Appendix H - Information to Inform the Habitats Regulations Appraisal (HRA)

Islay Community Demonstration Project

Information to Inform the Habitats Regulations Appraisal (HRA)

Version 5

P981 – February 2024

Issued by Aquatera Ltd on behalf of

Flex Marine Power

www.aquatera.co.uk

This study was completed for:

Flex Marine Power Ltd

Contact: Mark Spybey
Tel: [Redacted]
Email: mark.spybey@flexmarinepower.com

This report was completed by:

Aquatera Ltd
Old Academy Business Centre
Stromness
Orkney
KW16 3AW

Contact: Shane Quill
Tel: 01856 850 088
Email: shane.quill@aquatera.co.uk

Issue record

The version number is indicated on the front cover.

Version	Date	Details
V1	26 Nov 2021	Draft issued to FMP
V2	30 Nov 2021	Final issue
V3	30 Oct 2023	FMP issued revised draft (minor changes reflecting detailed design) to Aquatera for review.
V4	02 Nov 2023	Final version issued to client
V5	28 Feb 2024	Update due to design change – removal of marker buoys. Final version issued to client.

Members of:

OREF ORKNEY RENEWABLE ENERGY FORUM

ADEMAR

poet PACIFIC OCEAN ENERGY TRUST

APPA Asociación de Empresas de Energías Renovables

SCOTTISH Hydrogen & Fuel Cell ASSOCIATION

AUSTRALIAN OCEAN ENERGY GROUP

Contents

List of Figures

List of Tables

1 INFORMATION TO INFORM HRA

1.1 INTRODUCTION

Information to inform a Habitats Regulations Appraisal (HRA) is presented for Flex Marine Power Ltd.'s (FMP) proposed deployment of a single SwimmerTurbine™, rated up to 70 kW, in the Sound of Islay, Scotland (the Project), to determine whether the proposal has the potential to affect any European sites (Special Areas of Conservation (SACs) or Special Protection Areas (SPAs).

Pre-application consultation advice received from NatureScot listed the sites and qualifying features relevant to the proposed Project that require consideration in the HRA (see Section 1.4 Consultation Responses).

1.2 REGULATORY BACKGROUND

The requirements of the Habitats Directive and the Wild Birds Directive are transposed into domestic law in Scotland by The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (the 'Habitats Regulations'). These Regulations apply on land in Scotland, and in Scottish inshore waters (the area of sea adjacent to Scotland from 0 to 12 nautical miles). The UK's exit from the European Union has resulted in some changes in terminology regarding the Habitats Regulations. European sites are no longer part of the European Union's Natura 2000 network. Instead, they form a UK-wide network of protected sites. The UK site network is made up of SACs and SPAs. It is Scottish Government policy to afford the same protection to proposed SPAs (pSPA) and candidate SACs (cSAC) as fully classified sites.

1.3 OVERVIEW OF HRA PROCESS

Under the Habitats Regulations, a competent authority must consider whether a plan or project could affect a European site, firstly by considering whether it will have a likely significant effect on a European site, and if so, they must carry out an appropriate assessment. This process is known as HRA. HRA applies to any plan or project which has the potential to affect the qualifying features of a European site, even when those interests may be at some distance from that site.

A competent authority must not authorise a project unless it can be shown beyond reasonable scientific doubt – through an appropriate assessment, that the project will not adversely affect the integrity of a European site. The competent authority, in this instance Argyll and Bute Council will decide whether an appropriate assessment is necessary and carry it out (with advice provided by NatureScot) if required. It is the applicant, in this instance Flex Marine Power Ltd, who is usually required to provide the information to inform the appropriate assessment.

NatureScot guidance[1] sets out nine stages to HRA, these are:
Stage 1: What is the plan or project?
Stage 2: Is the plan or project directly connected with or necessary to site management for nature conservation?
Stage 3: Is the plan or project (either alone or in combination with other projects) likely to have a significant effect on a European site?

[1] Available at: https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra

Stage 4: Undertake an appropriate assessment of the implications for the site in view of its conservation objectives.
Stage 5: Can it be ascertained that the proposal will not adversely affect the integrity of the site?
Stage 6: Are there alternative solutions?
Stage 7: Would a priority habitat or species be affected adversely?
Stages 8 and 9: Are there imperative reasons of overriding public interest?

This report considers only stages 1 to 5. Stages 6 to 9 are only considered in exceptional circumstances where it cannot be ascertained that the plan or project will not adversely affect the integrity of a European site.

1.4 CONSULTATION RESPONSES

Consultation feedback specific to the HRA was received during pre-application consultations. Details of each of the comments received and how these have been incorporated into the assessment to allow completion of the HRA is presented in Table 1.1.

Table 1.1 Consultation responses specific to the HRA

Comment	Relevant section
NatureScot, pre-application advice, 12 October 2021	
South-East Islay Skerries SAC – harbour seal	
The proposed tidal turbine project is located approximately 17km from South-East Islay Skerries SAC and is therefore within the foraging range (50km) of its harbour seal feature. We advise that the HRA should include an assessment of the likely risk of collision and entanglement to the harbour seal qualifying feature.	Noted. The HRA includes an assessment of likely risk of collision and entanglement for the harbour seal qualifying feature (see Section 2.3.2).
Guidance on assessing the collision risk between underwater turbines and marine wildlife[2] is available on our website for developers to use, including a collision risk modelling spreadsheet. Collision risk estimates for the harbour seal qualifying feature of South-East Islay Skerries SAC should be calculated using the updated ERM model with a 98% avoidance rate.	Noted. Collision risk modelling was undertaken by Natural Power in accordance with NatureScot guidance (Natural Power, 2024).
A relative risk assessment, as outlined in the Benjamins et al. 2014[3] should be included in the HRA.	Noted. A relative risk assessment is included in the HRA (see Section 2.3.2).
Inner Hebrides and the Minches SAC - Harbour porpoise	

[2] https://www.nature.scot/doc/assessing-collision-risk-between-underwater-turbines-and-marine-wildlife

[3] https://www.nature.scot/doc/naturescot-commissioned-report-791-understanding-potential-marine-megafauna-entanglement-risk

Comment	Relevant section
The proposed tidal turbine project is located close to the Inner Hebrides and the Minches SAC designated for its Harbour porpoise qualifying feature. The Sound of Islay is thought to function as a transit route. We advise that the HRA should include an assessment of the likely risk of collision and entanglement to the harbour porpoise qualifying feature.	Noted. The HRA includes an assessment of likely risk of collision and entanglement for the harbour porpoise qualifying feature (see Section 2.3.4).
Collision risk estimates for the harbour porpoise qualifying feature of Inner Hebrides and the Minches SAC should be calculated using the updated ERM model with a 98% avoidance rate.	Noted. Collision risk estimates were calculated in accordance with the guidance (see Natural Power, 2024).
A relative risk assessment, as outlined in the Benjamins et al. 2014 should be included in the HRA.	Noted. A relative risk assessment is included in the HRA (see Section 2.3.4).
NatureScot, pre-application advice, 16 November 2021	
We request that collision risk modelling is undertaken for: • Both seal species • Harbour porpoise CRM for seals and Harbour porpoise will help inform the HRA process and assessment of impacts to protected species including the need for EPS licencing.	Noted. Collision risk modelling has been undertaken for harbour seal, grey seal and harbour porpoise (see Sections 2.3.2; 2.3.3 and 2.3.4).

1.5 STAGE 1: WHAT IS THE PROJECT?

1.5.1 Project description

Project description details can be found in the Environmental Management Plan (EMP). This HRA report should be read in conjunction with the EMP and supporting appendices including Appendix E: Project PEMP and Appendix H: Marine Mammal Collision Risk Modelling Report submitted as part of the Marine Licence application.

1.5.2 Project location

The HRA was undertaken for the Project using the licence boundary shown in Figure 1.1**Error! Reference source not found.**.

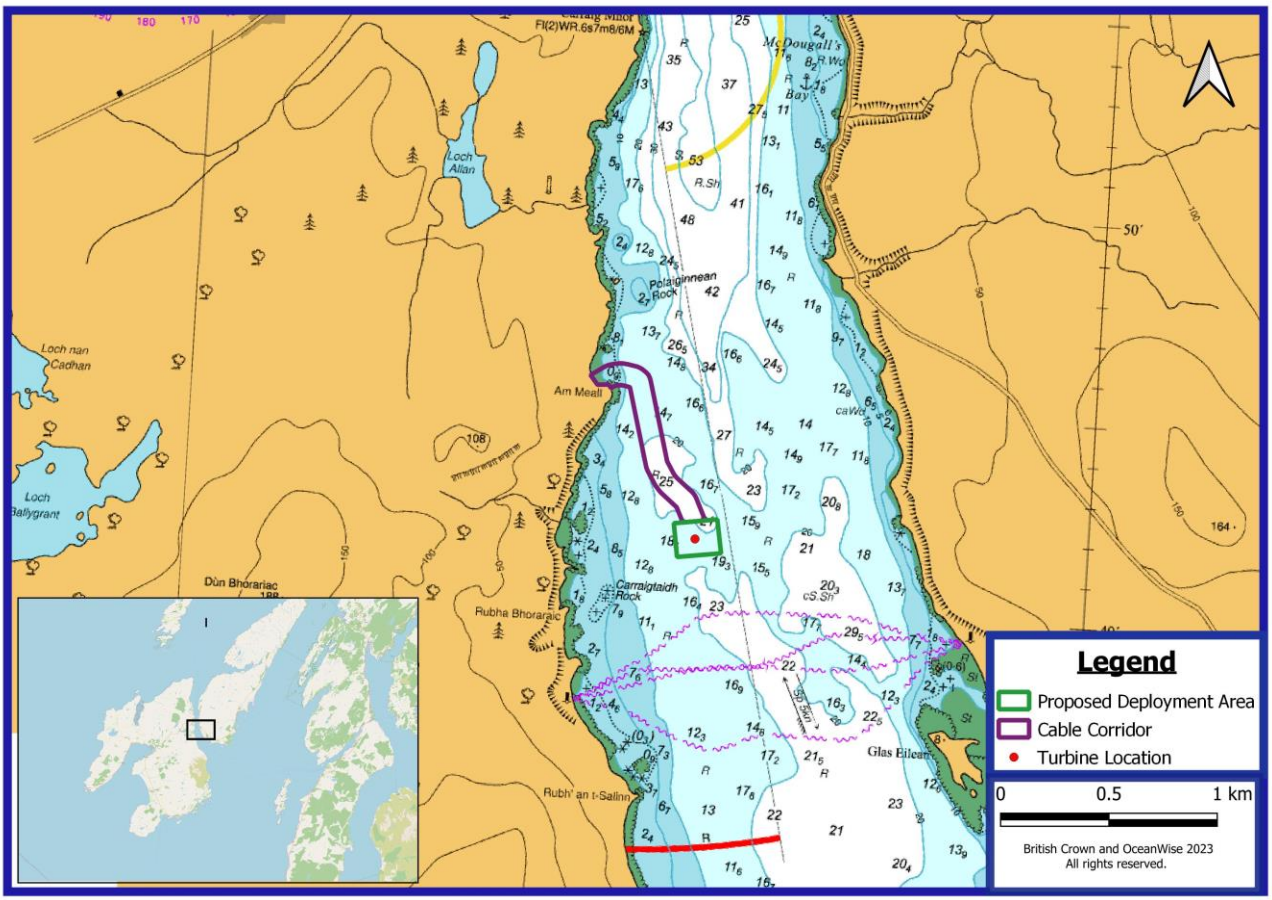

Figure 1.1 Proposed licence and deployment area

2 SACS

2.1 STAGE 2: IS THE PROJECT DIRECTLY CONNECTED WITH OR NECESSARY TO SITE MANAGEMENT FOR NATURE CONSERVATION?

No, the proposal is not directly connected with or necessary to site management for the conservation of any SACs and therefore consideration of Stage 3 is required.

2.2 STAGE 3: IS THE PROJECT (EITHER ALONE OR IN COMBINATION WITH OTHER PROJECTS) LIKELY TO HAVE A SIGNIFICANT EFFECT ON THE SITE?

2.2.1 Identification of relevant European sites

NatureScot advised during pre-application consultation (see Table 1.1) that the only sites and qualifying features requiring consideration in relation to HRA are:

- South-East Islay Skerries SAC (harbour seal (*Phoca vitulina*)
- Inner Hebrides and the Minches SAC (harbour porpoise (*Phocoena phocoena*)
- Grey seal (*Halichoerus grypus*)

South-East Islay Skerries SAC

South-East Islay Skerries SAC, designated for harbour seal is located 15.8 km to the south of the Project (see Figure 2.1). Harbour seal has a foraging range of 50 km therefore there is connectivity between the Project and seals from this SAC, that may use the Sound of Islay for foraging or whilst in transit through the area. As there is potential for likely significant effects, consideration of Stage 4 is required.

There are no other SACs with harbour seal as a qualifying feature within 50 km of the Project.

Treshnish Isles SAC

The nearest SAC with grey seal as a qualifying feature is Treshnish Isles SAC located 74.4 km to the north of the Project. Grey seals travel large distances to forage and frequently travel over 100 km between haul-out sites (SCOS, 2022) therefore there is potential connectivity between the Project and grey seals from Treshnish Isles SAC. As there is potential for likely significant effects, consideration of Stage 4 is required.

There are no other SACs in Scotland with grey seal as a qualifying feature within 100 km of the Project.

Inner Hebrides and the Minches SAC

Inner Hebrides and the Minches SAC, designated for its population of harbour porpoise, is located 10.7 km to the east and 8.6 km to the north of the Project (see Figure 2.1). The SAC is an extensive site covering an area of 13,801.74 km^2 and harbour porpoise use the entirety of the site (NatureScot, 2020). The Sound of Islay is thought to function as a transit route for this species therefore there is potential connectivity between the Project and harbour porpoise from the SAC. As there is potential for likely significant effects, consideration of Stage 4 is required.

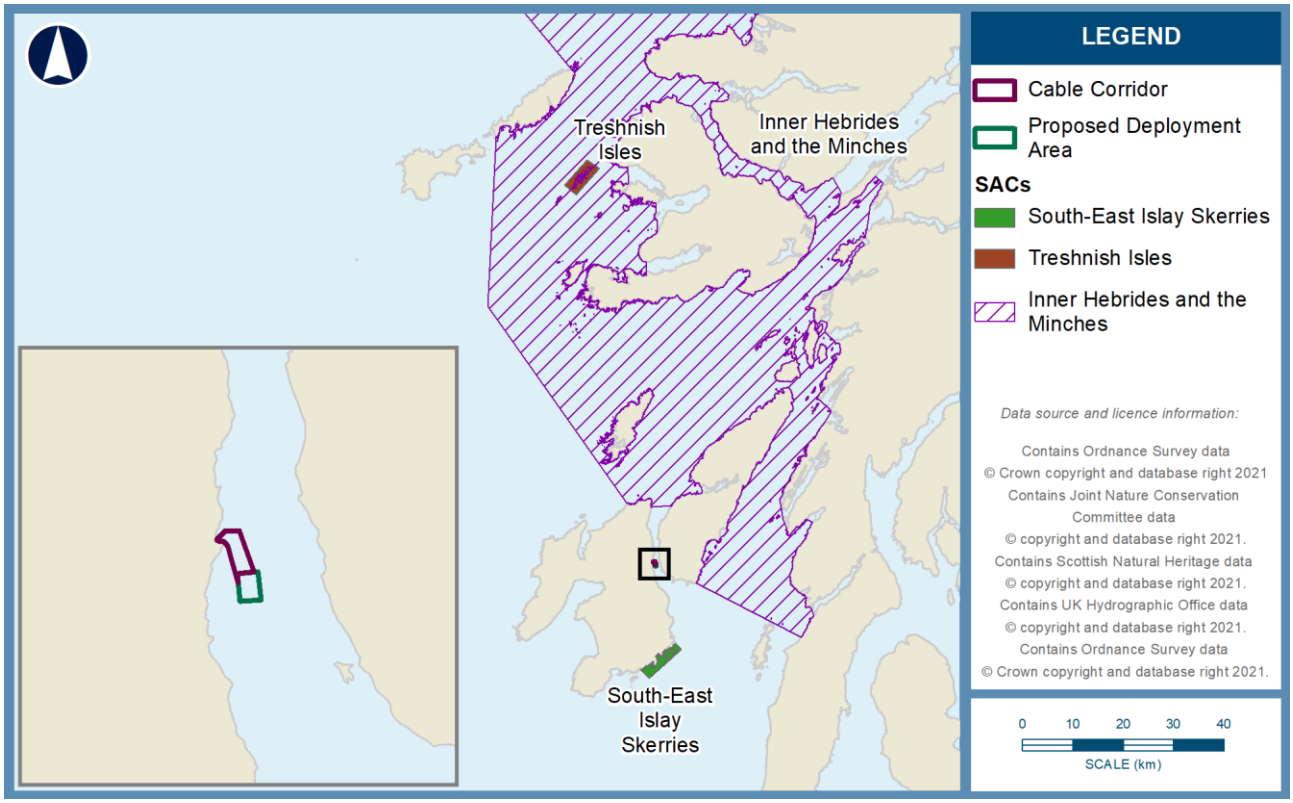

Figure 2.1 The location of the Project in relation to SACs with potential connectivity to the Project

2.3 STAGE 4: UNDERTAKE AN APPROPRIATE ASSESSMENT OF THE IMPLICATIONS FOR THE SITE IN VIEW OF ITS CONSERVATION OBJECTIVES

As there is potential for LSE on the qualifying interest of these three SACs, the Competent Authority, must carry out an appropriate assessment to ascertain whether the proposal might adversely affect the integrity of the SACs. Information is provided in this section to inform that appropriate assessment.

2.3.1 Impacts associated with the Project

NatureScot advised in their pre-application advice that the following aspects of the Project are of relevance to both seal species and harbour porpoise and therefore require consideration in the HRA:

Operational phase

- Collision with turbine blades leading to injury or death
- Entanglement in mooring lines or cables leading to injury or death

2.3.2 South-East Islay Skerries SAC

Conservation objectives

The conservation objectives of South-East Islay Skerries SAC are:

- To avoid deterioration of the habitats of the qualifying species (harbour seal) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

Of these, one conservation objective is relevant to the Project and is considered in the Project's effect on site integrity:

- to maintain the population of the species as a viable component of the site

Baseline conditions

The harbour seal abundance estimate for the West Scotland Seal Management Unit (SMU) is 15,600 (SCOS, 2022). Abundance in the West Scotland SMU is increasing slightly due to increases in the central and northern parts of the SMU while there is no significant trend in the southern part. SACs in the southern part show differing trends with abundance at South-East Islay Skerries SAC increasing at a rate of 1.88 % per annum whereas abundance at Eileanan agus Sgeiran Lios mor SAC is currently stable (SCOS, 2022). The most recent count data available for South-East Islay Skerries SAC recorded 706 harbour seals in 2018(SCOS, 2022).

The south-east Islay coastline areas are extensively used as pupping, moulting and haul-out sites by harbour seals, which represent between 1.5% and 2% of the UK population[4]. The latest assessed site monitoring condition for harbour seal at the SAC (in 2009) is 'favourable maintained'[5].

Collision with turbine blades leading to injury or death

The deployment and operation of a tidal device in the water column presents a potential collision risk for harbour seals that may be present in the area. The Project comprises a single SwimmerTurbine™ tidal device, rated up to 70 kW, which has two blades with a rotor diameter of 5 m (a 3.28 m rotor will be used for the commissioning phase as part of a gradual step-up of operations). Collision risk modelling was undertaken by Natural Power, in accordance with NatureScot guidance (Natural Power, 2024).

The predicted annual collision rate for harbour seal for a 5 m diameter rotor using a 98 % avoidance rate is:

- Harbour seal: 0.13 (C.I: 0.06 – 0.23) collisions per year.

The predicted annual collision rate for harbour seal for a 3.28 m diameter rotor using a 98 % avoidance rate is:

- Harbour seal: 0.06 (C.I: 0.03 – 0.11) collisions per year.

The worst-case scenario (predicted collision of 0.13 harbour seals per year for a 5 m diameter rotor) is equivalent to one collision every 7.7 years.

[4] South-East Islay Skerries - Special Areas of Conservation (jncc.gov.uk)

[5] SiteLink (nature.scot)

The South-East Islay Skerries SAC is one site in the network of SACs for harbour seals within the West Scotland SMU. The Permitted Biological Removal (PBR) value for harbour seals for the West Scotland Seal Management Unit (SMU) is 936 (SCOS, 2022). The predicted collision risk of 0.13 harbour seals per year constitutes just 0.014 % of the allowable take suggested by the PBR value.

Entanglement in mooring lines or cables leading to injury or death

The device mooring will comprise a single mooring line that attaches the device, which is mid-water buoyant, to a single gravity anchor on the seabed. The device mooring is a combination of steel rope (~38 mm diameter) and chain (130 mm diameter). The chain section will be attached to the clump weight and fixed onto the steel rope which will in turn be attached to the device.

A relative risk assessment for entanglement has been undertaken as outlined in Benjamins *et al.*, (2014). The Project's mooring configuration comprising a taut mooring line of steel rope and chain presents a relatively low risk of entanglement to harbour seals.

Technical monitoring of the SwimmerTurbine™ will be undertaken for operational purposes using equipment installed on the device with outputs monitored in real time using cloud-based communications. Remote sensors on the device will be used to monitor pitch and roll and accelerometers will be used to identify any movement. Using an inertial/GPS system for the device, the movement of the device will be monitored, and an alert will be triggered if the device moves outside of the operational parameters. The control system will have a shock sensor for the purpose of giving indication should an object strike the device. These systems will allow FMP to detect any changes or failings in the mooring or any entanglement event should it occur and enable any necessary inspections or retrieval operations to be actioned as soon as possible. In the highly unlikely event that any of the key device components should become detached from their substructure, an alarm will immediately be sent to the operator on duty who will co-ordinate retrieval operations.

2.3.3 Treshnish Isles SAC

Conservation objectives

The conservation objectives of Treshnish Isles SAC are:

- To avoid deterioration of the habitats of the qualifying species (grey seal) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and
- To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function and supporting processes of habitats supporting the species
  - No significant disturbance of the species

Of these, one conservation objective is relevant to the Project and is considered in the Project's effect on site integrity:

- to maintain the population of the species as a viable component of the site

Baseline conditions

The most recent count data for grey seals for the West Scotland SMU from 2018 is 4,174 grey seals (SCOS, 2022). The most recent count for Treshnish Isles SAC is 160 grey seals in 2018 which indicates abundance is stable (SCOS, 2022). Treshnish Isles SAC supports a breeding colony of grey seals that contributes just under 3 % of the annual UK pup production[6]. Pup production at Treshnish Isles also appears stable and makes up around 25 % of the SMU's production (SCOS, 2022). The Treshnish Isles is not a key haul out in the SMU accounting for less than 5 % of the SMU count. The latest assessed site monitoring condition for grey seal at Treshnish Isles SAC (in 2014) is 'favourable maintained'[7].

Collision with turbine blades leading to injury or death

The deployment and operation of a tidal device in the water column presents a potential collision risk for grey seals that may be present in the area. The Project comprises a single SwimmerTurbine™ tidal device, rated up to 70 kW, which has two blades with a rotor diameter of 5 m (a 3.28 m rotor will be used for the commissioning phase as part of a gradual step-up of operations). Collision risk modelling was undertaken by Natural Power, in accordance with NatureScot guidance (Natural Power, 2024).

The predicted annual collision rate for grey seal for a 5 m diameter rotor using a 98 % avoidance rate is:

- Grey seal: 0.02 (C.I: 0.01 – 0.03) collisions per year.

The predicted annual collision rate for grey seal for a 3.28 m diameter rotor using a 98 % avoidance rate is:

- Grey seal: 0.01 (C.I: 0.01 – 0.02) collisions per year.

The worst-case scenario (predicted collision of 0.02 grey seals per year for the 5 m diameter rotor) is equivalent to one collision every 50 years.

The Permitted Biological Removal (PBR) value for grey seals for the West Scotland Seal Management Unit (SMU) is 933 (SCOS, 2022). The predicted collision risk of 0.02 grey seals per year constitutes just 0.002 % of the allowable take suggested by the PBR value.

Entanglement in mooring lines or cables leading to injury or death

The device mooring will comprise a single mooring line that attaches the device, which is mid-water buoyant, to a single gravity anchor on the seabed. The device mooring is a combination of steel rope (~38 mm diameter) and chain (130 mm diameter). The chain section will be attached to the clump weight and fixed onto the steel rope which will in turn be attached to the device

A relative risk assessment for entanglement has been undertaken as outlined in Benjamins *et al*., (2014). The Project's mooring configuration comprising of a taut mooring line of chain and steel rope presents a relatively low risk of entanglement to grey seals.

Technical monitoring of the SwimmerTurbine™ will be undertaken for operational purposes using equipment installed on the device with outputs monitored in real time using cloud-based communications. Remote sensors on the device will be used to monitor pitch and roll and accelerometers will be used to identify any movement. Using an inertial/GPS system

[6] Treshnish Isles - Special Areas of Conservation (jncc.gov.uk)

[7] https://sitelink.nature.scot/site/8398

for the device the movement of the device will be monitored, and an alert will be triggered if the system moves outside of the operational parameters. The control system will have a shock sensor for the purpose of giving indication should an object strike the device. These systems will allow FMP to detect any changes or failings in the mooring or any entanglement event should it occur and enable any necessary inspections or retrieval operations to be actioned as soon as possible. In the highly unlikely event that any of the key device components should become detached from their substructure, an alarm will immediately be sent to the operator on duty who will co-ordinate retrieval operations.

2.3.4 Inner Hebrides and the Minches SAC

Conservation objectives

The conservation objectives of Inner Hebrides and the Minches SAC are:

1. To ensure that the Inner Hebrides and the Minches SAC continues to make an appropriate contribution to harbour porpoise remaining at favourable conservation status.
2. To ensure for harbour porpoise within the context of environmental changes, that the integrity of the Inner Hebrides and the Minches SAC is maintained through 2a, 2b and 2c:
    a. Harbour porpoise within the Inner Hebrides and the Minches are not at significant risk from injury or killing.
    b. The distribution of harbour porpoise throughout the site is maintained by avoiding significant disturbance.
    c. The condition of supporting habitats and the availability of prey for harbour porpoise are maintained

Of these, one conservation objective is relevant to the Project and is considered in the Project's effect on site integrity:

- to ensure that harbour porpoise are not at significant risk from injury or killing

Baseline conditions

The Inner Hebrides and the Minches SAC is designated to protect harbour porpoise on the west coast of Scotland and provides protection to approximately 32 % of the harbour porpoise population found on the west coast of Scotland (NatureScot, 2020). The feature condition for harbour porpoise in the SAC is assessed as 'Favourable' in 2018 (NatureScot, 2020). The number of harbour porpoise using the site is likely to vary as this is a wide-ranging species and there is likely to be a lot of movement of animals in and out of the site therefore there is not a population estimate for the site (NatureScot, 2020).

Collision with turbine blades leading to injury or death

The deployment and operation of a tidal device in the water column presents a potential collision risk for harbour porpoise that may be present in the area. The Project comprises a single SwimmerTurbine™ tidal device, rated up to 70 kW, which has two blades with a rotor diameter of 5 m (a 3.28 m rotor will be used for the commissioning phase as part of a gradual step-up of operations). Collision risk modelling was undertaken by Natural Power, in accordance with NatureScot guidance (Natural Power, 2024).

The predicted annual collision rate for harbour porpoise for a 5 m diameter rotor using a 98 % avoidance rate is:

- Harbour porpoise: 0.23 (C.I: 0.05 – 0.44) collisions per year.

The predicted annual collision rate for harbour porpoise for a 3.28 m diameter rotor using a 98 % avoidance rate is:

- Harbour porpoise: 0.12 (C.I: 0.03 – 0.24) collisions per year.

The worst-case scenario (predicted collision of 0.23 harbour porpoises per year for a 5 m diameter rotor) is equivalent to one collision every 4.3 years.

For harbour porpoise, the site lies within the West Scotland cetacean Management Unit (MU). The population estimate for harbour porpoise within the West Scotland MU is 28,936 (21,140 – 39,608) (IAMMWG, 2023). The predicted collision risk of 0.23 harbour porpoise fatalities per year would represent less than 0.001 % of the total population within the West Scotland MU.

Entanglement in mooring lines or cables leading to injury or death

The device mooring will comprise a single mooring line that attaches the device, which is mid-water buoyant, to a single gravity anchor on the seabed. The device mooring is a combination of steel rope (~38 mm diameter) and chain (130 mm diameter). The chain section will be attached to the clump weight and fixed onto the steel rope which will in turn be attached to the device.

A relative risk assessment for entanglement has been undertaken as outlined in Benjamins *et al.*, (2014). The Project's mooring configuration comprising a taut mooring line of steel rope and chain for anchoring the device presents a relatively low risk of entanglement to harbour porpoise.

Technical monitoring of the SwimmerTurbine™ will be undertaken for operational purposes using equipment installed on the device with outputs monitored in real time using cloud-based communications. Remote sensors on the device will be used to monitor pitch and roll and accelerometers will be used to identify any movement. Using an inertial/GPS system for the device, the movement of the device will be monitored, and an alert will be triggered if the device moves outside of the operational parameters. These systems will allow FMP to detect any changes or failings in the mooring or any entanglement event should it occur and enable any necessary inspections or retrieval operations to be actioned as soon as possible. In the highly unlikely event that any of the key device components should become detached from their substructure, an alarm will immediately be sent to the operator on duty who will co-ordinate retrieval operations.

2.4 STAGE 5: CAN IT BE ASCERTAINED THAT THE PROPOSAL WILL NOT ADVERSELY AFFECT THE INTEGRITY OF THE SITE?

2.4.1 Collision with turbine blades leading to injury or death

South-East Islay Skerries SAC

The worst case predicted collision risk of 0.13 harbour seals per year (at 98 % avoidance) for a 5 m diameter rotor is 0.016 % of the population of South-East Islay Skerries SAC. Count data indicates that abundance is increasing at the SAC which suggests the site continues to be maintained in favourable condition. The predicted collision risk of 0.13 harbour seals per year constitutes just 0.014 % of the allowable take suggested by the PBR value for West Scotland SMU. The risk of collision from the Project is sufficiently low that the conservation objective 'to maintain the population of the species as a viable component of the site' will not be undermined. It can therefore be concluded that there will be **no adverse effects on site integrity** for South-East Islay Skerries SAC.

Treshnish Isles SAC

The worst case predicted collision risk of 0.02 grey seals per year (at 98 % avoidance) for a 5 m diameter rotor is 0.0125 % of the population of Treshnish Isles SAC, based on the latest count (2018). Count data indicates that abundance and pup production are currently stable at Treshnish Isles SAC. The predicted collision risk of 0.02 grey seals per year constitutes just 0.002 % of the allowable take suggested by the PBR value for West Scotland SMU. The risk of

collision from the Project is sufficiently low that the conservation objective 'to maintain the population of the species as a viable component of the site' will not be undermined. It can therefore be concluded that there will be **no adverse effects on site integrity** for Treshnish Isles SAC.

Inner Hebrides and the Minches SAC

The worst case predicted collision risk of 0.23 harbour porpoise fatalities per year (at 98 % avoidance) for a 5 m diameter rotor would represent less than 0.001 % of the total population within the West Scotland MU. The rate of predicted collision is well below 1 % of the total population of the West Scotland MU therefore it can be concluded that the predicted collision risk is sufficiently low that the conservation objective 'to ensure that harbour porpoise are not at significant risk from injury or killing' will not be undermined. It can therefore be concluded that there will be **no adverse effects on site integrity** for Inner Hebrides and the Minches SAC.

2.4.2 Entanglement in mooring lines or cables leading to injury or death

South-East Islay Skerries SAC

The risk of entanglement resulting from the Project presents a relatively low risk of entanglement to harbour seals. The monitoring measures that will be implemented to monitor the device for operational purposes will ensure that an entanglement event is rapidly identified in the highly unlikely event should one occur. It can be concluded that the entanglement risk is sufficiently low that the conservation objective 'to maintain the population of the species as a viable component of the site' will not be undermined. It can therefore be concluded that there will be **no adverse effects on site integrity** for South-East Islay Skerries SAC.

Treshnish Isles SAC

The risk of entanglement resulting from the Project presents a relatively low risk of entanglement to grey seals. The monitoring measures that will be implemented to monitor the device for operational purposes will ensure that an entanglement event is rapidly identified in the highly unlikely event should one occur. It can be concluded that the entanglement risk is sufficiently low that the conservation objective 'to maintain the population of the species as a viable component of the site' will not be undermined. It can therefore be concluded that there will be **no adverse effects on site integrity** for Treshnish Isles SAC.

Inner Hebrides and the Minches SAC

The risk of entanglement resulting from the Project presents a relatively low risk of entanglement to small cetacean species such as harbour porpoise. The monitoring measures that will be implemented to monitor the device for operational purposes will ensure that an entanglement event is rapidly identified in the highly unlikely event should one occur. It can be concluded that the entanglement risk is sufficiently low that the conservation objective 'to maintain the population of the species as a viable component of the site' will not be undermined. It can therefore be concluded that there will be **no adverse effects on site integrity** for Inner Hebrides and the Minches SAC.

3 REFERENCES

Benjamins, S., Harnois, V., Smith, H.C.M., Johanning, L., Greenhill, L., Carter, C. and Wilson, B. (2014). Understanding the potential for marine megafauna entanglement risk from renewable marine energy developments. Scottish Natural Heritage Commissioned Report No. 791.

IAMMWG. (2023). Review of Management Unit boundaries for cetaceans in UK waters (2023). JNCC Report 734, JNCC, Peterborough, ISSN 0963-8091.

Natural Power (2024) Marine Mammal Collision Risk Modelling Sound of Islay. Report for FMP.

NatureScot, (2020). Conservation and Management Advice: Inner Hebrides and the Minches SAC. 2020. NatureScot.

Special Committee on Seals (SCOS) (2022). Scientific Advice on Matters Related to the Management of Seal Populations: 2022.