



**Report Supporting Appropriate Assessment of Extensive
Aquaculture in Bantry Bay**

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1. Introduction

1.1. Overview

The MI has been requested to review six applications for extensive aquaculture activities within Bantry Bay. The proposed activities at each site and the application type in each instance are as follows:

- Longline culture of multiple seaweed species – T05/547A, application for review of licence conditions to include extra culture species, the proposed species are;
 - *Alaria esculenta*;
 - *Ulva lactuca*;
 - *Palmaria palmata*;
 - *Aspragopsis armata*;
 - *Saccharinea latissimi*;
 - *Laminaria digitata*; and
 - *Fucus serratus*.
- Harvesting of wild periwinkles – T05/622A, T05/623A, T05/624A and T05/625A, application for new sites; and
- Culture of pacific oyster *Crassostrea gigas* on trestles in the intertidal – T05/634A, application for new site.

None of the applications areas overlap with Natura 2000 sites but due to their proximity to a number of SPAs and SACs (see **Section 2.2**) they are being subject to the Appropriate Assessment (**AA**) process, the first stage of which is screening (see **Section 1.3**) for full details of the AA process).

The purpose of this report is to consider if the proposed aquaculture activities are likely to significantly adversely affect the conservation features of Natura 2000 sites in view of their conservation objectives. If these activities are considered likely to adversely affect conservation features, they would have to be carried forward for full AA and considered on a cumulative basis with other aquaculture activities and other likely disturbing activities (e.g. fisheries).

Figure 1-1: Application Sites in Bantry Bay with Adjacent SACs

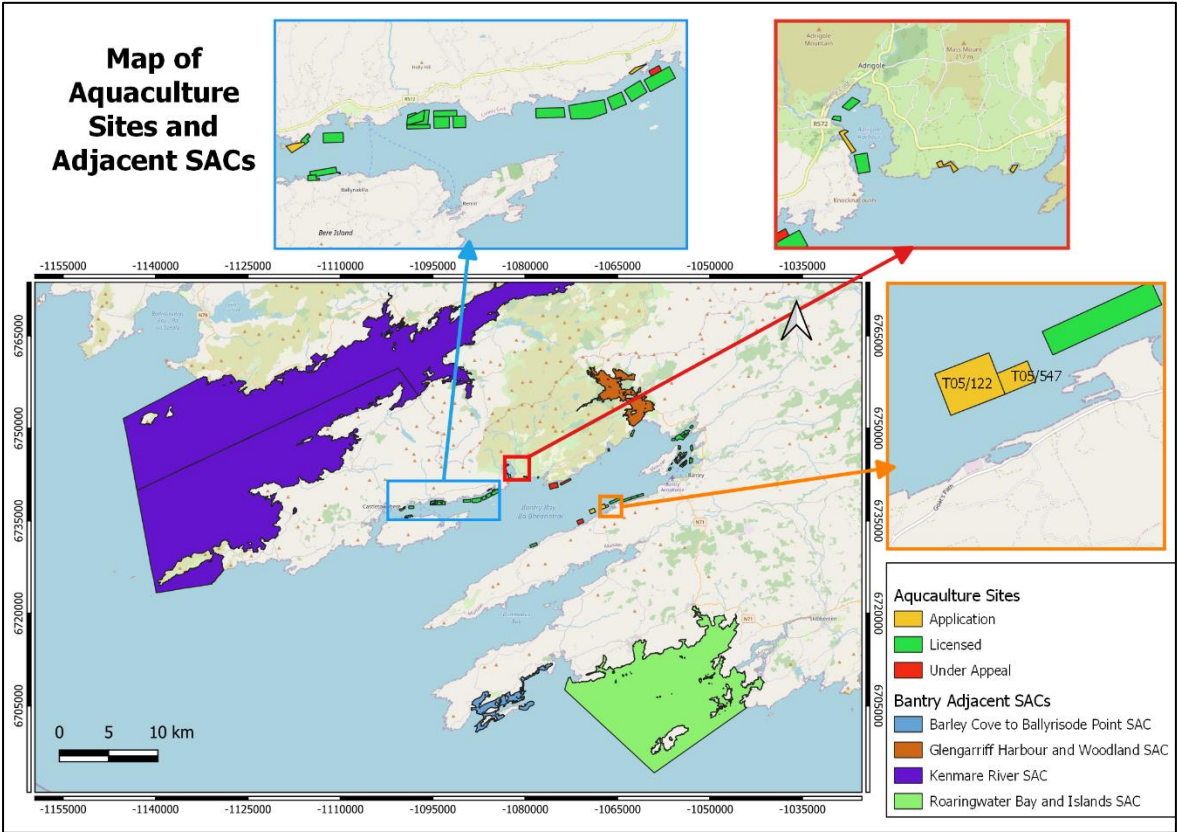
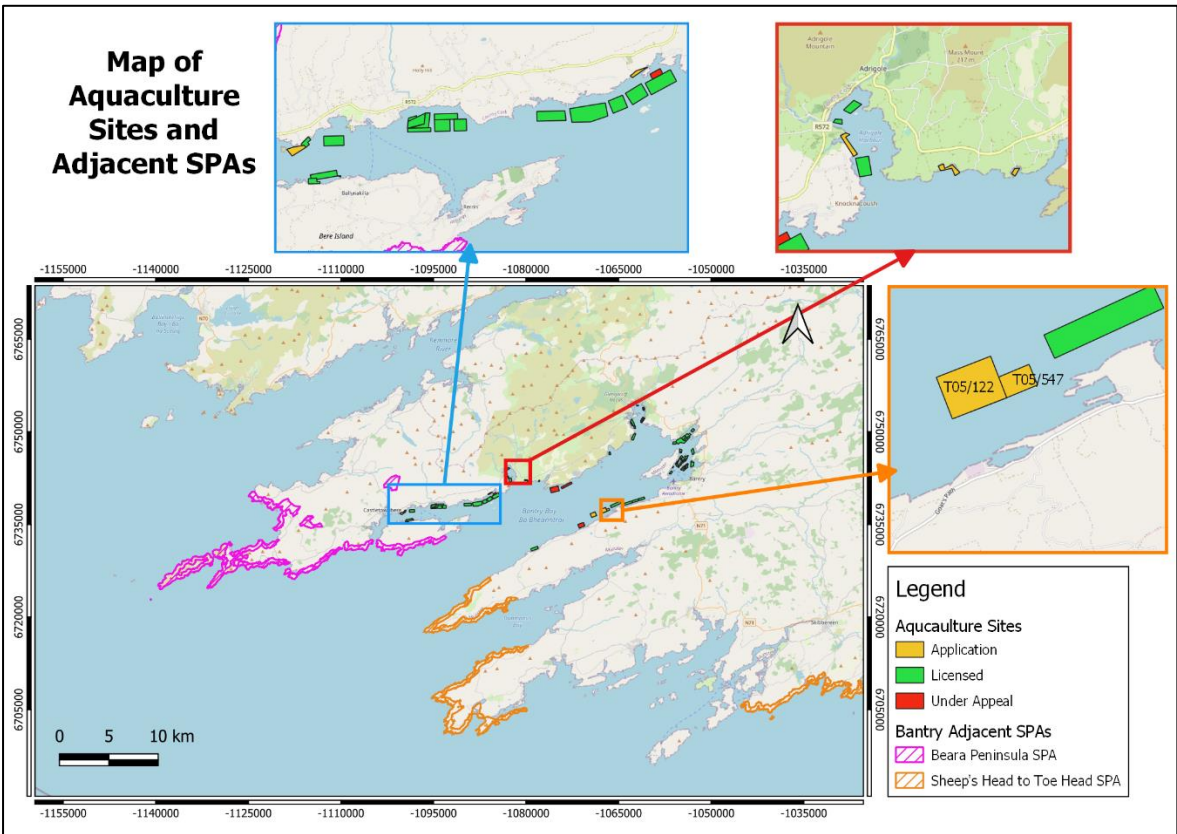


Figure 1-2: Application Sites in Bantry Bay with Adjacent SPAs



1.2. *Legislative Context*

Articles 3 - 11 of the European Community (EC) Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (**Habitats Directive**) provide the legislative means to protect habitats and species of Community interest through the conservation of an EU-wide network of protected sites known as Natura 2000 sites.

The Habitats Directive was originally transposed into Irish law by the *European Communities (Natural Habitats) Regulations, 1997* (S.I. No. 94 of 1997). The 1997 Regulations were subsequently revoked and replaced by the *European Communities (Birds and Natural Habitats) Regulations 2011*, as amended (herein referred to as the 2011 Birds and Natural Habitats Regulations). Natura 2000 sites are referred to as European sites in the 2011 Birds and Natural Habitats Regulations. The terms Natura 2000 sites and European sites are synonymous. The term Natura 2000 sites is used in this report. Natura 2000 sites include SACs which are designated under the Habitats Directive and Special Protected Areas (**SPAs**) which are designated under EC Directive EC 79/409/EEC (**Birds Directive**).

SACs are designated due to their significant ecological importance for habitats and species protected under Annex I and Annex II respectively of the Habitats Directive and while SPAs are designated for the protection of populations and habitats of bird species protected under the Birds Directive. The specific named habitats and/or (non-bird) species for which an SAC or SPA are selected are called the 'Qualifying Interests', of the site. The specific named bird species for which a SPA is selected is called the 'Special Conservation Interests'. However, in practice, the common terminology of Qualifying Interest applies also to Special Conservation Interest. This report focuses on Annex I habitats and Annex II species of the Habitats Directive. The term Qualifying Interest is used throughout.

Under Article 6(3) of the Habitats Directive any plan or project likely to significantly affect the integrity of a Natura 2000 site must be subject to an AA. AA focuses on the likely significant effects of a plan or project on a Natura 2000 site and considers the implications for the site in view of its' conservation objectives. Every Natura 2000 site has Conservation Objectives which are set out by the National Parks and Wildlife Service (**NPWS**), a competent authority for the management of Natura 2000 sites in Ireland. The AA process also must consider any plan or proposal in combination with other activities that have the potential to significantly affect the integrity of the Natura 2000 site.

DAFM is the aquaculture licensing authority under the Fisheries (Amendment) Act (1997) and determines applications for new aquaculture licences and applications for renewal of existing aquaculture licences. DAFM is also the competent authority responsible for undertaking AA of aquaculture licence applications. The AA in this report is part of an ongoing programme of AA of aquaculture activities in Ireland, as agreed with the EU Commission in 2009, and will eventually cover

all aquaculture activities in all Natura 2000 sites. DAFM is responsible for licencing of aquaculture in Ireland. As part of this process DAFM must determine if the proposed aquaculture activities individually or in-combination with other activities are likely to significantly impact the Conservation Status of Qualifying Interests and the integrity of Site 000190. DAFM must base its' determination on an AA and is also responsible for ensuring that an AA is carried out

1.3. *Appropriate Assessment Process*

The requirements for AA derive directly from Article 6(3). Article 6(3) outlines the decision-making tests for considering plans and projects that may have a significant effect on a Natura 2000 site. No definition of the content or scope of AA is given in the Habitats Directive, but the concept and approach are set out in EC guidance (EC, 2018). The Guidance on *Appropriate Assessment of Plans and Projects in Ireland* document published by the Department of Environment, Heritage and Local Government (DEHLG) in 2009 (DEHLG, 2009) sets out how AA of plans or proposals in Natura 2000 sites in Ireland should be carried out in alignment with EC guidance. In 2021 the Office of the Planning Regulator (OPR) published a practice note on AA Screening (OPR, 2021). The practice note provides guidance on how a planning authority should screen an application for planning permission for appropriate assessment

DEHLG (2009) promotes a four stage process to complete the AA. The four stages are:



Stage 3 and Stage 4 are not applicable here. The key procedures involved in completing the first two stages of the AA process are described in below.

Stage 1: Appropriate Assessment Screening

Stage 1 AA Screening is the process that addresses and records the reasoning and conclusions in relation to whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of the site's Conservation Objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 AA. Screening should be undertaken without the inclusion of mitigation. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no effect.

Stage 2: Appropriate Assessment

This stage considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a Natura 2000 site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. This stage requires a targeted scientific examination of the plan or project and the relevant Natura 2000 sites, to identify and characterise any possible implications for the site in view of the site's Conservation Objectives, taking account of in-combination effects. If the assessment is negative, then recommendations on mitigation measures or on licensing decisions will be made.

1.4. *Structure of this Report*

The AA process followed in this report adheres closely with DEHLG (2009) and OPR (2021) guidance and follows worse-case scenario principles as it is assumed that cultivation activities are ongoing at all of the existing licenced sites and that the entirety of each existing aquaculture site in Bantry. See **Figure 1-1** for a map of all aquaculture sites considered active in Bantry Bay as of March 2022.

The report considers the following:

- **Section 2 - Stage 1: Appropriate Assessment Screening**

AA Screening is undertaken to identify potential likely significant effects on Qualifying Interests of Natura 2000 sites. Where the screening exercise cannot exclude on the basis of objective information, the Qualifying Interest would have to be brought forward for further consideration in a Stage 2 AA.

This AA screening process which has followed relevant DEHLG (DEHLG, 2009) and OPR (OPR, 2021) guidance has drawn on information from a number of sources associated with relevant SACs and SPAs (see **Section 2.2**).

2. Stage 1: Appropriate Assessment Screening

2.1. Details of Proposed Aquaculture Activities

Longline Culture of Seaweeds

Longline culture of Seaweed at site T05/547 has been ongoing for a number of years and this application seeks only to include additional species in licence conditions. There is no proposal to amend or extend the existing infrastructure at this site. This site is immediately adjacent to a finfish site on its western boundary (see **Figure 1-1**).

The site area is 6 ha and 17 x 100 m longlines are currently in place. Maximum proposed total tonnage of algae at this site is approximately 19 T per annum. The harvest method will be hand-cutting into 1 T bins. Juvenile algae will be sourced from the local Bantry Marine Research Station Hatchery.

Intertidal harvesting of Wild Periwinkles

Four sites are proposed to be used for on-growing of wild harvested periwinkle and juvenile periwinkle seed production (see **Figure 1-1**). The area of the sites are as follows:

- T05/622A – 2.52 ha;
- T05/623A – 3.8 ha;
- T05/624A – 3.69 ha; and
- T05/625A – 1.15 ha.

There are no proposed movements of periwinkles between these sites. It is proposed that the sites will be stocked with 50 kg – 100 kg of wild juvenile periwinkles between 2 mm – 10 mm which will be collected from ‘*exposed local shores from March to September*’ (assumed to be within Bantry Bay for this assessment). It is anticipated that the site will be self-sustaining once initially stocked and subsequent harvesting adequately managed.

Harvesting is proposed to be harmonised with the life history cycle of the periwinkle as follows:

“Periwinkles spawn from December to February, with juveniles from 2mm – 5mm appearing on shore from February to June. In the first year they grow to 10mm. In the second year they grow to 12mm and some of the cohort begin to spawn. In the third year they grow to 15mm,

with increased spawning within the population. In the fourth year they grow to >18mm and are then harvested, leaving behind the smaller periwinkles to spawn and restock the site.¹

No infrastructure, containment or supplemental feeding is proposed to form part of this activity. It is proposed that periwinkles will be harvested annually and exported to the French market.

Intertidal Oyster Cultivation

Intertidal oyster trestle cultivation (*C. gigas*) is proposed to be carried out within site T05/634A. The area of this site is 5.5 ha. It is located on the north shore of Bantry Bay approximately 1 km due east of Dinish Island at Castletownbere. The proposed site T05/634A would also be accessed via vehicle along a short access route given the proximity of the site to the shore, it may also be accessed by boat. Seed for this site will be sourced from French hatcheries.

Oyster trestle activities are largely the same between sites in terms of operational characteristics. Intertidal trestle cultivation activities are carried out in daylight hours only. In general, trestle cultivation involves the use of steel table-like structures arrayed in double rows with wide gaps between the paired rows to allow for access. Trestles used are made from steel and typically between 3 m in length, are approximately 1 metre in width and stand between 0.5 m and 0.7 m in height. In general, oyster farms are positioned between mean Low Water Spring and mean Low Water Neap, allowing on average between two and five-hours exposure depending on location, tidal and weather conditions. The trestles typically hold six High Density Poly Ethylene mesh bags approximately 1m by 0.5m by 10cm, using rubber and wire clips to close the mesh bags and to fasten them to the trestles. In this instance it is also proposed that Seapa cages² will be either placed on or under trestles.

2.2. Identification of Relevant Natura 2000 Sites and Qualifying Interests

A key consideration as to whether or not an activity is likely to adversely affect Natura 2000 Qualifying Interest is whether or not there is a pathway of connectivity between the Qualifying Interest and the sources of potential impacts associated with the activity.

The likelihood of the proposed activities having an adverse effect on the qualifying interests of an SPA or SAC is greatly reduced given that the activities would not be carried out within any SAC or SPA.

¹ This information was provided by the applicant on foot of a request for further information made by the MI which was provided to DAFM on 17 February 2022.

² <https://seapa.com.au/>

However, the proposed activities are proximal to a number of SAC and SPAs and so the potential for *ex-situ* adverse effects of the proposed activities on the Qualifying Interests of these adjacent SACs and SPAs must be assessed.

The Qualifying Interest of a Natura 2000 site could be at risk of negative *in situ* (within the site) and *ex situ* (beyond the site) effects where a Source-Pathway-Receptor (S-P-R) link exists between the activity and the Qualifying Interest[s] of the site.

The following are the adjacent SACs with Qualifying Interests that the proposed aquaculture activities may potentially adversely affect (see **Figure 1-1**):

- Barley Cove to Ballyrisode Point SAC³;
- Glengarriff Harbour and Woodland SAC⁴;
- Kenmare River SAC⁵; and
- Roaringwater Bay and Islands SAC⁶.

The following are the adjacent SPAs with Qualifying Interests that the proposed aquaculture activities may potentially adversely affect (see **Figure 1-2**):

- Beara Peninsula SPA⁷; and
- Sheep's Head to Toe Head SPA⁸

The assessment of the likelihood of proposed aquaculture activities adversely affecting the Qualifying Interests of adjacent SACs and SPAs are presented in **Sections 2.3** and **2.4** respectively.

³ <https://www.npws.ie/protected-sites/sac/001040>

⁴ <https://www.npws.ie/protected-sites/sac/000090>

⁵ <https://www.npws.ie/protected-sites/sac/002158>

⁶ <https://www.npws.ie/protected-sites/sac/000101>

⁷ <https://www.npws.ie/protected-sites/spa/004155>

⁸ <https://www.npws.ie/protected-sites/spa/004156>

2.3. Screening of Qualifying Interests of Adjacent SACs

The following are the adjacent SACs along with the Qualifying Interests that could potentially be affected by the proposed activities:

- Glengarriff Harbour and Woodland SAC;
 - *Lutra lutra* (Otter – 1355); and
 - *Phoc vitulina* (Harbour Seal – 1365).
- Kenmare River SAC
 - Large shallow inlets and bays [1160]
 - Reefs [1170]
 - *Lutra lutra* (Otter – 1355); and
 - *Phoca vitulina* (Harbour Seal – 1365).
- Roaringwater Bay and Islands SAC
 - *Phocoena phocoena* (Harbour Porpoise) [1351]
 - *Lutra lutra* (Otter) [1355]
 - *Halichoerus grypus* (Grey Seal) [1364]
- Barley Cove to Ballyrisode Point SAC
 - Mudflats and sandflats not covered by seawater at low tide [1140]

2.3.1. Annex I Habitats

Of the adjacent SACs there are a number of Annex I Habitats that occur in the marine environment:

- Mudflats and sandflats no covered by seawater at low tide;
- Large shallow inlets and bays; and
- Reefs.

In general habitats are impacted by aquaculture activities via direct physical disturbance via installation of structure, access to structures via access routes, or by altering the hydrodynamic regime. Direct effects can also arise due to organic enrichment from fall out from feeding practices or

faecal material produced by the cultured organisms^{9,10}. For a habitat to be subjected to this type of disturbance the activities would need to directly overlap with or be immediately adjacent to it. Given that the nearest Annex I Habitat to the proposed activities are located a minimum of 13 km (straight line distance) from the most proximal application site it is extremely unlikely that the proposed activities will directly adversely affect Annex I Habitats. Adverse effects on Annex I habitats can be **screened out**.

The potential effects of invasive species are the only potential indirect effect the proposed activities could have on Annex I Habitats and this is dealt with in **Section 2.5**.

2.3.2. Annex II Species

Marine Mammals

The risk of negative effects of aquaculture activities on aquatic mammal species is a function of:

1. The location and type of structures used in the culture operations – is there a risk of entanglement or physical harm to the animals from the structures?
2. The schedule of operations on the aquaculture sites – is the frequency such that they can cause disturbance to the animals?

Otter Lutra lutra

A pathway for negative effects on otters from the proposed activities can be ruled out on the basis that:

- The activities are located at significant distance (minimum of 13 km) from SACs designated for Otter.
- The activities will not lead to any modification of the extent of habitat (terrestrial, marine and/or freshwater habitat).
- The activities involve net input rather than extraction of biomass so that no negative impact on the essential food base (fish biomass) is expected
- The number of couching sites and holts or, therefore, the distribution, will not be directly affected by activities.

⁹ Forde, J., Francis, X.O., O'Carroll, J.P., Patterson, A. and Kennedy, R., 2015. Impact of intertidal oyster trestle cultivation on the Ecological Status of benthic habitats. *Marine Pollution Bulletin*, 95(1), pp.223-233.

¹⁰ O'Carroll, J.P., Quinn, C., Forde, J., Patterson, A., Francis, X.O. and Kennedy, R., 2016. Impact of prolonged storm activity on the Ecological Status of intertidal benthic habitats within oyster (*Crassostrea gigas*) trestle cultivation sites. *Marine Pollution Bulletin*, 110(1), pp.460-469.

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- Shellfish production activities are unlikely to pose any risk to otter populations through entrapment or direct physical injury.
 - The oyster culture structures are raised from the seabed (0.5m -1m) and are oriented in rows, thus allowing free movement through and within the site.
 - Similarly, the algal longlines are arranged parallel to one another allowing for free passage between them and through the site.
 - Disturbance associated with tractor and foot traffic at oyster cultivation sites could potentially affect the distribution of otters at the site. However, the level of disturbance is likely to be very low given the likely encounter rates will be low dictated primarily by tidal state, in daylight hours and the fact that otters are crepuscular.

For the reasons listed above adverse effects on otter of the proposed activities can be **screened out**.

Grey Seal Halichoerus grypus & Phoca vitulina

The proposed activities must be considered in light of the following important conservation measures for the Grey Seal *Halichoerus grypus* and the Harbour seal *Phoca vitulina*:

- Access to suitable habitat – artificial barriers should not restrict access;
- Disturbance – frequency and level of impact; and
- Seal Sites – Breeding sites, Moulting sites, Resting sites must not be obstructed or disturbed.

Restriction or modification of suitable habitats and locations considered important to the maintenance of healthy populations must be avoided when possible. These important areas are categorised according to various life history stages (important to the maintenance of the population) during the year. Specifically, they are breeding, moulting and resting sites. It is important that seal access to these sites is not restricted and that disturbance, when at these sites, is kept to a minimum especially within SACs. It is important to note that the influence of the proposed aquaculture on the seabird and seal community in Bantry Bay has generally been found to be positive or neutral^{11, 12}.

¹¹ Roycroft, D., Kelly, T.C. & Lewis, L.J. 2004. Birds, seals and the suspension culture of mussels in Bantry Bay, a non-seaduck area in Southwest Ireland. *Estuarine Coastal and Shelf Science* 61, 703-712.

¹² Roycroft, D., Kelly, T.C. & Lewis, L.J. 2006. Behavioural interactions of seabirds with suspended mussel longlines. *Aquaculture International* (In Press, now available online at www.springer.com).

Given the distance between seal sites and the proposed activities there is no pathway for interaction between the two which could result in negative *in-situ effects*. On this basis, negative effects on *Grey Seal Halichoerus grypus* and the harbour seal, *Phoca vitulina*, can be **screened out**.

Phocoena phocoena

Available data on the Harbour porpoise *Phocoena phocoena* is for within the Roaringwater Bay and Island SAC. While there is potential that this species could forage in the vicinity of the proposed aquaculture activities they will occur in subtidal areas only and therefore only potentially interact with the algal longline activities.

It should be noted, however, that the overall footprint of specified longline aquaculture operations is small (i.e., approx. 6 ha) and represents a very small proportion of potential harbour porpoise habitat in Bantry Bay. In addition, this activity is located 14 km (straight line distance) from the Roaringwater Bay and Island SAC that is designated for the harbour porpoise. Given the relatively small footprint of the suspended aquaculture locations the likelihood of interaction and potential adverse effects is very small. In addition, the locations of the structures are relatively close to the shorelines, and as such they do not present a barrier to movement of this species. Furthermore, the structures are such that echolocating species, such as harbour porpoise and dolphin, can easily avoid the structures/sites^{13, 14, 15} and therefore, avoid any risk of entanglement.

It is also important to note that there are no energy sources (e.g., light, noise etc.) likely to result from activities at the sites that pose a risk to harbour porpoise.

Finally, research has demonstrated that cetaceans such as dolphin and harbour porpoise may be attracted to structures similar to those used in longline culture operations^{16,17}, presumably on the

¹³ Watson-Capps JJ, Mann J (2005) The effects of aquaculture on bottlenose dolphin (*Tursiops* sp.) ranging in Shark Bay, Western Australia. *Biological Conservation* 124: 519–526.

¹⁴ Heinrich, S. (2006) Ecology of Chilean dolphins and Peale's dolphins at Isla Chiloe, southern Chile (PhD dissertation). University of St Andrews, 239 p.

¹⁵ Ribeiro S, Viddi FA, Cordeiro JL, Freitas TRO (2007) Fine-scale habitat selection of Chilean dolphins (*Cephalorhynchus eutropia*): interactions with aquaculture activities in southern Chiloe Island, Chile. *Journal of the Marine Biological Association of the United Kingdom* 87: 119–128.

¹⁶ Díaz López, B. & Methion, S. (2017) The impact of shellfish farming on common bottlenose dolphins' use of habitat. *Marine Biology* 164: 83. doi:10.1007/s00227-017-3125-x

¹⁷ Callier M, Byron C, Bengtson D, Cranford P, Cross S, Focken U, Jansen H, Kamermans P, Kiessling A, Landry T., O'Beirn F., Petersson E., Rheault, RB., Strand, O., Sundell, K., Svasand, T., Wikfors, GH., McKindsey, CW. (2017) Attraction and repulsion of mobile wild organisms to finfish and shellfish aquaculture: a review. *Rev Aquac* 0:1–26

basis that they act as fish attraction devices and therefore act as a food source aggregation area. Given these observations potential adverse effects on harbour porpoise can be **screened out**.

2.4. Screening of Qualifying Interests of Adjacent SPAs

The following are the adjacent SPAs along with the Qualifying Interests that could potentially be affected by the proposed activities:

- Beara Peninsula SPA;
 - Fulmar (*Fulmarus glacialis*)
 - Chough (*Pyrrhocorax pyrrhocorax*)
- Sheep's Head to Toe Head SPA;
 - Peregrine (*Falco peregrinus*)
 - Chough (*Pyrrhocorax pyrrhocorax*)

2.4.1. Fulmar (*Fulmarus glacialis*)

Fulmar are considered as marine species as they forage solely in the marine environment and roost on marine cliffs¹⁸. The Fulmar population in Ireland has increased significantly over the last 30 years with a reported 68% increase in the population size from 1985 – 2018¹⁸. While certain individuals of the fulmar population in Bantry Bay and surrounds may be partially displaced by the proposed aquaculture activities, the proposed sites are small. It is extremely unlikely that the proposed activities would adversely affect the fulmar population of the Beara Peninsula SPA to the extent that it's conservation objectives could not be met. For this reason, the potential for adverse effects on Fulmar can be **screened out**.

2.4.2. Peregrin (*Falco peregrinus*)

The foraging ranges of the Peregrin Falcon are extensive and largely encompass terrestrial habitats, but Peregrin are known to forage on intertidal areas also. While some individuals may utilise the intertidal areas where the proposed intertidal oyster cultivation and periwinkle harvesting are proposed to occur, the total area of the proposed sites (ca. 19 ha spread over 15 km of coastline) is not such that it could displace foraging Peregrin to the extent that their conservation objectives cannot be met. In addition, none of the proposed activities directly overlap with the Sheep's Head to Toe

¹⁸ <https://www.npws.ie/sites/default/files/publications/pdf/IWM114.pdf>

Head SPA and therefore cannot directly affect the protected habitat of this species. For these reasons, potential adverse effects of the proposed activities on Peregrin can be **screened out**.

2.4.3. Chough (*Pyrrhocorax pyrrhocorax*)

Chough are largely considered a terrestrial species as they roost in coastal cliffs and forage on coastal grasslands. None of the proposed activities are located in areas where Chough are likely to be roosting or foraging. The foraging ranges of Chough can be up to 30 km from their roosting sites and while some individuals may utilise the proposed aquaculture area for feeding, the size of the proposed aquaculture sites is not such that it could displace this species to the extent that its conservation objectives cannot be met. For these reasons, the potential for the proposed activities on Chough can be **screened out**.

2.5. Screening of Potential Effects of Introduction of Non-native Species

The establishment of non-native species as a wild population in an area can be a potential risk associated with aquaculture largely due to the moving of stock (seed, juvenile or adults) into aquaculture sites. There is the potential that the culture organisms could become established as a wild non-native population and that non-native species may ‘hitch-hike’ along with the cultured organisms and then become established as a wild population. In this instance, there are two potential causes of non-native introduction and establishment; the movement of *C. gigas* into Site T05/634A, and the movement of other species that might ‘hitchhike’ along with periwinkles moved into sites T05/622A, T05/623A, T05/624A and T05/625A, and any sporophytes or other algae stocked at site T05/547.

2.5.1. Screening of Risk of Establishment of Wild Populations of Non-native Species

C. gigas

Application T05/634A states that oyster seed will be sourced from a hatchery in France. The movement of hatchery seed is managed in a way that significantly minimises the risk that ‘hitchhiker’ non-native species will be introduced along with the oyster seed.

The environmental conditions at site T05/634A in Bantry Bay are not considered to be suitable for the settlement and subsequent establishment of *C. gigas* because; *C. gigas* larvae require high water residency times within a waterbody (low rates of water circulation and replenishment), in the order of 20 days, to have time to settle.

Given the proposed well managed movement of *C. gigas* stock into the site and the natural characteristics of the site it is highly unlikely that non-native species could be established as a wild

population as a result of the proposed *C. gigas* aquaculture activities. On this basis the potential negative effects of *C. gigas* cultivation **can be screened out**.

Periwinkles

If periwinkles are sourced from within Bantry Bay for the purpose of stocking sites T05/622A, T05/623A, T05/624A and T05/625A then there is no risk of introduction of native species as part of this process. On the assumption that periwinkles are sourced from within Bantry Bay then the potential adverse effects from introduction of non-natives due to periwinkle harvesting can be **screened out**.

Algae

The algae proposed for use at this site (T05/547) are all native species and plantlets are sourced from the hatchery in Bantry Bay. There is no movement of stock from outside of the bay. On this basis, the potential adverse effects from the introduction of non-native species due to seaweed culture can be **screened out**.

3. Screening Conclusion

The screening assessment has determined, in light of best available scientific data, that there is no potential for significant adverse effects on the conservation features of Natura 2000 sites adjacent to the proposed aquaculture activities within Bantry Bay. All potential adverse effects on conservation features of Natura 2000 sites can be **screened out**.