Marine Ecological Consultancy Services for the Great Blasket Island

Supporting Information for Screening for Appropriate Assessment (SISAA)

COMMERCIAL IN CONFIDENCE

Client: **Office of Public Works**
Address: [redacted]

Project reference: P000012541
Date of issue: April 2024

Project Director: [redacted]
Project Manager: [redacted]
Project Author: [redacted]

AQUAFACT (APEM Group)
[redacted]

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1. Introduction

1.1. Purpose of Document

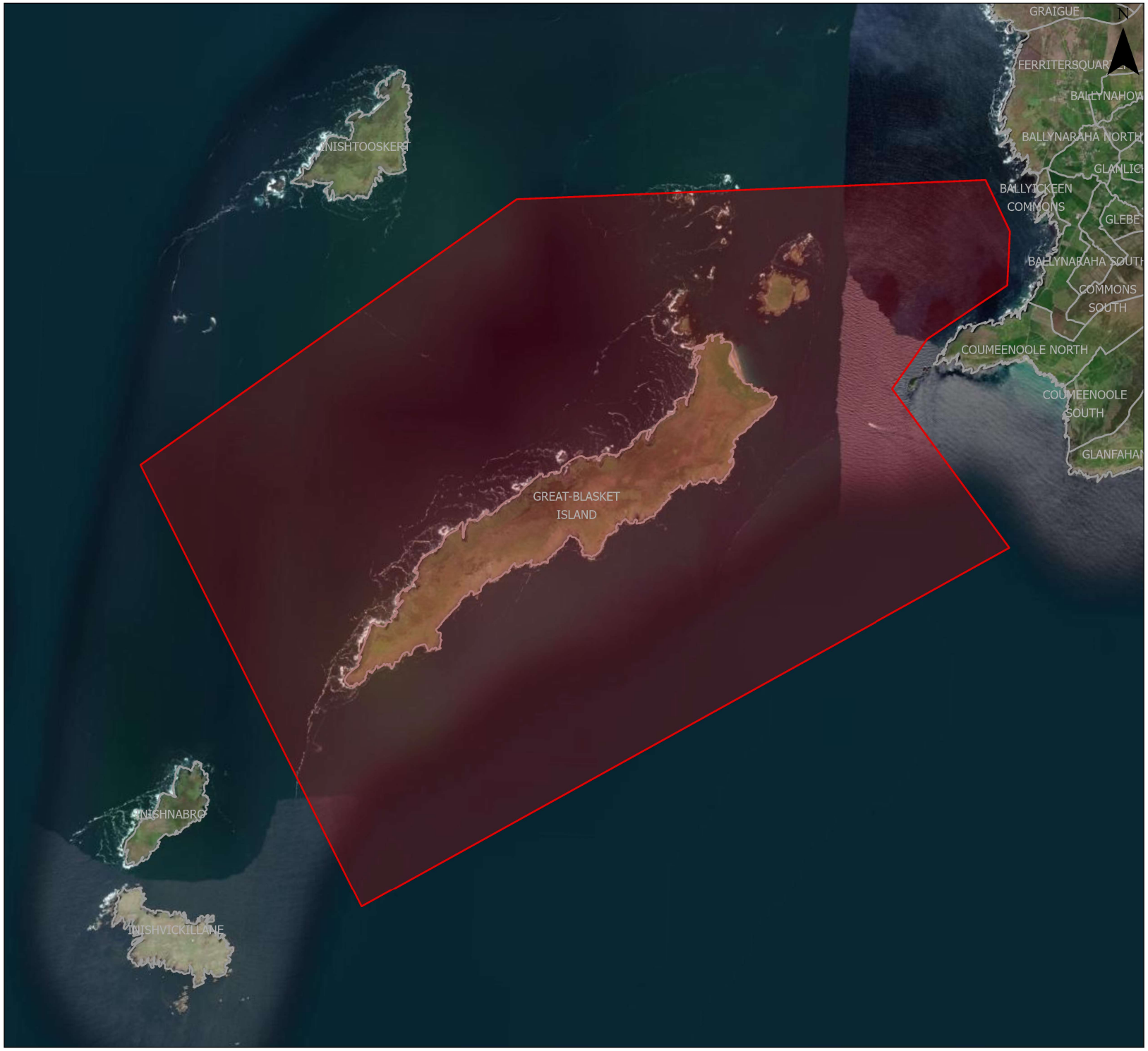
Office of Public Works (OPW) proposes to redevelop the landing zone on Great Blasket Island in tandem with a revitalised Island management plan. Survey works are to be carried out as part of the marine aspect of this project including deployment of static Passive Acoustic Monitoring (PAM) devices, boat-based transects, intertidal and subtidal surveys, grey seal counts, and human disturbance monitoring. As a result, a marine area usage licence is required from the Maritime Area Regulatory Authority (MARA) for the survey works.

This Supporting Information for Screening for Appropriate Assessment (SISAA) has been prepared by AQUAFACT, a member of the APEM Group to provide relevant information to enable the competent authorities to carry out a Stage 1: Screening for AA 'Marine Ecological Consultancy Services for the Great Blasket Island' ('the Project') as required under Article 6(3) obligations of the Habitats Directive. This report considers the potential effects of the Project on European sites.

The purpose of these surveys is to gather baseline data which will be used to inform the design and location of a proposed landing facility to the island and for the submission of several environmental reports. It is envisaged that the on-site survey period for the above works will be carried out between April 2024 and March 2025. The redline boundary for the environmental surveys is shown in **Figure 1.1**.

The aims/benefits of the Project can be summarised as follows:

- Obtaining baseline data on the ecology of the study area.
- The baseline data that is collected will be able to inform future projects in the area, including the much-needed development of a scheme for improved landing facilities on the Island.



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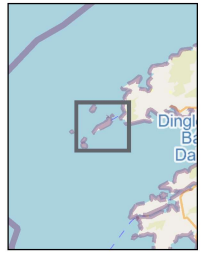
Boundary for Marine Ecology Surveys.

Supporting Information for Screening for Appropriate Assessment (SISAA)

- Initial Marine Ecology Survey Boundary
- Townlands___Ungen_2019_Clip



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Coordinate Reference System
IRENET95 / Irish Transverse Mercator

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Figure 1.1

Figure Reference: 12541_OPW_GreatBlasketIsland_SISAA

1.2. Appropriate Assessment Process

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (commonly known as the Habitats Directive) is the European Community legislation based on nature conservation established to ensure biodiversity is conserved through the conservation of natural habitats, wild fauna and flora in Europe. A network of sites of conservation importance hosting habitats and species as needing to be either maintained at or, where appropriate, restored to favourable conservation status have been selected as a Special Area of Conservation (SAC) and Special Protection Area (SPA), which are collectively referred to in Ireland as European sites. Together these comprise the Natura 2000 network of protected sites (OPR, 2021). The specific named habitat and/or non-bird species for which an SAC is selected are called Qualifying Interests (QI) of the site while specific named bird species for which an SPA is selected are called Special Conservation Interest (SCIs) of the site (OPR, 2021). In this report, QIs and SCIs are collectively referred to as conservation features.

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). The Habitats (92/43/EEC) and Birds (2009/147/EC) Directives were transposed into the Irish legislation by Part XAB of the 2000 Act and the Birds and Natural Habitats Regulations 2011. The legislative provisions for AA Screening for planning applications are set out in Section 177U of the 2000 Act.

Articles 6(3) and Article 6(4) of the Habitats Directive outlines the procedure for considering plans and projects that may have a significant effect on a Natura 2000 site. The Department of the Environment Heritage and Local Government guidelines (DEHLG, 2009, reviewed in 2010) promotes a four-stage process (**Figure 1.2**) to complete the AA and outlines the issues and procedures at each stage. Stage 1 and Stage 2 encompass the main requirements for assessment under Article 6(3) of the Habitats Directive. Stage 3 may be part of the Article 6(3) Assessment or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

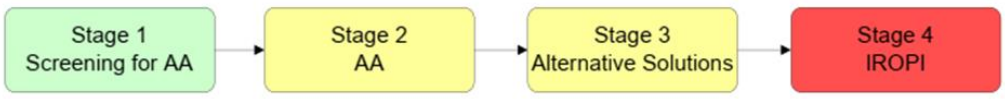


Figure 1.2: Four stages of the Appropriate Assessment Process.

An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

1.3. Guidance/Legislation

This report has been prepared in accordance with the following guidance:

- European Commission (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC Commission notice.
- Office of Planning Regulator (2021) Practice Note PN01 Appropriate Assessment screening for development management.
- Department of Environment, Housing and Local Government (2009) Appropriate Assessment of plans and projects in Ireland guidance for planning authorities (Revised 2010).
- European Commission (2021) Assessment of plans and projects in relation to Natura 2000 sites – methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC Commission notice.
- Habitats Directive (Council Directive 92/43/EEC) 1992.
- Birds Directive (Directive 79/409/EEC) 1979, amended Directive 2009/147/EC.
- European Communities (Birds and Natural Habitats) Regulations 2011-2021
- Department of Arts, Heritage and the Gaeltacht – National Parks and Wildlife Service (DAHG - NPWS) (2012) Marine Natura Impact Statements in Ireland Special Areas of Conservation, a working document.

This assessment includes a desk-based review of available records of protected QIs and SCIs including the following sources:

- Conservation status assessment reports, backing documents and maps prepared to inform national reporting required under Article 17 of the Habitats Directive[1].
- Site synopsis, conservation objective reports and Natura 2000 forms available from NPWS.
- Published and unpublished NPWS reports on protected habitats and species including Irish Wildlife Manual reports, species action plans and conservation management plans.
- Existing relevant mapping and databases *e.g.* waterbody status, species and habitat distribution, *etc*. (sourced from the Environmental Protection Agency (EPA)[2], the National Biodiversity Data Centre (NBDC)[3] and the NPWS[4]).

As there are several species that are classed as both Annex II and Annex IV, the Annex IV species not covered by this report (as they are not QI's of the assessed European sites) are assessed as part of the accompanying Annex IV Species Risk Assessment. Refer to accompanying report.

1.4. Statement of Authority

This report has been prepared by [redacted] The preparation of this report was overseen by [redacted].

[redacted]BSc (Joint Hons) is a Principal Ecologist with Apem Ireland and has over 12 years' experience in ecological assessment and holds a BSc in Marine Biology/Oceanography from the University of Wales, Bangor and a HND in Coastal Conservation with Marine Biology from Blackpool and Fylde College. [redacted] has a wide range of experience in the preparation of Environmental Impact Assessment Reports, Appropriate Assessment Screening reports and Natura Impact Statements. [redacted] was the lead ecologist on a range of projects in the UK, including large scale infrastructural schemes. Since moving to Ireland, he has been lead ecologist / author (EIAR, EcIA, AA Screening reports and NIS's) for a number of projects including historic landfill remediation works, urban planning applications, commercial regeneration sites and renewable energy projects.

[redacted] joined AQUAFACT, a member of the APEM Group, in October 2023 as Head of Consultancy. Ronan has a valuable background in aquatic biology and environmental science, specialising in marine research and fisheries management. He earned a PhD from the National University of Ireland Galway, an MSc from Bangor University, and a Diploma in Aquatic Biology from Galway Institute of Technology. His career is characterised by diverse roles in project management, environmental monitoring, and marine species research. From 2021 to 2023, [redacted] managed an Ireland/Wales Interreg project called Sensor Technologies for Remote Environmental Aquatic Monitoring (STREAM). Between 2017 and 2021, as the BlueFish Officer for BIM (Irish Sea Fisheries Board), he investigated potential climate impacts on marine life. From 2011 to 2017, [redacted] oversaw national projects for the Water Framework Directive monitoring on behalf of Complete Laboratory Solutions, coordinating with various institutions, and ensuring compliance with environmental standards.

[redacted] is a Senior Ecologist with AQUAFACT. She holds a BSc in Zoology from University of Galway (formerly NUIG) and a First-Class Honours MSc in Marine Biology from University College Cork where she completed her thesis on habitat distribution modelling of odontocetes using bioacoustic analysis. She then went on to co-author a published paper on the findings of this thesis. [redacted] is an Associate Member of the Chartered Institute of Ecology and Environmental Management (ACIEEM). She has over 4 years of work in environmental consultancy and has experience in multiple different areas of Marine Biology including taxonomy, sampling work, data analysis and ecological report writing. She has worked on numerous Appropriate Assessments (AA), Natura Impact Statements (NIS), Ecological Impact Assessments (EcIA) and Environmental Impact Assessments (EIA) for a variety of projects within the marine and aquatic sector.

[redacted] is a Consultant Ecologist has a First Class Hons. BSc in Zoology from NUIG and a First Class Hons. MA in Ecological Design Strategy. She is experienced in a range of research and technical survey skills in

terrestrial, marine, ornithology, mammals, habitats and phylogenetics. She has a good knowledge of environmental legislation with reference to Ireland as well as the EU and the Habitats Directive. She has also previously spent time at sea conducting UWTV and Deep-Sea Trawling fisheries surveys with the Marine Institute. As a consultant ecologist for APEM ltd., she contributors towards Ecological Impact Assessments (EcIA), Appropriate Assessments Screenings (AA Screenings) and Preliminary Ecological Appraisals (PEAs).

[redacted] is the Divisional Director of AQUAFACT and has 25 years of experience in the field of marine science. He is a Chartered Scientist (CSci) and Fellow of the Royal Society of Biology (FRSB) and the Royal Geographical Society (FRGS) and holds a PhD in biological oceanography from the National University of Ireland, Galway. Prior to joining AQUAFACT, [redacted] was manager of the Ecology Unit in the Irish Environmental Protection Agency. He has previously worked as a Research Fellow in the Marine Institute and as a seconded expert to the European Commission.

2. Stage 1: Screening for Appropriate Assessment

Stage 1 AA Screening is the process that addresses and records the reasoning and conclusions in relation to the first two points of Article 6(3):

i. whether a plan or project is directly connected to or necessary for the management of a European site, and
ii. whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its 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 Appropriate Assessment (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no impact.

2.1. Description of the Project

Intertidal Survey

The intertidal survey will cover a < 1km stretch of coastline. A Marine Nature Conservation Review (MNCR) Phase 1 intertidal survey will be completed within the intertidal areas during mean low water spring (MLWS) tidal conditions. Surveys will be carried out throughout the entire proposed zone of influence. The Common Standards Monitoring Guidance (JNCC, 2004) and 'Littoral Sediments Habitats' Procedural Guidance (Version 4, August 2004) will be followed as guidance throughout surveys. Additional guidance including the 'CCW Handbook for marine intertidal Phase 1 survey and mapping (Wyn *et al*., 2000), the 'Guidelines for the Conduct of Benthic Studies at Marine Aggregate Extraction Sites (2nd edition)' (Ware and Kenny ,2011) will be applied.

The intertidal survey will include areas of soft sediment habitat (beach) and rocky shore (see **Figure 2.1** and **Figure 2.2**). A Phase II Quantitative Intertidal transect survey will be conducted within the survey area. The methodology will follow that set out within the Marine Monitoring Handbook Procedural Guidance No's 3-1 (Intertidal Biotope Recording) (Wyn & Brazier, 2001) and 3-6 (Intertidal Core Sampling) (Dalkin and Barnett, 2001). Rocky shore habitat will also be encountered, surveying may need to be adapted appropriately to use quadrats rather than core sampling. Three replicate samples will be taken using a hand operated coring device measuring 30 cm in depth and 15cm in width. One additional fist-sized bag of sediment will be taken at suitable stations. Photographic records during surveying should be taken as appropriate for recording and reporting purposes.

Drop down video (DDV) or camera surveying (digital video / stills)

Subtidal still and video seabed photographic data will be acquired to determine the presence of subtidal reefs and calculate a 'reefiness' score (Irving, 2009) where applicable at specified locations using a high-resolution underwater camera. AQUAFACT follows the NMBAQC and JNCC guidelines for the best practice acquisition of video stills imaging of benthic substrata and epibenthic species, ensuring that the data collected is fit for purpose in relation to the needs and requirements of the proposed survey.

Dive surveys

In areas that are not suitable for the use of DDV equipment, such as subtidal reefs or sea caves, a team of HSE Part 4 qualified commercial divers will be deployed to obtain video and still imagery. The team will use high-resolution underwater camera and lighting equipment to obtain imagery suitable for species / habitat type identification. The team will use non-intrusive method of works, ensuring to remain 0.5 – 1 m from the seabed or sea cave walls. The team of marine biologists will take note on seabed type and features, cave wall conditions and features, flora and fauna with emphasis on notable sensitive and protected species.

Marine mammal visual surveys

2.1.1.1. Grey Seal haulout & Human disturbance surveys

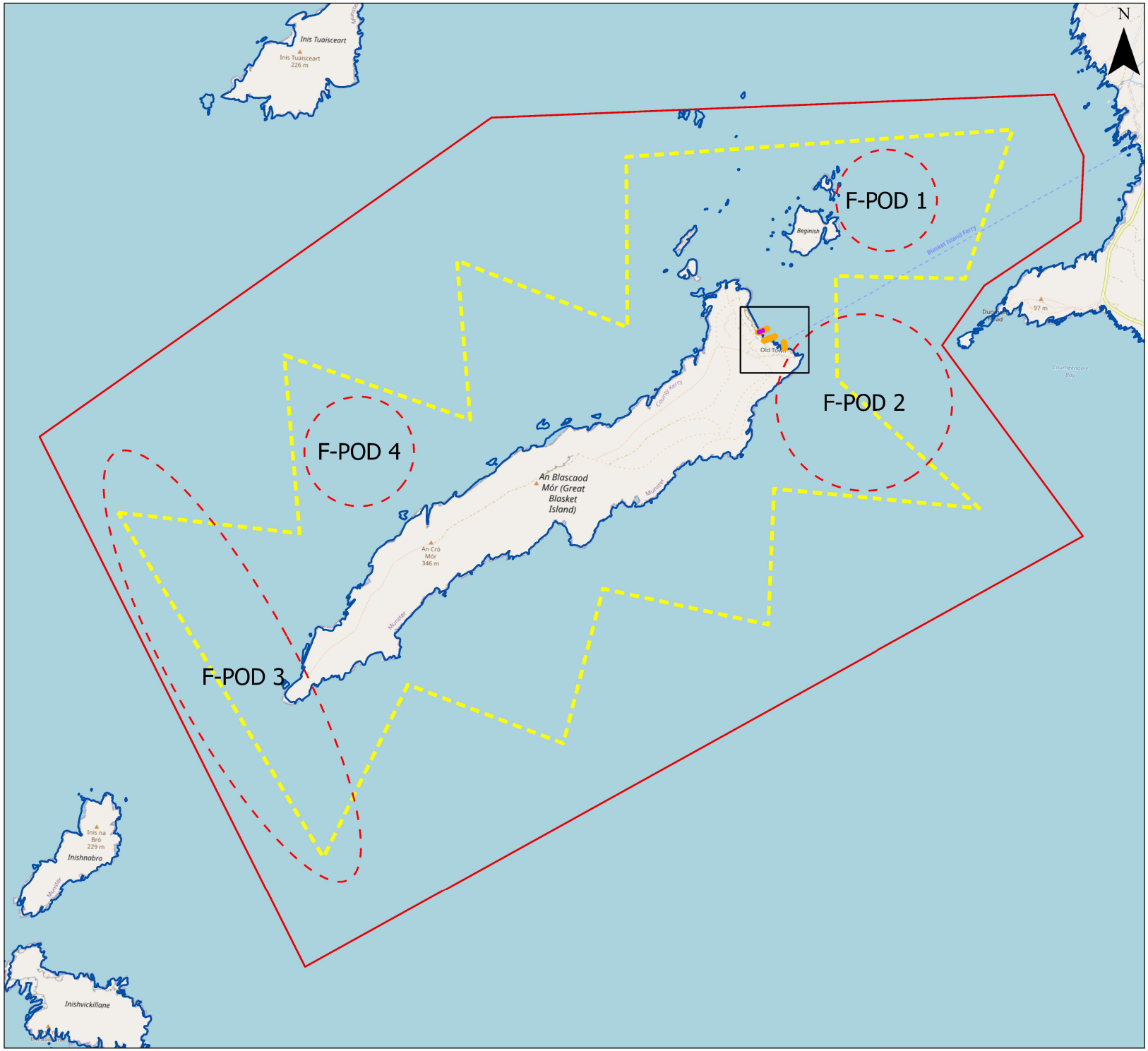
Haul-out surveys of grey seals will be carried out by an observer from a vantage point above An Trá Bán. The observer will carry out regular counts throughout the day, either side of low tide. Flexibility with weather conditions and access to Great Blasket Island will be a deciding factor in when each survey takes place. The aim will be to survey over six days, with one survey day per month between April and September. In the event that conditions do not allow for a survey to be carried out in any given month, a survey can be delayed to the following month in which two surveys can take place, with a minimum period of two weeks between surveys. During each count, mapping and population profile data will be collected. Human disturbance surveys will take place simultaneously to the haul-out surveys. Throughout the survey day, the observer will monitor the beach for any signs of disturbance to any seals hauled out or in the water within the general area of An Trá Bán. Any disturbance that is observed will be recorded along with the cause of the disturbance and the time it takes for the seals to return to baseline (i.e. resting state prior to the disturbance event) following any disturbance.

2.1.1.2. Acoustic surveys

Four F-POD acoustic monitoring devices (used to detect clicks of cetaceans, including porpoise and dolphin species) will be deployed on fixed moorings to provide continuous monitoring of the area throughout the season. The devices will be deployed on either side of the Blasket Sound, one south west of Slea Head and one to the north of Beiginis pier, see **Figure 2.1**. Servicing of the F-POD will be carried out every 2-3 months after deployment, to replace batteries and download data, for up to one year. The moorings would be a standard concrete construction (50 to 70 kg).

2.1.1.3. Boat based surveys

Boat based transect surveys will be carried out to further determine the species of marine mammals (and other marine megafauna, e.g. turtle species) and their occurrence and distribution within the ZoI. The aim will be to undertake 6 surveys, each survey will coincide with deployment, recovery, and maintenance of the F-PODs to minimise vessel presence within the ZoI. The transect surveys will cover the area surrounding the entirety of the Great Blasket Island and extending into the area of Dunquin Pier (**Figure 2.1**). The survey vessel will travel at a standard survey speed of approx. 12 km/hr (7 knots) while on transect (traveling between F-POD sites). All marine mammal sightings during this transect will be recorded along with number of animals, location of sighting and any other relevant data (e.g. behaviour). Each survey will include a search area of approximately 200 m either side of the transect line.



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Indicative Survey Locations

Supporting Information for Screening for Appropriate Assessment (SISAA)

- Initial Marine Ecology Survey Boundary
- Acoustic Deployment Sites
- Marine Mammal Survey Transect
- High_Water_Mark__2023
- Indicative Transect for Intertidal Surveys
- Indicative Sediment Sampling Points

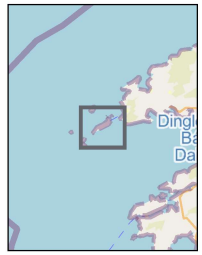

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Figure 2.1

Figure Reference: 12541_OPW_GreatBlasketIsland_SISAA

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12541 OPW Great Blasket Island

Intertidal Transects and Sediment Sampling on Great Blasket Island Beach

Supporting Information for Screening for Appropriate Assessment (SISAA)

- Indicative Transect for Intertidal Surveys
- Indicative Sediment Sampling Points
- High_Water_Mark__2023

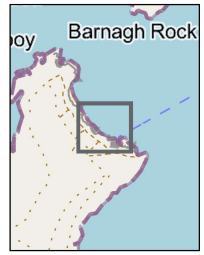

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Figure 2.2

Figure Reference: 12541_OPW_GreatBlasketIsland_SISAA

2.2. Assessment Methodology: Source-Pathway-Receptor

The assessment of impact mechanisms considers all relevant aspects of the Project that have potential direct or indirect effects on conservation features. In order to establish the Zone of Influence (ZoI) of the Project, the assessment of likely significant effects will be based on the Source-Pathway-Receptor (S-P-R) Model (OPR, 2021):

- **Source** - Identification of the characteristics of the Project based on the nature, size, location, and type of impacts.
- **Pathway** – Identification of pathways that could link European sites and their conservation features to the Project.
- **Receptor** – Identification of the location, nature, and sensitivities of the conservation features and the ecological conditions supporting their survival and the conservation objectives specified to maintain or restore favourable conservation status.

In order to establish the ZoI of the Project, the assessment of connectivity between impact mechanisms (or source) and a conservation feature considers the location of the Project relative to habitats and non-mobile species, species foraging distances and migration routes, the proximity of the Project to foraging and breeding areas, potential changes in species behaviour, potential hydrological connectivity between the Project and conservation features, effects on prey species resulting in alteration of interactions, and associated impacts. Given the nature of the survey works and the potential impacts, the ZoI for the project is set at the boundary line for the project laid out in **Figure 1.1**.

To inform the screening exercise, available data on protected habitats and species was mapped using a Geographic Information System (GIS) and interrogated to identify the S-P-R connectivity. The source (potential impact mechanisms), pathways (hydrological, physical or ecological connectivity) and receptors (conservation features) were identified based on a review of ecological surveys undertaken in the area using QGIS software. If there is no ecological pathway or functional link between the Project and the conservation feature of the European site, there is no potential for impact and the conservation feature can be screened out. **Section 2.5** considers the likely significant effects from the impact mechanisms from the Project alone, while **Section 2.6** considers potential in-combination effects with other plans or projects.

2.3. Potential Impact Mechanisms

A detailed description of the Project is provided above; given the nature of the proposed activities associated with the Project, the potential impact mechanisms (or sources of impact) are:

Potential Impact Mechanism 1: Intertidal habitat disturbance

There is a potential for intertidal habitat disturbance as a result of some of the survey activities that are being carried out. Very small areas of the intertidal will be disturbed during the surveying and sampling site investigation activities. The habitats that overlap with the intertidal work are not listed as QIs of the Blasket Islands SAC, given this along with the short term (1-2 days) nature of the survey, and the minimal impact of the surveys required this would not provide enough disturbance to undermine the site's conservation objectives. As such, the potential effect of intertidal habitat disturbance is assessed to be **Not Significant**.

Potential Impact Mechanism 2: Subtidal habitat disturbance

There is a potential for subtidal habitat disturbance as a result of some of the survey activities that are being carried out. Activities that have the potential to cause subtidal habitat disturbance are the acoustic monitoring deployments, dive surveys and dropdown video surveys. Sedimentation and increased turbidity are unlikely to have a direct effect on marine mammals but may have an indirect effect through impacts on prey (Todd *et al*., 2015). Grey seal are the most abundant marine mammal species within the ZoI. Even when increased turbidity has been shown to substantially reduce visual acuity in seals, there is no evidence of reduced foraging efficiency (Todd *et al*., 2015). Furthermore, the duration of the dive surveys, dropdown video surveys and mooring deployment is short-term and the moorings have a small footprint. Along with the fact that the negligible sediment material in suspension that may be created will likely fall out of suspension or disperse into the water column. Both the drop-down video and diving surveys should not result in an effect on the benthos as they will be occurring exclusively in the water column. As such, the potential effect of subtidal disturbance is assessed to be **Not Significant**.

Potential Impact Mechanism 3: Collision risk

Collisions between vessels and marine mammals on survey work is a risk whilst the boat is moving, and during the drop-down video analysis. One of the main aspects contributing to collision between marine mammals and vessels is vessel speed (Schoeman *et al*., 2020) and whilst injuries from vessel strikes vary between species, they tend to be more severe with vessels travelling at higher speeds (Wang et al., 2007). The vessel being used for the surveys will be either stationary or travelling slowly (approximately 7 knots), and in consistent and predictable patterns, thus allowing any animal in the area the time and opportunity to move away from the vessel and avoid collision.

Marine mammals in the area are already accustomed to vessels travelling through on a regular basis due to other activities, including tourism to the islands. The potential effect of vessel collision is assessed to be **Not Significant** and the risk of collision between vessels and marine mammals is assessed to be **Unlikely**.

Potential Impact Mechanism 4: Species disturbance

The survey activities outlined in **Section 2.1** have the potential to cause a disturbance to marine mammals, seabirds and other fauna in the area. Seals are observed to haul-out on the stretch of beach that is being surveyed during the intertidal surveys for this project, and population counts of grey seals is a key component of this project. The counts will aim to establish the hauled-out population size during the months where the island is open to the public. Considerations will be made to the position of the surveyor at the furthest practical distance from the colony while maintaining a suitable viewpoint, following methodologies from similar surveys (Tadeo *et al*., 2021). The potential for disturbance will be taken forward for assessment (refer to Section 2.5).

Potential Impact Mechanism 5: Noise emissions

Noise emissions created due to survey work are limited to the operational noise of the boat. Moorings for the static PAM stations will be gravity secured/anchored with no drilling or piling required. The PAM devices do not produce noise either actively or passively (see Appendix 1). No other elements of the survey work are predicted to result in noise emissions to water.

Noise emissions can have the potential to affect species, especially marine mammals. However, due to existing boating activity in the area, species are most likely already habituated to noise disturbance from marine traffic, such as shipping vessels and boats for tourism purposes. Consequently, the introduction of an additional slow-moving vessel during infrequent surveys (every two to three months for PAM and boat-based surveys) is not likely to cause significant disturbance. The potential effects from noise emissions is assessed to be **Not Significant.**

2.4. European sites

The conservation features within the ZoI of the proposed Project of the area are shown in **Figure 2.3** and **Figure 2.4**, respectively. **Table 2.1** and

Table 2.2 show the conservation features for which the European sites are designated, their conservation objectives and the distance[5] of the SACs and SPAs to the Project. All site synopses and conservation objectives for the European sites can be accessed through the NPWS website[6].

The Project itself lies within the Blasket Islands SAC and SPA, as the ZoI is defined as within the redline boundary of the project these are the only European sites carried forward for assessment. The SAC is shown in **Figure 2.3** and listed in

Table 2.2 along with its conservation objectives. The SPA is shown in **Figure 2.4** and listed in

Table 2.2 along with its conservation objectives

Table 2.1: Qualifying Interests (QIs) for assessed SACs.

SAC (site code)	Distance from Project (km)	Qualifying Interest	Ecological Group	Conservation objective
Blasket Islands SAC (002172)	>0m	Reefs [1170]	Annex I habitat	To maintain the favourable conservation condition
		Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	Annex I habitat	To restore the favourable conservation condition
		European dry heaths [4030]	Annex I habitat	To maintain the favourable conservation condition
		Submerged or partially submerged sea caves [8330]	Annex I habitat	To maintain the favourable conservation condition
		Phocoena phocoena (Harbour Porpoise) [1351]	Annex II species	To maintain the favourable conservation condition
		Halichoerus grypus (Grey Seal) [1364]	Annex II species	To maintain the favourable conservation condition

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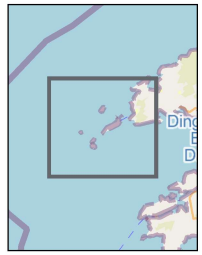
Special Area of Conservation

Supporting Information for Screening for Appropriate Assessment (SISAA)

- Initial Marine Ecology Survey Boundary
- High_Water_Mark__2023
- Blasket Island SAC



Notes

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Figure 2.3

Figure Reference: 12541_OPW_GreatBlasketIsland_SISAA

Table 2.2: Special Conservation Interests (SCIs) for SPAs in the Zone of Influence (ZoI) of the Project.

SPA (site code)	Distance from Project (km)	Special Conservation Interest	Ecological Group	Foraging Behaviour	Conservation Objective
Blasket Islands SPA (004008)	<0m	Fulmar (*Fulmarus glacialis*) [A009]	Annex I,II & III bird species	Obtains food by dipping, surface-seizing, surface-plunging, pursuit-diving, and scavenging; apparently unable to pick up prey while on the wing.	To maintain or restore favourable conservation condition.
		Manx Shearwater (*Puffinus puffinus*) [A013]		Forages from the sea by diving. It's diet consists of small fish, plankton, molluscs and crustaceans.	
		Shag (*Phalacrocorax aristotelis*) [A018]		Feeds by diving in the water column. They eat a wide range of fish however their most common prey is the sand eel.	
		Storm Petrel (*Hydrobates pelagicus)* [A014]		Feeds on small fish, plankton, molluscs and crustaceans taken from the sea.	
		Lesser Black-backed Gull (*Larus fuscus*) [A183]		Feeds in a range of habitats. Extensive use is made of refuse and other sources of human waste. This species is an omnivorous, opportunistic feeder and forages extensively at sea.	
		Kittiwake (*Rissa tridactyla*) [A188]		Feeds on fish, waste from commercial fishing and invertebrates.	
		Herring Gull (*Larus argentatus*) [A184]		Forages around ship in inshore areas, on shoaling fish, in the intertidal, in agricultural areas, on refuse and in streets.	
		Razorbill (*Alca torda*) [A200]		Species forages by surface diving on small fish.	
		Arctic Tern (*Sterna paradisaea*) [A194]		Preys on small fish or marine crustaceans in coastal areas. This species dives to the surface of the water to catch prey close to the surface.	
		Chough (*Pyrrhocorax pyrrhocorax*) [A346]		Feeds mostly on insects and their larvae, worms and other subterranean invertebrates. They will also eat berries, grain, small mammals and birds and pretty much anything else they can find.	
		Puffin (*Fratercula arctica*) [A204]		Feeds on marine fish and crustaceans primarily at sea.	

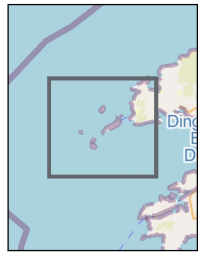
APEM Group

12541 OPW Great Blasket Island

Special Protection Area

Supporting Information for Screening for Appropriate Assessment (SISAA)

- Initial Marine Ecology Survey Boundary
- High_Water_Mark__2023
- Blasket Island SPA



Notes

World Imagery: Earthstar Geographics
OpenStreetMap: Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps

Coordinate Reference System
IRENET95 / Irish Transverse Mercator

0 3 6 km

0 0.9 1.8 nm

Scale	Date	Drawn by	Checked by	Approved by
1:128,615 @A4	16/04/2024	EOB	JG	JG

APEM Ireland

[redacted]

Figure 2.4

Figure Reference: 12541_OPW_GreatBlasketIsland_SISAA

2.5. Assessment of Potential Significant Effects

A screening assessment is an initial evaluation of the significance of effects from potential impacts that activities may have on the Conservation features of a European site. The screening process is a filter, which may lead to exclusion of certain activities or Conservation features from further assessment, thereby simplifying the process. Screening is a conservative filter that minimises the risk of false negatives. As the Project ZoI is set out at the boundary laid out in **Figure 1.1**, only the Blasket Islands SAC within this boundary has been brought forward for assessment of SACs.

Screening for Special Areas of Conservation

In this section potential significant effects to the QIs (habitats and species) of SACs are assessed, as based on the ZoI of the proposed project and the distance from the proposed project from the SAC, to see if a potential pathway for interaction exists between project impact mechanisms and the conservation features (*i.e.,* connectivity). **Table 2.3** below presents this assessment.

Table 2.3: Assessment of potential significant effects from the impact mechanisms to the conservation features in the SACs.

Site (code)	Qualifying Interest (QIs)	Impact Mechanisms	S-P-R Assessment	Brought to Stage 2 (Y/N)
Blasket Islands SAC (002172)	Reefs [1170]	• Intertidal habitat disturbance • Subtidal habitat disturbance • Collision risk • Species disturbance • Noise emissions	Precautions are outlined in the survey methodology so as not to cause disturbance to this habitat.	No, as significant effects from potential impact mechanisms have been ruled out.
	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]		Precautions are outlined in the survey methodology so as not to cause disturbance to this habitat.	
	European dry heaths [4030]		Survey activities do not overlap or have any impact on this QI.	
	Submerged or partially submerged sea caves [8330]		The team will use non-intrusive method of works, ensuring to remain 0.5 – 1 meter from the seabed or sea cave walls. Therefore, significant effects to this QI as a result of the potential impact mechanisms have been ruled out.	
	Phocoena phocoena (Harbour Porpoise) [1351]		Due to this species already being habituated to marine traffic from tourism and shipping activities, collision risks and disturbance from vessels, due to noise emissions and people surveying have been ruled out, as noted in **Section 2.3**. Subtidal surveying will cause minimal disturbance and is unlikely to affect marine mammals as also discussed in **Section 2.3**. Therefore, significant effects to this QI as a result of the potential impact mechanisms have been ruled out.	
	Halichoerus grypus (Grey Seal) [1364]		Due to this species already being habituated to marine traffic from tourism and shipping activities, collision risks and disturbance from vessels, due to noise emissions and people surveying have been ruled out, as noted in **Section 2.3**. Using best practice measures, a minimum distance of 100 m is to be kept from seals at all times during surveying on land. Subtidal surveying will cause minimal disturbance and is unlikely to affect marine mammals as also discussed in **Section 2.3.** Therefore, significant effects to this QI as a result of the potential impact mechanisms have been ruled out.	

Due to the foraging ranges of Annex II marine mammal species found in Irish waters, the following species listed as QIs in SACs in Ireland have been assessed in terms of their potential to occur in the Project area:

- Harbour seal (*Phoca vitulina*)
- Grey seal (*Halichoerus grypus*)
- Harbour porpoise (*Phocoena phocoena*)
- Bottlenose dolphin (*Tursiops truncatus*)

Two species of pinniped, the grey seal (*Halichoerus grypus*) and harbour seal (*Phoca vitulina*), inhabit Irish waters year-round and are recorded along the south Irish coast. Both are listed as species of Least Concern on the IUCN Red List (Bowen, 2016; Lowry, 2016).

Both species have established haul-out sites along all coastlines of Ireland for resting, breeding, and engaging in social activity (Cronin *et al.,* 2004; Ó Cadhla *et al.,* 2007). The largest proportion of the grey seal population is hauled out ashore during the annual moult which begins in November and continues until April (Ó Cadhla and Strong, 2007). Grey seals also aggregate in large colonies during the breeding season between August and December (Ó Cadhla *et al*., 2013), with peak pup production during October and November (Lyons, 2004). Grey seals tend to breed on exposed rocky shores, on sandbars or in sea caves with ready access to deeper water. An NPWS report indicates the population on Great Blasket and Beginish totalled in the range 648 – 833 individuals, which included all age groups (Ó'Cadhla *et al*., 2007), though citizen science reports from local wildlife charters suggest upward of 1,000 individuals in more recent years.

More than 25 species of cetaceans have been recorded in Irish waters (NBDC, 2023), with about 10 of these regularly occurring the region surrounding the Blasket Islands (Berrow *et al.,* 2018; Rogan *et al.,* 2018; IWDG, 2022; NBDC, 2023).

The harbour porpoise is the most widespread and frequently recorded species in Irish waters, sighted largely in inshore waters in the Celtic Sea throughout the entire year (Ó Cadhla *et al.,* 2004; Berrow *et al.,* 2010; Wall *et al.,* 2013; Rogan *et al.,* 2018). Porpoise sightings tend to differ by season, with densities peaking in summer (Berrow *et al.,* 2010). They are listed as a species of Least Concern on the International Union for Conservation of Nature (IUCN) Red List (Braulik *et al.,* 2020).

Bottlenose dolphins are one of the most frequently recorded cetaceans in Ireland (NPWS, 2019) and have been observed throughout Irish waters year-round. They are listed as a species of Least Concern on the IUCN Red List (Wells *et al.,* 2019).

2.5.1.1. Assessment

The relevant SACs designated for Annex II marine mammal species are detailed in

Table 2.4.

Table 2.4: SACs designated for marine mammal species in Ireland.

SAC (Site code)	Qualifying Interest				
	Harbour seal (*Phoca vitulina*) (1365)	Grey seal (*Halichoerus grypus*) (1364)	Harbour porpoise (*Phocoena phocoena*) (1351)	Bottlenose dolphin (*Tursiops truncatus*) (1349)	Distance from Site
Slyne Head Peninsula SAC [002074]				✓	141Km
West Connacht Coast SAC [002998]			✓	✓	146Km
Slyne Head Islands SAC [000328]		✓			139Km
Inishbofin and Inishshark SAC [000278]		✓			161Km
Kilkieran Bay and Islands SAC [002111]	✓				127Km
Clew Bay Complex SAC [001482]	✓				190Km
Duvillaun Islands SAC [000495]		✓		✓	214Km
Galway Bay Complex SAC [000268]	✓				139Km
Inishkea Islands SAC [000507]		✓			118Km
Killala Bay/Moy Estuary SAC [000458]	✓				236Km
Lower River Shannon SAC [002165]				✓	45Km
Ballysadare Bay SAC [000622]	✓				261Km
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC [000627]	✓				267Km
Blasket Islands SAC [002172]		✓	✓		0Km
Slieve Tooey/Tormore Island/Loughros Beg Bay SAC [000190]		✓			306Km
Donegal Bay (Murvagh) SAC [000133]	✓				312Km

SAC (Site code)	Qualifying Interest				
	Harbour seal (*Phoca vitulina*) (1365)	Grey seal (*Halichoerus grypus*) (1364)	Harbour porpoise (*Phocoena phocoena*) (1351)	Bottlenose dolphin (*Tursiops truncatus*) (1349)	Distance from Site
West of Ardara/Maas Road SAC [000197]	✓				321Km
Kenmare River SAC [002158]	✓		✓		34Km
Rutland Island and Sound SA [002283]	✓				336Km
Glengarriff Harbour and Woodland SAC [000090]	✓				64Km
Roaringwater Bay and Islands SAC [000101]		✓	✓		81Km
Horn Head and Rinclevan SAC [000147]		✓			372Km
Slaney River Valley SAC [000781]	✓				254Km
Rockabill to Dalkey Island SAC [003000]			✓		320Km
Lambay Island SAC [000204]	✓	✓	✓		334Km
Saltee Islands SAC [000707]		✓			258Km
St. John's Point SAC [000191]				✓	298Km
Inishmore Island SAC [000213]			✓		116Km
Porcupine Bank Canyon SAC [003001]				✓	279Km
North-west Porcupine Bank SAC [002330]				✓	277Km
South-west Porcupine Bank SAC [002329]				✓	291Km
Kilkieran Bay and Islands SAC [002111]			✓		127Km
Belgica Mound Province SAC [002327]			✓	✓	87Km

SAC (Site code)	Qualifying Interest				
	Harbour seal (*Phoca vitulina*) (1365)	Grey seal (*Halichoerus grypus*) (1364)	Harbour porpoise (*Phocoena phocoena*) (1351)	Bottlenose dolphin (*Tursiops truncatus*) (1349)	Distance from Site
Southern Canyons SAC [002278]				✓	326Km
Hook Head SAC [000764]			✓	✓	235Km
Carnsore Point SAC [002269]			✓		275Km
Blackwater Bank SAC [002953]			✓		287Km
Bunduff Lough and Machair Trawalua/Mullaghmore SAC [000625]			✓		284Km
Codling Fault Zone SAC [003015]			✓		349Km
Lough Swilly SAC [002287]			✓		361Km
Gweedore Bay and Islands SAC [001141]			✓		345Km

The impact mechanisms that have the potential to act on the QIs listed above are the same as those outlined for the grey seal and harbour porpoise in the Blasket Islands SAC assessment in **Table 2.3.** Due to these species already being habituated to marine traffic from tourism and shipping activities, collision risks and disturbance from vessels, due to noise emissions and people surveying have been ruled out, as noted in **Section 2.3**. Using best practice measures, a minimum distance of 100 m is to be kept from seals at all times during surveying on land. Subtidal surveying will cause minimal disturbance and is unlikely to affect marine mammals as also discussed in **Section 2.3.** Therefore, there will be no significant effects to these QI's as a result of the Project.

Screening for Special Protection Areas

In this section, potential significant effects to the SCIs (bird species) of SPAs are assessed, as based on the ZoI of the proposed project and the distance from the proposed project from the SPA, to see if a potential pathway for interaction exists between project impact mechanisms and the conservation features (i.e., connectivity).

Table 2.5 below presents this assessment.

Table 2.5: Assessment of potential significant effects from the impact mechanisms to the conservation features in the SACs

Site (code)	Qualifying Interest (QIs)	Impact Mechanisms	S-P-R Assessment	Brought to Stage 2 (Y/N)
Blasket Islands SPA (004008)	Fulmar (*Fulmarus glacialis*) [A009]	• Intertidal habitat disturbance • Subtidal habitat disturbance • Collision risk • Species disturbance • Noise emissions	Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	No, due to no predicted significant effects on the SCIs listed.
	Manx Shearwater (*Puffinus puffinus*) [A013]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Shag (*Phalacrocorax aristotelis*) [A018]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Storm Petrel (*Hydrobates pelagicus)* [A014]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Lesser Black-backed Gull (*Larus fuscus*) [A183]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Kittiwake (*Rissa tridactyla*) [A188]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Herring Gull (*Larus argentatus*) [A184]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Razorbill (*Alca torda*) [A200]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Arctic Tern (*Sterna paradisaea*) [A194]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Chough (*Pyrrhocorax pyrrhocorax*) [A346]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	
	Puffin (*Fratercula arctica*) [A204]		Due to the small scale and temporary nature of the survey work, it is not expected to have any interaction with breeding, foraging or nesting activities of this species.	

2.6. Plans or Projects That Might Act in Combination

As outlined above the obligation to undertake AA under the 2011 Birds and Natural Habitats Regulations derives from the Habitats Directive. Regulation 42(1) of the 2011 Regulations requires that:

> *A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or* ***in combination with other plans or projects*** *is likely to have a significant effect on the European site*.

It is therefore required that the potential impacts of the proposed Project be considered in combination with other relevant plans or projects. Given the nature of the proposed activities associated with the Project, the potential project impact mechanisms (or sources of impact) are:

1. **Intertidal habitat disturbance**
2. **Subtidal habitat disturbance**
3. **Collision risk**
4. **Species disturbance**
5. **Noise emissions**

The assessment of potential in-combination effects considers other plans and projects that may result in significant effects to conservation features of SACs and SPAs. To inform the assessment of potential in-combination effects a review of consent applications for projects in the vicinity of the proposed Project included on the following websites was completed in January 2024:

- DHPLG - EIA Portal[7]
- Kerry County Council - Planning System[8,9]
- Aquaculture Information Management System (AQUAMIS) by DAFM[10]

Screening assessments of potential in-combination effects from current and proposed projects listed on above websites are summarised in **Table 2.6**.

In summary, the assessments presented in **Table 2.6** conclude that there is no potential likelihood for significant effects caused by in-combination effects.

Table 2.6: Assessment of potential in-combination effects.

Website	Project Details	File Reference	Date Application Received	Assessment of Potential Cumulative or In-combination Effects	Potential significant effect assessment
DHPLG - EIA Portal	A search of the DHPLG EIA Portal was undertaken to examine projects with potential for in-combination effects.	-	-	No projects were noted within the ZoI of the Project.	No potential significant cumulative or in-combination effects.
Kerry County Council - Planning System	A search of the Kerry planning databases was undertaken to examine projects with potential for in-combination effects.	-	-	Applications made typically to Kerry County Council in the locality of the Blasket islands and Dunquin and published on the planning database consisted of historic extensions and renovations to existing houses, and retention of existing developments. These are small-scale terrestrial developments are most likely long finished and do not have the potential to result in cumulative effects in combination with the proposed Project.	No potential significant cumulative or in-combination effects
AQUAMIS	Fisheries or other aquaculture activities	-	-	A review of AQUAMIS shows are no known current inshore fisheries or applications for fisheries within a considerable distance of the Blasket Islands with the closest one being located in Ventry Harbour over 10Km away.	No potential significant cumulative or in combination effects.

2.7. Screening Outcome

The assessment has determined, in light of best available scientific data, that there is no potential for significant effects on the conservation features of SACs and SPAs resulting from the Project, *i.e.,* the likelihood of significant effects on all European sites has been ruled out. The assessment also determined that there is no potential likelihood for significant effects from the Project in combination with other plans or projects. The findings of the assessment are summarised in **Table 2.7**.

Table 2.7: Summary of the Appropriate Assessment Screening outcome.

AA Screening outcome	
Brief description of the Project.	The objective of the Project is to undertake ecological baseline surveys at the Blasket Islands, Co. Kerry (**Figure 1.1**). The work planned includes deployment of static PAM devices, boat-based transects, intertidal and subtidal surveys, grey seal counts, and human disturbance monitoring. The purpose of these surveys is to gather baseline data which will be used to inform the design and location of a proposed landing facility for boats to the island and for the submission of several environmental reports. It is envisaged that the on-site survey period for the above works to be carried out between April 2024 and March 2025. The redline boundary for the environmental surveys is shown in **Figure 1.1.**
European site(s)	
List of the European site(s) in the Zone of Influence.	The conservation features of the following SACs and SPAs are listed in **Table 2.1** and **Table** 2.2 alongside conservation objectives. **SACs** • Blasket Islands SAC(002172) **SPAs** • Blasket Islands SPA (004008)
Assessment summary	
Description of the potential impact mechanisms from the Project that have likely significant effects on the conservation features.	All potential impact mechanisms are detailed in **Section 2.3**. Impact mechanisms for which likely significant effects have been identified: 1. Intertidal habitat disturbance 2. Subtidal habitat disturbance 3. Collision risk 4. Species disturbance 5. Noise emission
Conservation features with the potential to be impacted by the Project.	No conservation features are considered to have the potential to be impacted by the Project.
Description of the potential direct or indirect impacts of the Project in combination with other plans or projects on the European sites.	There is deemed to be no additional potential direct or indirect impacts of the Project in combination with other plans or projects on the European sites.

Conservation features with the potential to be impacted by the Project in combination with other plans or projects.	No conservation features are considered to have the potential to be impacted by the Project in combination with other plans or projects on the European sites.
Concluding statement.	It is concluded that there is no pathway between the Project impact mechanisms, alone or in combination with other plans or projects, and the conservation features of European sites. The assessment is presented in full in **Section 2.5 to 2.6**.

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[1] The most recent Article 17 report (2019) is available at https://www.npws.ie/publications/article-17-reports/article-17-reports-2019

[2] http://gis.epa.ie/

[3] http://maps.biodiversityireland.ie

[4] http://www.npws.ie/mapsanddata/

[5] Distance relates to shortest linear distance, *i.e.*, 'as the crow flies'.

[6] All site synopsis and respective conservation objectives documents can be assessed at Protected Sites in Ireland | National Parks & Wildlife Service (npws.ie)

[7] DHPLG - EIA Portal: https://www.housing.gov.ie/planning/environmental-assessment/environmental-impact-assessment-eia/eia-portal

[8] County Council - Planning System: https://eplanning.ie/

[9] Kerry County Council - Planning System: https://www.eplanning.ie/KerryCC/SearchTypes

[10] https://dafm-maps.marine.ie/aquaculture-viewer/

Appendix 1

Chelonia Ltd. F-POD Technical Specification

Housing:	F-POD: Polypropylene. DeepF-POD: Aluminium.
Dimensions:	F-POD: Length: 710 mm. Diameter: 90 mm. DeepF-POD: Length: 710 mm. Diameter: 100 mm
Weight:	F-POD: 2.35 kg without batteries. DeepF-POD: 7.15 kg without batteries.
Buoyancy:	F-POD: Approximately +0.7 kg with alkaline batteries and +1.2 kg with lithium batteries. This makes F-PODs self-orientating and increases the chance of recovery if the mooring fails. A web link engraved on the outside has enabled over 150 PODs to be returned to their owners by people who have found them on sea shores, sometimes more than 2,500 km from home. DeepF-POD: -3.1 kg, not buoyant.
Mooring:	F-POD: 3 x 10 mm holes in the lid. DeepF-POD: 1 x 12 mm hole in the lid.
Hydrophone:	Improved hydrophone with less Z-plane variation. 20 kHz to 160 kHz omni-directional in a large-diameter housing to reduce surface noise. The transducer mounting and housing design gives high resistance to impact damage.
Memory:	Removable 32 GB micro SD card. Two SD cards are supplied with each F-POD. Any blank micro SD card up to 32 GB can be used.
Batteries:	Battery packs hold 10 D-cells. The battery housing is sprung to reduce battery damage from end impacts.
Detection range:	Maximum detection range for porpoises is approximately 400 metres. Dolphins may be detected at >1 km.
Standardisation:	See standardisation and calibration.
Click selection:	Digital time domain waveform analysis, using duration (5µs resolution), frequency, amplitude, number of cycles, bandwidth, amplitude profile, frequency profile and Narrow Band High Frequency Index, to select possible cetacean clicks in the range 20-160 kHz. On-board train detection selects clicks in trains so that some representative full waveforms can be saved.
Cetacean detection:	Coherent click trains are extracted and classified by the KERNOF classifier. This classifier is a fixed component of the process to give long term uniformity of performance.
Species classification:	Porpoises and other narrow-band high frequency (NBHF) species can be distinguished from broadband species. Some discrimination of groups of species within the broadband species may become possible when enough data is available. Every species tested has given good detection performance – see Species detection.
Sonars:	Runs two independent sonar detectors that detect and filter out boat sonars. A record is kept of sonar detections.
Settings:	The default settings cover all species and most environments. In locations with high levels of ambient noise, which are usually due to substrate transport by currents, standard low sensitivity settings may be required.
Angle sensing:	The angle-from-vertical is recorded each minute, enabling the user to check after deployment that the F-POD was deployed in a vertical position, and giving information on currents. A range of angles at which the POD will log can be set. This allows the F-PODs to be set up well in advance and transported in a horizontal attitude saving power and memory.
Temperature sensing:	Temperature is recorded each minute.
Maintenance:	The external surfaces of the F-POD are simple and tough allowing robust methods of removing biofouling. The lids use a dual O-ring design with grease-free lubricants and these have proved highly reliable.