crookhaven in the west and from Baltimore to Tragumna Bay, Gokane Point and the Toe Head peninsula in the east. The site includes the sea cliffs, the land adjacent to the cliff edge, an area further inland to the east of Dunlough Bay, and also areas of sand dunes at Barley Cove and Crookhaven. The high water mark forms the seaward boundary. Most of the site is underlain by Devonian sandstones and mudstones, though Carboniferous rocks are also found on the Sheep's Head and Toe Head peninsulas.

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

The Sheep's Head peninsula is the narrowest of the large peninsulas in the south-west of the county. Tall cliffs, c. 100 m high, occur at its end and hills rise up from much of the coast; pastures are concentrated along the southern side. Much of the land is of marginal agricultural value, with coarse grassland and heath predominating. The Mizen Head Peninsula, on the other hand, has a quantity of semi-improved agricultural grasslands and heath, as well as a sand dune system at Barley Cove. At Mizen Head, large areas of closely bedded sandstones and shales occur, and erosion of their joints has produced a spectacular array of red-brown and pink cliffs up to 130 m high. The cliffs at Three Castle Head to the north are almost 100 m high. Further south and east, a convoluted stretch of coast with sheltered bays, estuaries and exposed headlands extends from Baltimore to Toe Head. The habitats present range from sea cliff, Gorse-dominated heath and rough grassland to good agricultural grassland.

The site supports an internationally important population of breeding Chough, a Red Data Book species that is listed on Annex I of the E.U. Birds Directive; 82 breeding pairs were recorded from the site in the 1992 survey and 73 in the 2002/03 survey.

The birds are found in pairs and flocks along the coast from Sheep's Head in the north to beyond Toe Head in the south. The Mizen Head cliffs hold some of the highest concentrations of breeding pairs in Ireland.

At Sheep's Head, Chough are concentrated at the tip of the peninsula. An estimated 18 pairs bred in 1992, with 17 recorded in 2002, from Dooneen in the south to Glanroon in the north. Flocking and roosting activity is limited. During the winter of 2003/04, flocks of up to 27 birds were feeding on improved pastures around Caher.

Roosting is confined to the southern side of the very extremity of the peninsula, with small numbers, of up to 8 birds, gathering occasionally. At Mizen Head, an estimated 46 pairs bred in 1992 and 32 in 2002, from Crookhaven in the south to Dunkelly in

the north. The highest densities of breeding Chough are on and around Mizen Head itself.

Studies have shown that Chough forage mainly within 300 m inland of the cliff tops used for breeding and these areas have been included in the site. Flocking activity centres on the dunes at Barley Cove and around Dunlough Bay. Twenty-six birds were recorded in the dunes in October 2002, 52 in September 2003 and 26 in June 2004. A flock of 30-40 birds were recorded feeding during the winter of 2003/04, inland from Dunlough Bay on improved pastures and Gorse-dominated areas. Two roosts were identified in 2002 on the Mizen Head Peninsula, one at Brow Head (up to 25 birds), and one north of Mizen Head (up to 55 birds). The remainder of the breeding pairs in the site are scattered along the cliffs between Baltimore Head in the west and Toe Head in the east. A roost at Baltimore Head holds up to 15 birds (winter 2003/04).

The site supports a nationally important Peregrine population (7 pairs in 2002) and a range of other breeding seabirds including Fulmar (57 pairs), Herring Gull (30 pairs), Shag (17 pairs), Kittiwake (20 pairs), Black Guillemot (137 individuals) and Great Black-backed Gull (1 pair) – all seabird data from 1999, 2001 and 2002.

The Sheep's Head to Toe Head SPA is one of the most important sites in the country for Chough, with a breeding population of international importance occurring. It also supports a nationally important Peregrine population. The presence of Chough and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive, is of particular significance.

30.5.2015

## **SITE NAME: DEENISH ISLAND AND SCARIFF ISLAND SPA**

### **SITE CODE: 004175**

Deenish Island and Scariff Island are small- to medium-sized islands situated between 5 and 7 km west of Lamb's Head off the Co. Kerry coast; they are thus very exposed to the force of the Atlantic Ocean. Scariff is the larger of the two. It is steep-sided all the way around and rises to a peak of 252 m. The highest cliffs are on the south side. The island vegetation is a mix of maritime grassland, areas dominated by Bracken (*Pteridium aquilinum*) and heathy areas with Ling Heather (*Calluna vulgaris*). There are the ruins of a monastic settlement and a cottage in the north-east sector of the island. Deenish is less rugged than Scariff, and rises to 144 m in its southern half; the northern half is lower and flatter. The vegetation is mostly grassland, with some heath occurring on the higher ground. Old fields are now overgrown with Bracken and brambles (*Rubus* spp.). The surrounding seas to a distance of 500 m around the islands 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: Fulmar, Manx Shearwater, Storm Petrel, Lesser Black-backed Gull and Arctic Tern.

The islands support important populations of breeding seabirds. The Seabird 2000 survey recorded 1,960 pairs of Manx Shearwater on Scariff Island and 351 pairs on Deenish in 2000, giving a total of 2,311 pairs which is equivalent to c. 5% of the national total. On Scariff, the shearwaters breed in burrows on the cliff tops on the south and west of the island. Birds also breed within the ruins, including the souterrain below the oratory. On Deenish, birds breed in burrows on steep grassy slopes with rock outcrops in a limited area on the south-east side of the island. Scariff Island has long been known as a breeding site for Storm Petrel. Whilst there are no recent survey data for this nocturnal species, an estimate of 6,200 pairs is given for the two islands. Scariff also supports nationally important populations of Fulmar (385 pairs in 2000) and Lesser Black-backed Gull (97 pairs in 2000). Deenish Island is a traditional site for nesting terns, with 54 pairs of Arctic Tern present in 1995 - a population of national importance. Other seabirds which were recorded breeding in 2000 include Shag (5 pairs), Herring Gull (28+ pairs), Great Black-backed Gull (7 pairs) and Black Guillemot (several pairs).

Chough is a resident species on Scariff, with 2 pairs recorded in 1992. Other species which breed on the islands include Oystercatcher, Skylark, Wheatear, Stonechat, Rock Pipit and Raven.

Deenish Island and Scariff Island SPA is a site of high ornithological importance on account of the internationally important population of Storm Petrel and nationally important populations of Manx Shearwater, Fulmar, Lesser Black-backed Gull and Arctic Tern. Also of note is that Storm Petrel and Arctic Tern, as well as Chough, are listed on Annex I of the E.U. Birds Directive.

30.5.2015