

Preface

This Environmental Statement accompanies the application by ScottishPower Renewables (UK) Ltd to the Scottish Government, Marine Scotland for the construction and operation of a marine tidal array named the Sound of Islay Demonstration Tidal Array.

The Environmental Statement has been prepared by Royal Haskoning and ScottishPower Renewables UK Ltd and comprises the following:

- Non Technical Summary;
- Environmental Statement Volume 1: Environmental Statement; and
- Environmental Statement Volume 2: Technical Appendices.

Copies of the Environmental Statement can be viewed at:

Argyll and Bute, Islay, Council Office, Jamieson Street, Bowmore, Isle of Islay, PA43 7HP.

and

Islay Energy Trust, Custom House, Main Street, Bowmore, Isle of Islay, PA43 7JJ.

and

Jura Servicepoint, Schoolhouse, Craighouse, Isle of Jura, PA60 7XG.

and

The Scottish Government Library, Saughton House, Broomhouse Drive, Edinburgh, EH11 3XD.

Copies of the Environmental Statement including the Non Technical Summary can be obtained from ScottishPower Renewables by calling 0141 568 2153 at a cost of £300, CD's are also available at a cost of £20, whilst the Non Technical Summary is available separately free of charge.

Or by writing to:

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1.0 Introduction

1.1 This document provides a Non Technical Summary (NTS) of the Environmental Statement (ES) produced in support of the consent application process for the Sound of Islay Demonstration Tidal Array, hereafter known as the Development. The ES is the formal report of an Environmental Impact Assessment (EIA) undertaken by ScottishPower Renewables (SPR), into the potential impacts of the construction, operation and eventual decommissioning of the Development.

1.1 ScottishPower Renewables (UK) Limited

1.2 The Development will have a capacity of up to 10MW of renewable power for export to the grid and will contribute to meeting the Scottish Government's targets of providing 50% of Scotland's electricity generation from renewable sources by 2020.

1.3 The Development will consist of up to 10 pre-commercial submerged tidal stream-generating devices.

1.2 Project Details

1.4 The Development will be subject to the required Consents and Licenses being obtained. It will be the first of its kind and should be considered to be a 'Demonstration Tidal Array'.

1.5 The location of the Development and proposed layout of individual turbines is shown in Figure 1.

1.6 The proposed project will see ten 1MW devices installed in deep water (>48m) on an area of the seabed within the Sound of Islay, just south of Port Askaig. These will then be linked by seabed cable (indicated on Figure 1) to Jura, to connect to the grid (via a substation; indicated on Figure 1).

1.7 Flow modelling has been carried out in the Sound of Islay and this has been used to inform the design of the turbine layout. The ten turbines will be arranged so that they are spread out in four rows, the split being 2/2/3/3 from north to south of the Sound. The flow modelling work has determined that the optimum spacing for the turbines at this location is in the order of 1.5 diameters laterally and 20 diameters downstream.

1.8 Hammerfest Strøm UK (HSUK) is currently developing a 1MW demonstration tidal stream generating device to be deployed in Scotland, initially at the EMEC test facility on Orkney. This work builds on the development work undertaken for the Hammerfest Strøm AS device in Norway where a 300kW scale device has been successfully designed, built and operated for approximately 4 years.

1.9 The HS device is a fully submerged, bottom mounted, rotor, variable pitch turbine, similar in arrangement to a horizontal axis wind-turbine. The nacelle houses the turbine, gearbox, generator and associated components. The nacelle is attached to the tripod support structure and does not yaw like a traditional wind turbine. Figure 2 provides an illustration of the device.

1.10 The pitch of the rotors is variable, to present the most efficient angle of incidence to the oncoming flow, thereby generating the maximum energy from the flow at any given flow speed. When the tide reverses, the rotors alter pitch so that the turbine can extract energy from the flood, as well as the ebb tide. The turbine rotates in the opposite direction on the ebb tide.

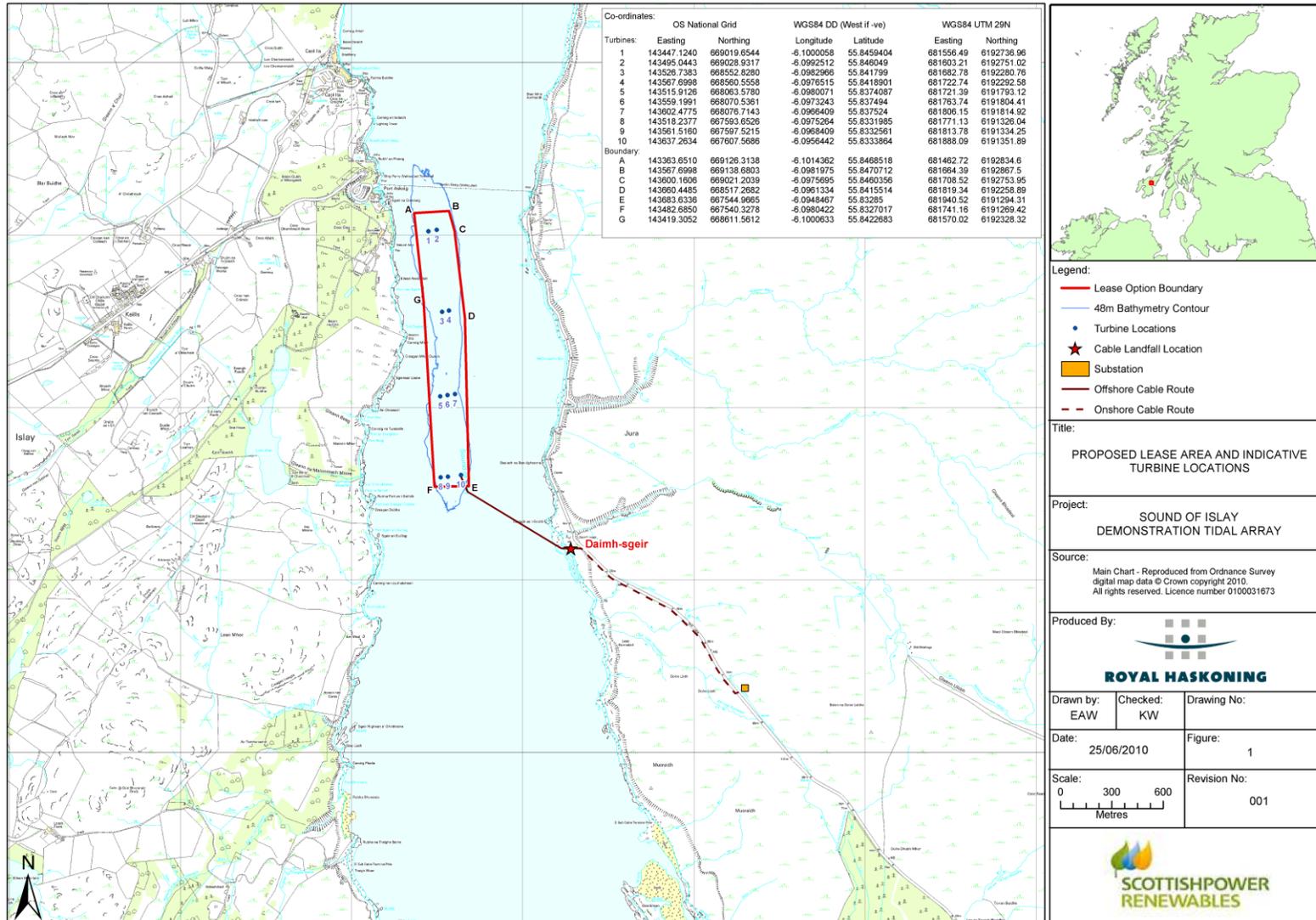


Figure 1: Proposed Lease Area and Indicative Turbine Locations



Figure 2: A schematic of the 300kW device

- 1.11 The tripod support structure dimensions are 15m (W) x 22m (L) and the nacelle will sit on the substructure with a hub height of 22m from the seabed.
- 1.12 A rotor diameter of 23m will give the device a total height from the seabed of approximately 33.5m. The siting of the devices in areas that have a minimum water depth of 48m will ensure that there is sufficient clearance draught to enable vessels to use the Sound unaffected by the turbines.
- 1.13 A tripod base, fixed to the seabed using gravity ballast in the legs, will support the nacelle and the rotor structure. Deployment of the Development in the Sound of Islay will allow tidal array deployment in a relatively sheltered environment, providing learning that will assist in developing effective procedures for installation of the devices in more energetic marine environments, such as the Pentland Firth.
- 1.14 The 1MW device to be used in the Sound of Islay is being designed to have a generating voltage of 6.6kV. The site will have up to 2 subsea cables laid from the array to the selected landfall point onshore. Subsea cables will also be used to connect the turbines together. The preferred cable landing site is on Jura as shown in Figure 1.

1.3 The Need for Renewable Energy

- 1.15 The central aim of UK Government energy policy is to establish a supply of energy that is diverse, sustainable, secure and is offered at competitive prices. Key to this goal is an 80% reduction of carbon dioxide (CO₂) emissions by 2050 (Section 1 of the Climate Change Act 2008). The development of renewable energy plays a primary role in UK Government strategy for carbon reduction and has set a target that 20% of the UK's electricity supply should come from renewable sources by 2020 (Energy Review, 2006).
- 1.16 UK Government targets for renewable energy will help the UK to meet its international obligations, but also obtain greater security of energy supply through the promotion of indigenous electricity generation.
- 1.17 The Scottish Government has more ambitious targets than Westminster and is keen to achieve a target of 50% or energy from renewable sources by 2020. Plans are developing to ensure that marine renewable energy sources wave, tidal and offshore wind will make a full contribution to meet this target.

2.0 Regulatory Requirements and the Environmental Impact Assessment Process

2.1 Regulatory Consents

2.1 A number of consents are required for the construction and operation of the Development. The Marine Scotland Licensing Operations Team (LOT) is leading the consents process.

2.2 SPR has applied for the following key consents:

- Consent under Section 36 of the Electricity Act 1989 to construct and operate the tidal array, including all ancillary infrastructure;
- Licence under Section 5 of the Food and Environment Protection Act (FEPA) 1985 to deposit materials such as the turbine foundations and the subsea cables on the seabed. Marine Scotland, which takes responsibility for protecting marine ecosystems, is the consenting authority for the FEPA licence; and
- Consent under Section 34 of the Coast Protection Act (CPA) 1949 in order to make provision for the safety of navigation in relation to the export cables.

2.2 Details of Programme

2.3 Subject to all consents for the project being received during 2011, the Development will be constructed during 2013.

2.3 The Need for Environmental Impact Assessment

2.4 The proposed Development in the Sound of Islay is subject to an EIA, as required under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000. The ES for the Development has been carried out in accordance with these regulations.

2.4 The Environmental Impact Assessment Process

2.5 EIA is a tool for systematically examining and assessing the impacts and effects of a development on the environment. The resultant ES contains:

- A description of the development, including any alternatives considered;
- A description of the existing environment at the site and surrounding areas;
- A prediction of the potential impacts on the existing human, physical and natural environment at the site and assessment of subsequent effects;
- A description of mitigation measures to avoid or reduce such effects; and
- A Non Technical Summary (This document).

2.5 Scoping and Consultation

2.6 A scoping exercise was carried out to identify the main issues that needed addressing as part of the EIA. Consultation as part of this process included statutory and non statutory bodies representing key interests and user groups on Islay and Jura and the wider area. Consultation and liaison continued throughout the EIA and is ongoing.

2.7 There have been a number of public exhibitions, consultations and meetings (including information distribution on the Islay Energy Trust Website) throughout the EIA process. Consultation has been undertaken in relation to specific receptors such as fisheries and navigation, as required.

2.6 Public opinion of the proposals

2.8 General opinion from the public has been positive with a proportionally small number of negative views. The main concern for the public has been focused on potential impacts on fisheries and perceived danger to fishery areas.

2.7 Original Data Collection and Surveys

2.9 The following surveys were undertaken as part of the EIA:

- Geophysical survey to understand the characteristics and features on the surface and subsurface of the seabed (ADCP, AWCP and geophysical);
- Drop down video survey work to establish seabed characteristics
- Metocean survey
- Land based bird and marine mammal visual observations;
- Fish surveys and observer trips on local fishing vessels;
- Activity survey of local fishermen;
- Landscape, seascape and visual impact assessment;
- Marine traffic survey;
- Archaeological assessment of both the sound and land surrounding the area; and
- Terrestrial and intertidal ecological survey.

3.0 Effects of Assessment and Mitigation

3.1 Impact identification and evaluation was carried out via a number of standard methods and techniques agreed during scoping and consultation. Due to the embryological nature of the technology there are areas where baseline information is still relatively unknown. The significance of residual effects has been assessed for each of the assessment chapters. Where possible this has been based on quantitative evidence; however, where it has not been possible to quantify effects they have been assessed qualitatively based on the best available knowledge and professional judgement.

3.2 Standardisation of the significance criteria generally leads to a common classification of the significance of effects. These are classified as Major, Moderate, Minor or Negligible. Effects are also described, where appropriate, according to whether they are Adverse, Neutral or Beneficial.

3.3 The potential impacts for each issue related to the Development have been produced with regards the following:

- Extent and magnitude of the impact (Table 1);
- Duration of the impact (short, medium or long-term);
- Nature of the impact (direct or indirect; reversible or irreversible);
- Whether the impact occurs in isolation or is cumulative in nature;
- Sensitivity of the receptor (Table 2);
- Whether the effects are positive or negative; and
- The level of mitigation that can be implemented to avoid, reduce or offset the effect.

| TABLE 1 MAGNITUDE OF IMPACT | |
|-----------------------------|--|
| Magnitude | Description |
| High | A fundamental change to the baseline condition of the receptor. |
| Medium | A detectible change resulting in the non-fundamental temporary or permanent condition of a receptor. |
| Low | A minor change to the baseline condition of the receptor (or a change that is temporary in nature). |
| Negligible | An imperceptible and/or no change to the baseline condition of the receptor. |

| TABLE 2 SENSITIVITY OF THE RECEPTOR | |
|-------------------------------------|---|
| Receptor Sensitivity | Description |
| High | Environment is subject to major change(s) due to impact. For example, sites contain features of international or national conservation or cultural designation, or permanent reduction of anthropogenic activity such as fish landings |
| Medium | Environment clearly responds to effect(s) in quantifiable and/or qualifiable manner. For example sites contain features of national or regional conservation or cultural designation, permanent modification of anthropogenic activity. |
| Low | Environment responds in minimal way to effects such that only minor change(s) are detectable. For example sites of local conservation or cultural value or temporary modification of anthropogenic activity. |
| Negligible | Environment responds in minimal way to effect such that only minor change(s) are detectable. For example sites contain features of local interest, little or no change to anthropogenic activity. |

3.4 Sensitivity criteria can be based both on the degree of environmental response to an impact, as well as the ‘value’ of the receptor. The sensitivity for each impact is determined by consideration of at least one of the following points:

- Comparison with Regulations or standards e.g. British Standards;
- Compliance with policy, plans and guidance documents e.g. Local Plan;
- Reference to criteria such as protected species, designated sites and landscapes;
- Consultation with stakeholders; and
- Experience and professional judgements by specialists on environmental sensitivity.

3.5 A detailed description of the criteria used to assess sensitivity or value for each receptor is provided in the relevant assessment chapter.

3.6 By combining the magnitude of the impact and the sensitivity of the receptor in a matrix (Table 3) the final significance of the effect (prior to the implementation of mitigation measures) can be obtained. It should be noted that any residual effect (the effect after the implementation of mitigation) which remains at the level of ‘Moderate’ or ‘Major’ is still regarded by the EIA Regulations as being significant.

| TABLE 3 IMPACT SIGNIFICANCE MATRIX | | | | |
|---|-----------------------------|------------|---------------|-------------|
| Magnitude of Impact | Receptor Sensitivity | | | |
| | Negligible | Low | Medium | High |
| High | No significant effect | Moderate | Major | Major |
| Medium | No significant effect | Minor | Moderate | Major |
| Low | No significant effect | Negligible | Minor | Moderate |
| Negligible | No significant effect | Negligible | Negligible | Minor |

3.7 Due to the differences between the individual technical assessments throughout this ES there is no specific definition that can be applied. Therefore, each receptor has its own impact assessment and defines the criteria for the level of residual effect. Where it has been possible to do so this has been based upon accepted criteria, as well as by employing expert interpretation and value judgements.

4.0 Summary of Environmental Impacts

4.1 Introduction

4.1 The following sections summarise the potential environmental impacts associated with the Development, as detailed in the ES. Impacts on the following environmental parameters have been assessed, with mitigation requirements included where necessary.

4.2 Marine Fish/Shellfish

4.2 There have been no physical surveys completed for fisheries within the Sound of Islay for the Development. Data for the impact assessment is based upon data and fisheries statistics from Marine Scotland, DEFRA, CEFAS, UKOOA and the International Council for the Exploration of the Sea (ICES), with drop down video surveys completed for both the array and the proposed cable route, as well as substantial consultation with local fishermen, fishing management bodies and the local community.

4.3 The main potential impact on fish is considered to be the noise generated from construction activities, in particular from turbine placement and cable installation. The main noise production will be from DP installation vessels and workboats and the operation of machinery on the vessels themselves. The main potential receptor species identified is herring, a species of fish particularly sensitive to noise; however, sediments favoured as a spawning habitat by herring are not present in the Sound of Islay.

4.4 Potential impacts during operation of the Development include underwater noise and vibration, fish aggregating effects of the structures within the Development and the influence of electromagnetic fields on sensitive species. On assessment, all these issues are expected to be of negligible or no significant effect.

4.5 The construction methodology aims to minimise smothering effects. It is assessed that the Development will have, at worst, negligible adverse effects on marine fish and shellfish resources.

4.6 The potential for the Development to act as a physical barrier to the movement of fish is also considered and its significance is assessed as minor adverse.

4.3 Anadromous Fish

4.7 Surveys were completed for migratory and anadromous fish populations in potential natal rivers adjacent to the Sound of Islay in particular for salmonids (sea trout and salmon).

4.8 Local salmon fishery associations were consulted alongside Marine Scotland (Pitlochry) to ensure all viable records about migratory and anadromous populations were considered.

4.9 There is no evidence to suggest that anadromous fish use or transit the waters of the Sound of Islay. Furthermore, survey has shown that watercourses on Islay and Jura adjacent to the Development have limited potential to support anadromous fish populations. A precautionary approach to assessment has been taken, and it has been assumed that migratory fish species do make use of the Sound, although the Sound is not considered to be a site of particular importance for anadromous fish.

4.10 Few studies have considered specifically the effects of offshore renewables installations on anadromous fish species. However, available information has been reviewed and indicates that any effects on such species would be negligible.

4.4 Elasmobranchs

- 4.11 The proposed Development is unlikely to significantly impact elasmobranchs overall.
- 4.12 Collision could theoretically impact basking sharks and although the potential magnitude of this impact is considered to be low, given the high importance of this species, the significance of this effect has been assessed as moderate. All other impacts have been assessed as being of negligible significance.
- 4.13 To manage potential impacts and inform mitigation post installation monitoring for elasmobranchs could be combined with marine mammal monitoring. Whilst no mitigation is planned at this stage of the Development, monitoring will allow the significance of collision risk to be continually assessed and if required, appropriate collision mitigation will be implemented.

4.5 Ornithology

- 4.14 Under the terms of the EIA regulations it is concluded that the likely effects of the proposed development on all bird species are not significant. The available information indicates that the Development will not, either alone or in combination, have a significant effect on any classified or proposed SPAs. Disturbance to important assemblages of birds is considered as negligible with appropriate mitigation in place through all phases of the development.

4.6 Commercial Fisheries

- 4.15 There has been extensive consultation completed with local fisherman regarding the Development.
- 4.16 Due to the nature of the local physical environment, commercial fishing within the Sound of Islay is limited to the use of static gears. Fishing for crustacean species such as velvet swimming crab, brown crab, and lobster is practiced by approximately 10 fishing vessels, with concentrated effort occurring during the winter and spring months.
- 4.17 Concerns from local fishermen focused on loss of fishing area and navigational issues relating to entanglement and loss of boats and equipment. (Navigation is considered within a separate Navigational Safety Risk Assessment). Impacts of the proposed Development are deemed to range between minor adverse and minor beneficial levels providing the appropriate mitigation measures are implemented.

4.7 Terrestrial Ecology

- 4.18 The assessment of impacts on terrestrial ecology is based on two cable land fall locations at Daimh-sgeir. Except for otters and terrestrial habitat loss, significance of effect on terrestrial and intertidal receptors is assessed as negligible or no significant effect during construction, operation (including maintenance), and decommissioning of the onshore elements of the Development.
- 4.19 For otters, several feeding areas and potential holt sites have been identified within a 2km radius of the potential land fall site. Further otter surveying is proposed once the final footprint of cable landfall is confirmed to inform the need for a European Protected Species (EPS) licence from the Scottish Government should a holt or resting site be located within the footprint of the cable route. No potential resting sites have been recorded at the current proposed landfall site; however, feeding otters have been recorded there.

4.20 A worst case scenario assesses the significance of effects to otters to be moderately adverse, reduced to minor adverse with mitigation.

4.21 Approximately 1400m of cable will be routed across wet heath habitat, the dominant habitat type for the surrounding area. However, this cable route will run immediately adjacent to, and in the disturbance footprint of, an existing road that crosses the wet heath and disturbance and impacts are considered to be of minor adverse significant effect.

4.8 Transport and traffic

4.22 The Sound of Islay has a number of ferry routes which are of high importance to the local community. During construction, the Development could cause a relatively high level of disruption; however, this will be temporary, and with careful planning and mitigation, these effects can be reduced to minor / no significant effect.

4.23 The onshore traffic and transport facilities on Islay and Jura may be affected temporarily during construction. However, due to the high capacity of the roads in relation to the predicted levels of work traffic and the delivery of equipment and materials by boat directly to Jura the impacts are expected to be of negligible significant effect.

4.9 Tourism, recreation and socio-economics

4.24 The Development will bring with it minor beneficial socio-economic benefits. A small number of local jobs may be created during the construction of the project, and there will be a temporary increase in local spend associated with the installation phase, as well as ongoing spend associated with operation and maintenance.

4.25 SPR is working with the IET to maximise the potential benefits to the local community. This includes identifying opportunities for local businesses and liaising with stakeholders to minimise the impacts.

4.26 Tourism and recreation are vitally important to the economy and the communities of Islay and Jura. The Development is not expected to have any significant long term adverse effect on existing marine and coastal activities, or on visitor numbers / visitor experiences. Any negative effects will be short-term and limited to the construction phase. With mitigation, the significance of effect is assessed to be at worst minor adverse during construction and negligible during operation.

4.27 The Development will create a new attraction for Islay and Jura, increasing the islands' profiles for renewable energy and wet renewable development, with assessed minor beneficial significance to tourism and the local community.

4.28 The project will supply approximately the equivalent of Islay's electricity demand on average. ScottishPower has an agreement with Diageo to supply electricity to three of their facilities on Islay; namely the distilleries at Caol Ila and Lagavulin, and the malting at Port Ellen.

4.10 Munitions and Military

4.29 The Development is located outside of any designated military areas and submarines are not expected to use the site. During construction there may be minor disruption to military vessels operating near the Sound of Islay in adjacent PEXAs; however, ongoing communication with the Defence Estates and subsequent scheduling of works at the tidal site will ensure coordination of any potentially conflicting activities. The implementation of the safety procedures identified in the Navigational Safety Risk Assessment will reduce the significance of effects to negligible.

4.30 There are no known unexploded munitions within or near to the Sound of Islay. It is also unlikely that munitions from official disposal sites could migrate into the Sound of Islay, with the nearest site over 100 km away. Should any unexpected munitions be encountered at the Development the works will cease, contractors will leave the site and MoD and emergency services will be consulted as necessary. The significance of effect here is assessed as negligible.

4.11 Air Quality

4.31 Air quality impacts are only likely to arise during construction / decommissioning of the onshore works, based on impact to sensitive receptors (i.e. points where the public are likely to be regularly present and exposed for a period of time). The local population living close to the area where the cable will come ashore is minimal, with only 2 residences located close to the Feolin – Port Askaig ferry terminal. It is anticipated that the increase in traffic on the local road network and dust emissions during construction will be of negligible significance.

4.32 Machinery used in the onshore construction phase could cause an impact on air quality in the immediate vicinity of the works; however, the impacts will be local and short term lasting for the duration of construction only. They are assessed as being of negligible significance.

4.12 Physical Processes

4.33 The physical environment and coastal processes within the study area is dominated by strong tidal flows through the Sound of Islay, the form of which is the result of previous glacial activity and subsequent sub-aerial weathering and erosion, leading to the landscape today.

4.34 The impacts of the Development on the physical environment and coastal processes are deemed to be of negligible significance due to the limited scale of the footprint of the array, and the low amount of energy that is to be extracted during operation.

4.35 Changes due to the presence of the seabed structures are considered to be less than those experienced due to the natural variation in both the seabed and shoreline. The Development will have a negligible significant effect on the hydrodynamic sedimentary regime within the Sound of Islay.

4.13 Benthic Ecology

4.36 A number of surveys were carried out to characterise the biological environment of the site, and in and around Sound of Islay. The site was typical of the region and characterised by patches of coarse gravel and rocky substrate with typical species and plants found within the site. No species of conservation significance were present, and those species present are considered to be well adapted to living in a dynamic, high energy environment. The intertidal areas within the vicinity of the proposed cable landfall locations are a mixture of solid bedrock and steeply inclined boulder and gravel beaches typical of the high energy environment.

4.37 Indirect impacts from sediment disturbance and smothering resulting from construction activities are considered to be of negligible significance, species found within the Sound of Islay are common to this part of Scotland and tolerant of high energy environments.

4.38 Post construction there is the potential for habitat alteration to occur around the foundation structures. Foundations are expected to be readily colonised by local species from adjacent areas and may cause a localised increase in biodiversity, feeding opportunities and refuge habitats for a range of species.

4.39 The direct impact on habitats and species through the installation of foundation structures, subsea cables and associated infrastructure are considered to be of short term duration and negligible significance.

4.14 Marine mammals

4.40 The Inner Hebrides are known to support a range of marine mammals including harbour porpoise, species of whale and common and grey seal. Whilst not considered common in comparison to other areas of the UK, there have been infrequent recordings of marine mammals in the vicinity of Sound of Islay. Low numbers suggest that the Sound of Islay is not highly significant to populations of marine mammals.

4.41 There will be effects caused by impacts from noise and vibration during construction and operation. In general these potential effects are considered to be minor or negligible, but when considering collision risk and possible barrier effects they are assessed as moderate (reduced to minor with implementation of the proposed deploy and monitor strategy discussed below) as a result of unknowns regarding the Development and the associated behaviour of marine mammals.

4.42 There is potential for disturbance to European Protected Species (EPS) and any deployment would require granting of a licence to disturb.

4.43 A deploy and monitor strategy will be developed to support the deployment, with the following key components:

- Application for a license to disturb marine mammals to Marine Scotland;
- Establishment of key monitoring questions relating to the deployment and anticipated potential effects on marine mammals; and
- Commitment by SPR to put in place any mitigation reasonably required by the results of monitoring.

4.44 SPR is in consultation with SNH and Marine Scotland on the development of both monitoring and mitigation measures.

4.15 Onshore Noise

4.45 Noise effects may arise from machinery involved in the excavation of the cable landfall. Impacts through elevated noise levels during installation of the onshore works have been assessed as temporary in nature and short term. Noise impacts could affect local receptors around the landfall site during construction; however, the proposed landfall locations are distant from any locally substantial areas of population, with no residents around the landfall location.

4.46 Due to the distance offshore of the Development there will be minimal impact from the offshore construction activity or operation on residents.

4.47 Delivery of materials for the onshore construction works may pass close to a small number of residential properties at the Jura site. Mitigation measures will be put in place to reduce noise impacts and an overall impact of negligible significance is predicted.

4.16 Water and Sediment Quality

- 4.48 There has been limited anthropogenic input to the environment within the Sound of Islay, which combined with the high energy environment and lack of sedimentary substrate that has the potential to hold contaminants have led to a reasonable assumption that sediment quality is good.
- 4.49 From extensive water quality monitoring carried out by SEPA, water quality in the Development site is good. The main impacts from the proposed Development would relate to accidental spillages of materials during construction, operation (including maintenance) and decommissioning. The magnitude of potential spills within the Sound is assessed as being low, in a medium sensitivity environment, resulting in impacts assessed as minor significance. Similar impacts were predicted for construction, operation and decommissioning. Current best practice will be adhered to for site management such as CIRIA Guidance note C650 or SEPA PPG5. The environment of the Sound is such that even if small spillages occur materials will be quickly dispersed and be of very minor significance.

4.17 Landscape, Seascape and Visual Impact Assessment

- 4.50 The Sound of Islay covers a range of different landscape and seascapes, from high moorland plateau to coastal ridges, and the Isle of Jura is designated as a National Scenic Area (NSA).
- 4.51 There would be a moderate significant effect on views from the Dunlossit Estate on Islay, the Kennacraig to Port Askaig ferry and from the Jura road south of Feolin during construction. However, these impacts would be temporary lasting approximately 3 months. There would be no significant impacts on views during the operational phase.
- 4.52 In terms of designations the proposal would not compromise the objectives of the NSA designation (which are taken to be the special qualities identified in Scotland's Scenic Heritage and new work recently undertaken by SNH) or the overall integrity of the Jura NSA. There would be no significant effect on the Area of Panoramic Quality.

4.18 Shipping and Navigation

- 4.53 A Navigational Safety Risk Assessment (NSRA) was carried out to identify the impact of the Development on shipping and navigation within the Sound of Islay. Whilst not considered as a standalone chapter (being, instead, a technical appendix) it is required to be assessed due to the nature of vessel movement within the area, especially for fishing vessels.
- 4.54 The Sound of Islay is located away from the main shipping route in the area (i.e. the Minch and routes to the Atlantic and Outer Hebrides). There are a number of potential navigational risks associated with both the installation and the operational phases of Development. In particular, the NSRA found that the methodology proposed for installation, using a DP vessel, is considered to be "Tolerable with Monitoring" subject to the application of controls.
- 4.55 During operation and maintenance the risks to navigation were also considered to be "Tolerable with Monitoring".
- 4.56 Controls to be established include the development and implementation of an appropriate Safety Management System covering the construction, operation (including maintenance) and decommissioning phases of the Development.

4.57 The area of the Development will be charted appropriately subject to a review of the issues involved with the UKHO. Individual devices or sub arrays will also need to be charted appropriately, subject to the limitations of the scale of the chart, and the need to avoid congestion of information.

4.58 Application will also be made for the area containing the array to be designated and charted as a “No Fishing and No Diving” area.

4.19 Cultural Heritage

4.59 An archaeological assessment was undertaken to determine the potential for submerged artefacts, wrecks and coastal remains within the area of the Development and wider Sound of Islay, using geophysical data. A number of wrecks were identified, but none were within the Development site.

4.60 All relevant cultural heritage assets known have been identified and the potential for unknown remains also discussed. Five distinct impacts of negligible to major significance have been identified. Mitigation has been outlined which is considered to completely mitigate residual impacts, and which has the potential to result in positive impacts in some cases.

5.0 Conclusion

- 5.1 Overall, with implementation of the stated mitigation measures by SPR, combined with ongoing dialogue with interested stakeholders and the Regulatory Authorities, it is predicted that Sound of Islay should not have any unacceptable long term impacts.
- 5.2 For some key potential impacts, particularly relating to marine mammals and some elasmobranchs, the establishment of a 'deploy and monitor' strategy is proposed. Key elements of this strategy will be application for a licence to potentially disturb European Protected Species (EPS), establishment of a series of monitoring measures aimed at answering key questions about behaviour of, and effects on, key receptors, a commitment to put in place any mitigation that is indicated by the results of monitoring.
- 5.3 The project will make a significant contribution to national targets for renewable energy generation and is a key project to demonstrate the potential to harness tidal power in Scotland.

6.0 Further Information

- 6.1 Copies of the Environmental Statement (ES) are available for public viewing at the following locations within normal opening times:
- Argyll and Bute, Islay, Council Office, Jamieson Street, Bowmore, Isle of Islay, PA43 7HP.
 - Islay Energy Trust, Custom House, Main Street, Bowmore, Isle of Islay, PA43 7JJ
 - Jura Servicepoint, Schoolhouse, Craighouse Isle of Jura, PA60 7XG
 - Scottish Government Library at Saughton House, Broomhouse Drive, Edinburgh, EH11 3XD.
- 6.2 Copies of the Environmental Statement may be obtained from: ScottishPower Renewables (UK) Limited (Tel: +44 141 568 2153) at a charge of £300 for a hard copy and £20 on CD (as PDF files for screen viewing only). Copies of a short non-technical summary (NTS) are available free of charge.