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ISLES II: TOWARDS IMPLEMENTATION

# SUSTAINABILITY APPRAISAL

Sub report

Post Approval Statement

June 2015



Department of

**Enterprise, Trade  
and Investment**

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**The Scottish  
Government**  
Riaghaltas na h-Alba

# ISLES II: TOWARDS IMPLEMENTATION

## Sustainability Appraisal Sub report

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#### ISLES Project

The ISLES project is supported by the European Union's INTERREG IVA Programme, managed by the Special EU Programmes Body. The project partners and co-funders are the Scottish Government, Department of Enterprise, Trade and Investment (DETI), Northern Ireland and the Department of Communications, Energy and Natural Resources (DCENR) Ireland.

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#### Consultants

The ISLES Spatial Plan and Sustainability Appraisal reports have been produced for the ISLES project partners by AECOM and ABPmer. The Plan includes Locational Guidance that will be used to inform and promote the development of a sub-sea electricity network and associated renewable energy projects in manner that avoids or reduces effects on the environment and marine resources.

AECOM is a global provider of professional technical and management support services to a broad range of markets, including environmental, energy, water, transportation, facilities and government. AECOM's purpose is to enhance and sustain the world's built natural and social environments for the clients and the communities that they serve. ABPmer is a leading marine environmental consultancy with particular expertise in offshore renewables and marine cables.

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# 1 Introduction

## 1.1 Introduction

This Sustainability Appraisal Post Approval Statement of the ISLES Spatial Plan has been prepared on behalf of the three ISLES Partner Organisations:

- the Scottish Government,
- the Department of Enterprise, Trade and Investment in Northern Ireland (DETI), and
- the Department of Communications Energy and Natural Resources in Ireland (DCENR).

The report explains how the key findings from the Sustainability Appraisal and responses from consultation have been taken into account in the preparation of the final Plan; and includes proposals for monitoring the implementation of the Plan.

## 1.2 The ISLES Spatial Plan

The Irish-Scottish Links on Energy Study (ISLES) is a major initiative designed to facilitate and encourage the development of interconnected grid networks to enhance the integration of marine and offshore renewable energy between the three ISLES partner countries Scotland, Northern Ireland and Ireland.

Each of the three partner administrations has significant potential for offshore wind, wave and tidal energy generation. However, planning and licensing, market and regulatory complexities between the three jurisdictions act as a potential challenge to joint development. ISLES is designed to smooth the pathway to future development of high-quality, efficient, renewable energy developments.

The Scottish Government is lead administrative partner for ISLES in collaboration with DCENR and DETI. The ISLES objectives align closely with the EU ambition of increasing renewable energy generation capacity and interconnection.

The Draft ISLES Spatial Plan was published on 2 February 2015 together with the Sustainability Appraisal and subject to a 10 week period of consultation. The results of consultation activities are summarised in Chapter 2 of this report below.

## 1.3 Sustainability Appraisal

The Sustainability Appraisal considers the potential social, economic and environmental effects of the ISLES Spatial Plan.

Under the Marine and Coastal Access Act 2009 (which applies to Scotland and Northern Ireland) any qualifying marine plan should be subject to a sustainability appraisal covering environmental, social and economic issues. The environmental component is also required under the SEA Directive/Regulations which apply across all three jurisdictions<sup>1</sup>. In addition, a Habitats Regulations Assessment (HRA) is required under the Habitats Directive (92/43/EEC).

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<sup>1</sup> The process of SEA was introduced under the European Directive 2001/42/EC 'the assessment of certain plans and programmes on the environment', commonly referred to as the SEA Directive. The SEA is being undertaken in accordance with national SEA Regulations which transpose this Directive:

- Scotland: Environmental Assessment (Scotland) Act 2005 and The Environmental Assessment of Plans and Programmes Regulations 2004.
- Northern Ireland: The Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004.
- Ireland: S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 as amended by S.I. No. 200 of 2011 (European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011).

In order to meet legislative and regulatory requirements, and to integrate the various studies, the SA is therefore made up of three separate but related assessments:

- Strategic Environmental Assessment (SEA)
- Habitat Regulations Assessment (HRA)
- Socio-economic Impact Assessment (SEIA)

## 1.4 Approval and Adoption of the ISLES Spatial Plan

The ISLES Spatial plan is not being formally adopted at this stage. The title of this report reflects the approval of the ISLES Spatial Plan by the ISLES Steering Committee made up of representatives of the three Partner countries.

The reasons for this approach are set out in Section 4.2 of the Plan. The three jurisdictions have different approaches to using the information contained in the Plan. Only the Scottish Government is proposing that the ISLES Spatial Plan to be integrated into emerging marine planning policy. In Ireland the Plan will not be automatically adopted, but will instead provide important guidance and advice for future policy development. Similarly, in Northern Ireland the Plan will not be adopted but will assist potential investors with their investment decisions.

## 1.5 SA Post Approval Statement Requirements and Report Structure

As required by Directive 2001/42/EC 'Assessment of Certain Plans and Programmes' (SEA Directive) and national regulations referred to in Section 1.3 above the SEA Post Approval Statement includes the following information:

- how environmental considerations have been integrated into the plan or programme;
- how the environmental report has been taken into account;
- how the opinions expressed in response to the invitations have been taken into account;
- how the results of any consultations have been taken into account;
- the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and
- the measures that are to be taken to monitor the significant environmental effects of the implementation of the plan or programme.

In addition, comments on the HRA and SEIA are provided in this document in order to provide coverage of all aspects of the Sustainability Appraisal.

## 1.6 Structure of SA Post Approval Statement

The SEA Post Approval Statement is structured to summarise all the information described in Section 1.5 above.

- **Chapter 1: Introduction**
- **Chapter 2: Consultation**
- **Chapter 3: Incorporating the Findings from the SEA into the Plan**
- **Chapter 4: Consideration of Alternatives**
- **Chapter 5: Monitoring Framework**

## 2 Consultation

### 2.1 Introduction

The Draft Plan and Sustainability Appraisal were published on 2 February 2015 and posted on the ISLES website <http://www.islesproject.eu/isles-ii/>

The consultation period was 10 weeks. During the consultation period workshops were held in:

- Belfast on 4 March 2015
- Dublin on 6 March 2015
- Glasgow on 9 March 2015

Meetings were also held with government officials in Isle of Man on 18 March 2015 and the Welsh Government on 19 March 2015.

### 2.2 Consultees

The organisations that attended workshop events in Northern Ireland, Ireland and Scotland are listed in the table below.

**Table 2.1 Organisations Attending Workshops**

Belfast Harbour Commissioners	Oriel Windfarm Ltd	Energy Association of Ireland	Albatern
Department of Environment Northern Ireland	Marine Renewables Industry Association	Environment Protection Agency	Mainstream
The Agri-Food and Biosciences Institute Northern Ireland (AFBINI)	Department of the Environment, Community and Local Government	Harland Wolff	Comhairle nan Eilean Siar
Royal Society for the Protection of Birds (RSPB)	ALSTOM	Marine Scotland	Northern Lighthouse Board
Sea Source	Aquafact	Department of Communications, Energy and Natural Resources (DCENR)	Scottish Enterprise
Dorans Consultants	Siemens	SSE	Scotstream Generation
Invest Northern Ireland	GA Electric	Crown Estate	Celtic Seas Partnership
Pure Marine Gen	Arthur Cox	Historic Scotland	Intertek
Queens University Belfast	Sustainable Energy Authority of Ireland (SEIA)	Scottish Government	

The organisations and individuals that submitted written comments on the Plan and/or Sustainability Appraisal are listed in Table 2.2 below.

**Table 2.2 Organisations and Individuals that Submitted Written Responses**

Scottish Environment Protection Agency (SEPA)	Environment Protection Agency	Historic England
Scottish Natural Heritage (SNH)(joint response)	DECC (Oil and Gas Environment & Decommissioning)	Private individual (one)
Joint Nature Conservation Committee (JNCC) (joint response)	Department of Agriculture Food and the Marine	Northern Ireland Environment Agency (joint response)
Historic Scotland	Department of Arts, Heritage and the Gaeltacht (marine archaeology, nature conservation)	Natural England (joint response)
SSE	Royal Society for the Protection of Birds (RSPB)	National Trust
NOW Ireland	Marine Management Organisation	Coastal Concern Alliance
Dumfries and Galloway Council	Royal Commission on the Ancient and Historical Monuments of Wales	James Hutton Institute
The Crown Estate	Natural Resources Wales	

## 2.3 Response to Consultation on the Draft ISLES Spatial Plan

Table 2.3 provides a summary of the main comments received on the draft Plan and how these comments have been taken into consideration and reflected in the finalised version of the Plan. All consultation responses (for which permission from the consultee was given to publish) are available to view at: <http://www.islesproject.eu/>

**Table 2.3 Comments on ISLES Spatial Plan**

Summary of Comments Received	Response
<b>General comments on Plan</b>	
<ul style="list-style-type: none"> <li>▪ Supportive of the overall approach taken by the ISLES Partner Organisations to establish a Spatial Plan to establish a grid for offshore renewable. The approach is deemed to be logical and comprehensive.</li> <li>▪ Recognised that the Plan offers a more efficient route to offshore renewable expansion, reducing the requirements for transmission or grid infrastructure, and therefore reduces the risk of environmental impacts.</li> <li>▪ Support given to the holistic approach to the interconnection of grid networks to enhance the integration of marine and offshore renewable energy around the Irish Sea. This approach will reduce transmission capital costs and improve economic viability of any renewable energy projects.</li> <li>▪ The Plan establishes common ground on key issues that must be considered and addressed in order to deliver a sustainable offshore renewables grid and integrate marine renewable energy between Scotland, Northern Ireland and Ireland.</li> <li>▪ Agree that the Plan is a useful tool for greater co-ordination between Partner administrations.</li> <li>▪ The objectives of the Plan are broadly supported under the principle of facilitating greater integration between energy systems and markets to further strengthen security of supply and achieve the efficient use of energy resources to the benefit of customers.</li> </ul>	Noted
<p>Comment that there is a misalignment between the Objectives of the Plan and the current situation within the Zone. The current situation for projects is unlikely to change at the scale and level of coordination described in the study within the timescales as set out in the Plan.</p>	<p>It is recognised that the current situation with respect to generation is one of attrition and there are a limited number of projects currently being promoted in the study area. However, The Plan aims to demonstrate the feasibility of ISLES as a concept but does not define specific projects or route corridors. It also considers a period to 2030 and the possibility that other projects could come forward during this period.</p>
<p>The outputs from the study are not to be used as a proxy for planning as this would result in the outputs having a greater significance than they would in a fully integrated planning process.</p>	<p>Agreed. In Section 5.3 of the Plan the following statement has been added to stress this point. <i>The Locational Guidance does not negate the need for more detailed project-specific studies as new developments come</i></p>

Summary of Comments Received	Response
Potential developers need to be made aware that further detailed assessment is needed at project level.	<i>forward but instead establishes a starting point for, and a process which could be followed to inform the development of new projects.</i>
Loch Duich, Long and Aish Marine Protection Area should be included in the assessment of Network Area 1.	Text has been updated to include references to these areas.
Concern has been raised regarding the identification of the area south of the Scottish coast in Network Area 2 is regarded as a 'generation cluster'.	As described in Chapter 5 of the Plan the generation clusters are based on where offshore and marine renewable energy projects can reasonably be expected to come forward taking account of National Plans, sector-specific plans and spatial strategies which identify areas for potential offshore wind, wave & tidal energy development as well as existing or known project-level offshore wind, wave & tidal developments.
There should be a spatial representation that combines all Environmental Features, Constraints and Routeing Opportunities for each of the Network Areas.	Given the scale of the study area and amount of data represented, overlaying all data on a single figure would not provide greater clarity.
Marine Protection Areas are wrongly labelled in the biodiversity, flora and fauna figures in the Network Areas.	Figures have been amended.
<b>Spatial coverage of Plan</b>	
<p>There are limitations in the spatial extent of the study, in that limited consideration is given to the terrestrial environment, in particular the land fall locations and onwards grid transmission issues.</p> <p>There is insufficient detail on the onwards grid transmission and capability of existing grid infrastructure to receive additional capacity, to comprehensively judge the risks that may be associated with individual projects.</p>	<p>The Plan has been updated to clarify the spatial coverage of the plan. The ISLES Spatial Plan focuses on the marine areas extending as far as the mean high water mark as this establishes the jurisdictional limits for marine planning and licensing of any offshore hubs and subsea cables which could be developed in the ISLES Zone.</p> <p>The requirement for onshore network infrastructure and its potential environmental impacts are acknowledged in the Locational Guidance. The Plan has been updated to highlight that in identifying landfall connections at the project level consideration should be given to the potential environmental effects of any onshore works which may be required to facilitate a connection to the onshore network.</p>
The largest concern in regard to sea and landscape would be from onshore grid connection infrastructure, including landfall locations which can be very large.	
Noted that the Isle of Man Government has a strategy to generate offshore power from renewable energy (offshore wind and tidal) in the Irish Sea. It is likely that there may be further economic benefit to clustering renewable energy projects to an onshore location on the Isle of Man.	The ISLES Spatial Plan is predicated on the basis of connecting generation in Scottish, Irish and Northern Irish Territorial Waters. As noted in 1.3 " <i>the waters and coastlines of England and Wales and the ISLE of Man are included for grid connection purposes</i> ", however, the nature of a multi-terminal or interconnected network is such that generation in these territorial waters could feasibly connect.
It is noted that the ISLES Zone includes waters around England, Wales and the Isle of Man, however it is unclear as to how the generation potential in these waters is	

Summary of Comments Received	Response
considered beyond the existing projects.	
<b>Policy context</b>	
<ul style="list-style-type: none"> <li>▪ The summary of the policy context is well defined and clear.</li> </ul>	Noted.
<ul style="list-style-type: none"> <li>▪ Should be noted that the Draft Sectoral Plans for Offshore Wind, Wave and Tidal Energy, in Scotland have not yet been adopted.</li> </ul>	Noted, text in Plan has been amended.
<p>A number of policy documents have been omitted from the Plan. These include:</p> <ul style="list-style-type: none"> <li>▪ National Grids' Electricity Ten Year Statement</li> <li>▪ No reference is made to Welsh planning policy beyond the Welsh National Marine Plan. Consideration should also be given to Planning Policy Wales (7th Edition, 2014) and supporting Technical Advice Notes, and Local Development Plans</li> <li>▪ Planning Advisory Service Soundness Checklist</li> <li>▪ Marine Management Organisations guide for Local Authority planners regarding marine planning</li> <li>▪ Ireland's Offshore Renewable Energy Development Plan and Plan and Project level Mitigation Measures</li> <li>▪ Comments that the Energy Union initiative needs to be considered in the Plan.</li> </ul>	Section 2 of the Plan has been updated to take account of additional policy documents in so far as they relate to the ISLES. Given the scale of the Plan the policy context has focused on national level policy.
Please note that coordination is undertaken between the Partner organisations and those in the Welsh Government developing the Welsh National Marine Plan, and Natural Resources Wales in regard to licensable marine activities.	Noted.
Noted that Ireland's Offshore Renewable Energy Development Plan and Plan and Project level Mitigation Measures may provide a useful approach to help inform the implementation of the Plan.	Noted.
<b>Spatial Planning Guidance (Chapter 3)</b>	
The proposal of the Spatial Plan to assist developers in reducing consenting risks for an interconnected transmission network is supported. The flexibility offered in the Spatial Plan to accommodate any theoretical project during the Plan period and uncertainty surrounding technology and generation deployment is also supported.	Noted.
Noted that the parameters in the Spatial Plan, particularly the Locational Guidance, provide a comprehensive coverage of the potential impacts on the marine	Noted.

Summary of Comments Received	Response
environment, and the mitigation measures to reduce or prevent any adverse impacts.	
The Locational Guidance should state that flood risk prevention measures (such as coastal defences) should be avoided.	The Locational Objective/Routeing Principle has been updated to make reference to coastal flood defences. It should be noted that the summary of the Locational Guidance presented in Section 3 advises that <i>"It is preferable to select landfall locations in less developed sections of the coast in order to avoid other infrastructure constraints but this will not always be possible. Where other assets are present for example flood defences, developers should use less intrusive installation techniques such as Horizontal Directional Drilling."</i>
It is felt that consideration should be made of sea and landscape character as well as areas of 'high amenity value' in the locational guidance to avoid areas that may be detrimentally affected by cable routes and collector hubs. The wording of areas of 'highest amenity value' should also be revised, a suggestion of which may be "... detrimentally impact on the amenity of the area".	The Locational Objective/Routeing Principle has been updated to make specific reference to landscape and seascape character.
It is noted that a number of generation clusters or land falls identified in the Plan are located within licensed oil and gas blocks. In addition is it highlighted that there is uncertainty around the location of oil and gas infrastructure as further blocks may be allocated between now and 2030.	Noted.
The ability of the Plan to provide guidance in developing an interconnected offshore electricity network is limited on account on the limited detail on the number and scale of projects considered in the SEA/ Plan and their specific locations.	The ISLES Spatial Plan has not been prepared with the aim of supporting defined projects; a flexible approach has been adopted to take account of the limited details about potential generation projects within the ISLES Zone and to allow for a number of possible development options.
Noted that there were several double-negatives within the Locational Objectives within the Spatial Plan e.g. "Avoid, as much as possible, developing offshore cable routes or positioning collector hubs in areas which would NOT detrimentally impact on commercial and recreational uses of the sea and seabed including commercial fishing and aquaculture, shipping and navigation and recreational uses."	The Locational Objectives/Routeing Principles have been corrected.
Noted that the Spatial Plan and Locational Guidance provide useful guidance for developers to facilitate future generation in a coordinated manner. It is recognised that the intention of the Locational Guidance to not replace project-specific routing/ optioneering studies or EIAs, as these are required by Regulations and should not be constrained by either the Spatial Plan or Locational Guidance.	Noted.
It is noted that although the Locational Guidance and Routeing Strategy provide an	The level of detail is proportionate to the strategic scale of ISLES Spatial

Summary of Comments Received	Response
aid to project scoping and reduce project risk, there is not sufficient detail to allow developers to judge the risks associated with individual landfall locations, or for plan makers to indicate the favour options for deploying cabling infrastructure.	Plan. The Locational Guidance does not identify specific landfall locations as it seeks to be flexible recognising the uncertainty which exists, particularly in terms of the locations of onshore network connections.
<p>Noted that Locational Influence of Landfall Locations for some Topics (Locational guidance) is regarded as being 'low'. However it is noted that the conditions at landfall are a key element for selection of a project as it has the potential to influence cable routeing.</p> <p>It is thought that the value attributed for the Locational Influence for Landscape &amp; Seascape at Landfall Locations should be revised from Low to Low-Moderate. This is thought more appropriate as it may not be possible to avoid protected sites.</p>	The Locational Guidance Influence has been updated to address this comment.
Marine Conservation Zones (MCZs) and recommended MCZs (rMCZs) should be considered.	Noted.
There should be greater emphasis to the avoidance of protected sites or habitats in regards to the siting of marine cables.	The Plan and Locational Guidance have been updated to highlight that in the first instance developers should seek to avoid protected sites or habitats, however, it recognises that the in some instances avoidance may not be possible and alternative approaches to mitigation are set out.
<b>Chapter 4 Actions</b>	
<p><b>Action1: Collaboration</b></p> <ul style="list-style-type: none"> <li>■ Greater clarification is needed on the relationships between the Steering Groups/ Committees referenced in the Plan groups, how they will be convened and their terms of reference.</li> <li>■ England, Wales and the Isle of Man should be included in any further correspondence regarding progress and their Marine Licensing authorities.</li> <li>■ Developers of offshore wind energy projects in the Irish Sea should be included in the Steering Group.</li> <li>■ Further discussions are required to determine greater detail on the locations for landfalls related to the potential clusters for electricity generation.</li> <li>■ Determining a clear monitoring strategy (Action 2) identifying the agencies and bodies that will be responsible for undertaking what aspects of the plan would be one way to improve coordination between partner administrations.</li> <li>■ Recommended that a coordination strategy would provide a useful tool to aid further development and collaboration.</li> </ul>	Action 1 has been updated to reflect how each of the Partner Organisations intends to take forward the findings and recommendations of the Plan.

Summary of Comments Received	Response
<p><b>Action 2: Monitoring</b></p> <ul style="list-style-type: none"> <li>■ Greater information is required in regard to monitoring – approach, specific arrangements, post-construction/ operational monitoring, the use of existing monitoring undertaken by Responsible Authorities.</li> <li>■ Agree that the Plan provides suitable arrangements for monitoring environmental and social effects during its implementation.</li> <li>■ Greater clarification is required on how ‘unanticipated effects’ will be monitored.</li> <li>■ Other key national level plans/ programmes/ strategies should be considered where appropriate, as well as the national and EU legislation already noted.</li> </ul>	<p>A proposed monitoring framework is set out in Section 5 of this document. Given the objectives of the Plan, the monitoring framework focusses on the influence the Plan has on informing projects and the resulting environmental and social effects; and how new evidence from future projects can be used to refine and improve the Locational Guidance for development.</p> <p>The wording of Action 2 has been updated in the ISLES Spatial Plan to reflect the fact that each jurisdiction will make use of the Plan in different ways, adopting it or not as the case may be:</p> <p><i>“Should ISLES be integrated in full or in part into a future plan, the relevant competent authority (or authorities) would be responsible for monitoring the effects of implementing their adopted Plan. They will also need to take forward measures for the collation, management and dissemination of data and information collected for the marine environment (see Action 3).</i></p> <p><i>Where projects promoted by future plans affect more than one country then collaboration between responsible authorities in each relevant jurisdiction will be required.”</i></p>
<p><b>Action 3: Data Sharing and knowledge gaps</b></p> <ul style="list-style-type: none"> <li>■ Further primary research should be included in the actions of this Action to address the information gap in our understanding of the effects of cables on the environment (particularly EMF).</li> <li>■ Noted that the improvement of sharing environmental data is aided by Scotland’s Marine Atlas and Scotland’s Environment Web.</li> <li>■ Marine environment data should be collated, managed and disseminated by Partner Organisations which should also be made publically available. Data should be made available to records holders such as The Crown Estate’s Marine Data Exchange and the National Monuments Record of Wales.</li> <li>■ Potential for significant collaboration with educational and research institutions to build evidence on environmental impacts and the success of mitigation measures.</li> </ul>	<p>These comments are noted and Action 3 promotes the need to make new data publically available. At the present time there are no proposals for Government funded primary research but evidence may be collected following Action 5 (project monitoring).</p> <p>The wording of Action 3 has been amended to acknowledge existing data systems.</p>

Summary of Comments Received	Response
<p><b>Action 4 and 5: Consenting and permitting</b></p> <ul style="list-style-type: none"> <li>■ Agree that decisions about individual projects should take account of the routeing principles and other relevant information in the Locational Guidance.</li> <li>■ It is unclear as to how the partner organisations will ensure the routeing principles are applied at project level, and therefore there is no certainty that good practice will be followed.</li> <li>■ Greater information is required on the approach that will be taken to ensure that the Spatial Plan and Locational Guidance is considered in marine licensing and Section 36 applications, as well as national and marine plans.</li> </ul>	<p>As explained in Chapter 4 of the Plan, each jurisdiction will make use of the information in the Plan in different ways and only in Scotland will the Plan be integrated into emerging marine planning policy. These comments on the influence of the ISLES Spatial Plan are noted and the wording of Action 4 has been amended to promote the implementation of the guidance contained in the Plan:</p> <p><i>“Action 4: In preparing future Plans, each administration should, where appropriate, take account of the advice provided in the Locational Guidance (including its routing principles) and broad findings and assessment of this SEA, SEIA and HRA in terms of location and constraints to inform the consenting process.”</i></p>
<ul style="list-style-type: none"> <li>■ Noted that Action 5 would require developers to put in place appropriate monitoring programmes to assess the effectiveness of their mitigation measures – this should be proportionate and only required where necessary.</li> </ul>	<p>The wording of Action 5 has been amended as follows:</p> <p><i>“The consent process should, where necessary, require developers to put in place appropriate monitoring programmes to assess the effectiveness of their mitigation measures used to avoid, reduce or offset the effects of their development. Monitoring should be proportionate and only required where relevant to the development being permitted.”</i></p>
<p><b>Plan review and adoption</b></p> <ul style="list-style-type: none"> <li>■ The Plan should be reviewed frequently (between 1 and 5 years) to consider changes in cabling activity, other projects and plans and findings of the monitoring programme.</li> <li>■ It is suggested that consideration is taken of having additional iterations of the Plan, or a subsequent second tier of Plans produced based on suggested reviews (as noted in the comment above).</li> </ul>	<p>These comments are noted. As explained in Chapter 4 of the Plan, each jurisdiction will make use of the information in the Plan in different ways and only in Scotland will the Plan be integrated into emerging marine planning policy.</p>
<p><b>Methods for Locational Guidance</b></p>	
<p>The approach taken is a legitimate one, given that much of the information (nature and location) of project activities is not yet known. However it is suggested that there would be significant benefits should the potential effects of the Plan be considered in greater detail.</p>	<p>The potential effects of the Plan are considered in the SEA at a scale proportionate to the strategic nature of the Plan.</p>

Summary of Comments Received	Response
Recognise that the approach to the assessment is clearly set out. The work has been carried out competently and provides a comprehensive list of effects.	Noted.
It is noted that it is important to consider issues and constraints from current offshore developments (from EIAs and Appropriate Assessments) are taken in to consideration before any megawatt (MW) output is promoted or encouraged.	Noted.
Detail of the assumptions made in the assessment of generation and landfall areas should be made clear.	Section 5.3 describes the approach taken to identifying the Generation areas and the Landfall Connections. Generation Cluster Concepts are based on where offshore and marine renewable energy projects can reasonably be expected to come forward. These have been developed from a combination of National Plans, sector-specific plans and spatial strategies which identify areas for potential offshore wind, wave & tidal energy development as well as existing or known project-level offshore wind, wave & tidal developments. Landfall Connections have been identified on a strategic scale based on sections of the coastline where offshore cables could potentially land taking into account on environmental designations and, engineering considerations such as the nature of the coastline as well as the proximity to the existing electricity network and grid considerations.
It should be made clear that the information provided in the Network Area Guidance is not comprehensive and that the original sources should be utilised for access to the information.	The Locational Guidance has been updated to make clear that detailed project-specific studies are required to be undertaken.
There is no reference to whether or not buffers, weightings or relative proximity were applied to the environmental features, constraints or routeing opportunities.	No buffers, weightings or relative proximity were applied to the environmental features, constraints or routeing opportunities.
Previous research on spatial modelling of seascapes and associated guidance for development should be referenced.	Noted.
Suggested that Priority Marine Features should be included alongside the Annex 1 features listed in Section 8.3.	The Plan has been updated to address this point.
An ecosystem approach should be taken to consider the human-environment relationships.	An ecosystem assessment is outside the scope of the current study. The sustainability appraisal is considered sufficient to fully understand the effects of the Plan and to meet legislative and regulatory requirements.

Summary of Comments Received	Response
<b>Mitigation Measures</b>	
It is suggested that the Plan should include the minimisation of cable protection wherever possible to reduce the amount of material deposited in the marine environment, as referenced in the SEA.	The Locational Guidance provides an overview of installation techniques in Chapter 6 of the Plan. This has been updated to highlight that developers should select installation methods which are less environmentally disturbing.
Mitigation measures should include those noted in the joint publication by English Heritage, Historic Scotland and Cadw “Historic Environment Guidance for Wave and Tidal Energy” (2013).	Noted.
The Landfall Locations Rationale for Cultural Heritage should state that designated sites and any other valued heritage sites should be avoided, including listed buildings in coastal areas.	The table has been updated. Section 8.3 sets out under Cultural Heritage and Landfall Connections: <i>“Protected features such as Scheduled Monuments and listed buildings and areas of cultural or historic interest should be avoided where possible in developing landfall locations. Where this is not possible project level mitigation should consider installation methods which prevent impacts.”</i>
It is suggested that where avoidance of potential constraints is not possible, mitigation measures should be identified in project-specific EIAs only. It is suggested that a number of the typical mitigation measures identified in the document contain potentially unreasonable restrictions – for example constraints to timing of work. Potentially restrictive mitigation measures in this context are unhelpful and should be considered on a project-by-project basis.	Section 8.4 has been updated to make clear that these measures should be followed where relevant and that detailed mitigation will continue to be required to be developed on a project-specific basis taking account of project-level impact assessments.
It is impossible to determine the mitigation measures (trenched, buried, rock deposits) required to protect the marine cables given the strategic level of the Plan and the unknown ground conditions.	The Locational Guidance has identified areas where cable protection measures are more or less likely to be required taking into account knowledge of the seabed conditions. As noted section 8.4 makes clear that mitigation will be developed on a project-specific basis taking account of project-level assessments.
Exclusion zones should also be applied to existing and proposed oil and gas licensed areas.	Noted. The Plan has been updated to take account of this.
The inclusion of the Typical Mitigation Measures table is seen to be very useful and provides a good overview of how the SEA has influenced the Plan preparation.	Noted.

## 2.4 Response to Consultation on the SA Reports

A summary of the main comments received on the SEA Environmental Report, HRA report and SEIA report and how these comments have been taken into consideration is provided in Tables 2.4 – 2.6 respectively. All consultation responses (for which permission from the consultee was given to publish) are available to view at: <http://www.islesproject.eu/>

It is noted that some stakeholders suggested specific text changes to the Environmental Report (e.g. additional baseline data sources). These additional baseline data sources have been reviewed and do not affect the overall conclusions of the assessment. For this reason in preparing this Post Approval Statement it was decided that these additions/changes to the Environmental Report would not be necessary. However comments have been dealt with in the following ways:

- In some instances changes have been made to the ISLES Spatial Plan to take account of comments received e.g. additional mitigation measures. These changes are identified in Table 2.3 above.
- The Post Approval Statement provides some additional information on a number of topics, including a Monitoring Framework. The Monitoring Framework notes the need to consider all relevant and up-to-date data sources.

**Table 2.4 Comments on SEA Environmental Report**

Summary of Comments Received	Response
<b>Scope of SEA</b>	
<p>The Plan and SEA should consider the terrestrial environment given the likely significant land-based infrastructure.</p>	<p>The Plan has been updated to clarify the spatial coverage of the plan. The ISLES Spatial Plan focuses on the marine areas extending as far as the mean high water mark as this establishes the jurisdictional limits for marine planning and licensing of any offshore hubs and subsea cables which could be developed in the ISLES Zone. The Sustainability Appraisal (including the SEA) assesses the effects of the Plan based on its defined jurisdictional limits.</p>
<p>Within the Environmental Report it is recommended that greater clarity is provided of the generation clusters and landfall areas identified within the Locational Guidance. Are these areas currently being investigated as to suitability for electricity generation? Are there projects within these areas that are currently at the pre-application or application stage? Or are they simply desirable locations where potential energy generation could take place?</p>	<p>As described in Chapter 5 of the Plan the generation clusters are based on where offshore and marine renewable energy projects can reasonably be expected to come forward taking account of National Plans, sector-specific plans and spatial strategies which identify areas for potential offshore wind, wave &amp; tidal energy development as well as existing or known project-level offshore wind, wave &amp; tidal developments.</p>

Summary of Comments Received	Response
<b>Baseline Data Resources and Resolution of Data</b>	
<p>A number of good practice guidelines, legislation and other baseline data sources have been omitted from the SEA. These include:</p> <ul style="list-style-type: none"> <li>■ Historic Environment Guidance for the Offshore Renewables Energy Sector (2007)</li> <li>■ Offshore Geotechnical Investigations and Historic Environment Analysis - Guidance for the Renewable Energy Sector (2011)</li> <li>■ Model Clauses for Archaeological Written Schemes of Investigation (2010)</li> <li>■ Historic Environment Guidance for Wave and Tidal Energy (2013)</li> <li>■ Operational Guides for Grapnel and Obstruction Clearance.</li> <li>■ Reference is made to the Isle of Man Marine Plan – this is no longer proposed, and instead the Isle of Man Government is proposing new Primary Marine Legislation.</li> <li>■ National Monuments Act 1930-2004 (as amended)</li> </ul> <p><b>Consultees recommended/requested additional data, including:</b></p> <ul style="list-style-type: none"> <li>■ Geological deposits, underwater landscapes and Priority Marine Features.</li> <li>■ Archaeological sites located at the Dee Estuary, Anglesey, the Menai Straits and the South Sands of Caernarfon Bar, the approaches to Milford Haven and Swansea Bay.</li> <li>■ The Underwater Archaeological Unit's (UAU) (Ireland) inventory of shipwrecks for the coastal waters of Ireland and the Record of Monuments and Places</li> <li>■ Greater detail should be provided on counts made for Roseate Terns off the Irish Coast.</li> <li>■ Whithorn and Garlieston harbours.</li> <li>■ European Protected Species (EPS) and Biodiversity Action Plan (BAP) habitats and species</li> <li>■ Water Framework Directive (WFD) water bodies</li> <li>■ Horse Mussel (<i>Modiolus modiolus</i>) aggregations, identified within the Environmental Statements of Rhiannon, Argyll Array (Tiree) and Kintyre Offshore wind farms.</li> <li>■ Dumfries &amp; Galloway Landscape Assessment (SNH/LUC, 1998)</li> <li>■ Dumfries &amp; Galloway Wind Farm Landscape Capacity Study (DGC/ Carol Anderson Associates, 2011)</li> <li>■ Marine Renewables, Vibrations, Electromagnetic and Noise (MarVEN) project</li> <li>■ Marine Strategy Framework Directive (MSFD) Noise Registry</li> </ul>	<p>The SEA provides a baseline covering all environmental topics, but it is recognised that the resolution of baseline data is at a strategic level and that other data sources, such as those identified by consultees, exist. It is considered that at a strategic level sufficient baseline information is provided in the SEA Environmental Report to undertake an assessment of the effects of the Plan. It is also considered that the inclusion of additional sources of data would not alter the results of the assessment. Whilst some minor inaccuracies and gaps in baseline data were noted the overall conclusions of set out in the ER remain valid and unchanged.</p> <p>Any project promoted as a result of ISLES would be subject to detailed project level baseline studies and assessment. In Section 5.3 of the Plan the following statement has been added to stress this point. <i>The Locational Guidance does not negate the need for more detailed project-specific studies as new developments come forward but instead establishes a starting point for, and a process which could be followed to inform the development of new projects.</i></p>

Summary of Comments Received	Response
<ul style="list-style-type: none"> <li>■ Coverage of local government designated landscapes has been omitted from the assessment.</li> <li>■ The avoidance of landfall and collector hub areas to areas which would detrimentally impact areas of amenity value should extend beyond areas designated for their national importance and include locally valued landscapes. These areas are key to enhancing our quality of life as a recreational resource and for tourism etc.</li> </ul>	<p>The presence of local government designated landscapes is acknowledged in the Baseline of the SEA but specific sites and areas are not listed or mapped. Because of the large study area and the highly strategic nature of the Plan we have identified the main national designations. We did not map or list local plan designations, although we do note that local designations exist across the study area. A similar approach is used for biodiversity.</p> <p>Given that marine cables are buried and that the impacts are temporary (during installation), in our opinion the effects (at a strategic level) on landscape will not be significant. The offshore hubs (to connect cables from different projects) would be permanent structures, but it is assumed that these would be located some distance offshore. The conclusion that no significant landscape/seascape effects would occur assumes that the locational guidance in the Plan will be followed, including careful routing or siting and the application of project level mitigation measures.</p>
<p>Tables 8.1 and 9.1 incorrectly state that there are no designated sites with marine or coastal features that overlap the Firth of Clyde and West Loch Tarbert Landing Regions. However there are number of Sites of Special Scientific Interest (SSSI) that overlap these areas.</p>	<p>There are no international designations but there are multiple national designations (SSSIs) in the West Loch Tarbert LR and Firth of Clyde LR. These are shown in Figure B3 of the SEA Baseline Appendix B. These should have been referred to in these tables. However, despite this accidental omission, the conclusions of the assessment remain the same given that these protected sites will be mitigated in the same way as for the other landfall regions which contain protected sites in these tables.</p> <p>Reference to these SSSIs has been made in the ISLES Spatial Plan to highlight the need to avoid these sites or otherwise ensure that no significant effects occur as a result of grid development.</p>
<p>National Parks in Ireland are not identified in the SEA.</p>	<p>Only National Parks in coastal areas with the potential to be affected by the Plan have been identified There are no National Parks in Ireland on the east coast.</p>

Summary of Comments Received	Response
<b>Other Plans</b>	
<p>The following plans and reports were identified by consultees:</p> <ul style="list-style-type: none"> <li>■ The Countryside Council for Wales' policy report on seascapes and their sensitivity to offshore renewables;</li> <li>■ Local Development Plans;</li> <li>■ National Park and Areas of Outstanding National Beauty Management Plans;</li> <li>■ Oil and gas licensing, aggregate extraction and energy generation development plans;</li> <li>■ Draft Irish Offshore Strategic Environmental Assessment (IOSEA) 5</li> <li>■ Key Irish port and harbour development plans including Dublin Port, Dun Laoghaire Harbour and Rosslare Harbour.</li> </ul>	<p>Section 2 of the Plan has been updated to take account of additional policy documents in so far as they relate to the ISLES. Given the scale of the Plan the policy context has focused on national level policy.</p> <p>The SEA provides a short summary of other relevant plans, programmes or strategies that have influence on the ISLES Spatial Plan. This is restricted to only the most relevant plans and includes a brief comment on why each is relevant. Given the strategic nature of the Plan and SEA, the study focusses on key National level policy and does not include all local government plans or focussed management plans such as those relating to AONBs.</p>
<b>Alternatives</b>	
<ul style="list-style-type: none"> <li>■ Alternative options should be considered in all cases where the SEA may point to the location of multiple projects within areas of high environmental sensitivity.</li> <li>■ Greater information/ detail should be provided for clarity purposes in regard to the description of alternatives.</li> </ul>	<p>Chapter 4 below explains the approach to considering alternatives. An objective of ISLES is to better integrate offshore grid infrastructure in a way that would in fact reduce the amount of development in comparison to the status quo.</p>
<b>Assessment of effects</b>	
<p>The assessment should make explicit reference to the requirement for consenting and assessment at the project level.</p>	<p>In Section 5.3 of the Plan the following statement has been added to stress this point. <i>"The Locational Guidance does not negate the need for more detailed project-specific studies as new developments come forward but instead establishes a starting point for, and a process which could be followed to inform the development of new projects"</i>.</p>
<p>The Environmental Report provides a detailed and clear assessment of the potential significant environmental effects of the Spatial Plan and provides accurate results.</p>	<p>Noted</p>
<p>The SEA recognises that many of the effects of an offshore electricity network are limited to temporary disturbance during installation and construction stages, and that the potential for permanent effects are limited. This recognition/ conclusion is welcomed.</p>	<p>Noted.</p>
<p>Greater detail is requested on the effects on specific topics or features of particular sensitivity:</p>	<p>The level of assessment of the Plan is considered sufficient</p>

Summary of Comments Received	Response
<ul style="list-style-type: none"> <li>■ shipping lanes and navigation routes.</li> <li>■ freshwater pearl mussels and otters</li> <li>■ marine wildlife e.g. basking sharks, harbour porpoises and Risso's dolphins.</li> <li>■ Underwater archaeology.</li> <li>■ Listed buildings in coastal areas</li> <li>■ Castles and Town Walls of Edward I in Gwynedd WHS.</li> </ul>	<p>for the purpose of identifying and describing effects on SEA topics. Whilst some minor inaccuracies and gaps in baseline data were noted the overall conclusions of set out in the ER remain valid and unchanged.</p> <p>Shipping lanes and navigation routes have been considered and assessed in the SEA in relation to each Regional Network Area.</p> <p>The effects on protected sites and features (which include Freshwater pearl mussels and otters) have been assessed within the SEA. However a detailed assessment on these specific features is considered more relevant for the HRA.</p> <p>A high level baseline review and assessment of effects on marine mammals and underwater archaeology was included in the SEA which is considered appropriate for a strategic plan-level assessment given the uncertainties associated with the Plan. The proposed monitoring framework will allow any residual uncertainties to be reviewed at a later date where necessary.</p> <p>The routing principles embedded in the Plan already avoid protected features (e.g. listed buildings) where possible (Section 8.3 of the Spatial Plan and Locational Guidance).</p> <p>Castles and Town Walls of Edward I in Gwynedd WHS is characterised in the SEA Baseline Appendix B. The assessment Table 9.4 only provides a high level assessment of impacts at each landfall region and example heritage features are provided for illustrative purposes only. This WHS is not explicitly mentioned but its inclusion would not change the overall conclusions of the assessment.</p>
<p>Clarification is required as to whether exiting offshore renewable developments have been included/ incorporated within the assessment.</p>	<p>The SEA considers grid infrastructure only, and does not consider the effects offshore renewable development.</p>
<p><b>In-combination and Cumulative effects</b></p>	
<p>Suggested that there is no detailed consideration of the in-combination or cumulative effects with projects as well as other plans, programmes or strategies. It is recommended that these interactions are assessed and more detail provided, specifically explaining the potential negative</p>	<p>In-combination effects are covered in Section 11.2 and table 11.1 of the Environmental Report. The previous chapters of the ER assessed effects generically and for each Network</p>

Summary of Comments Received	Response
<p>interactions and how these should be mitigated.</p>	<p>Area. Section 11.2 considers the effects of the plan as a whole – across all areas.</p> <p>The assessment concludes that it is theoretically possible to development integrated grid infrastructure projects without significant adverse effects on the environment. Given this conclusion, it can further be concluded that cumulative effects with other development (and with other plans, programmes and strategies) are not likely to be significant. This conclusion is strengthened by the fact that integrated grid infrastructure, in comparison with two or more stand alone projects, will result in a smaller development footprint and fewer cable landings. In other words in comparison to the no Plan scenario (the status quo in which all proposed developments are developed independently), ISLES would reduce the environmental and social impact of offshore grid infrastructure.</p>
<p>The inclusion of Table 11.1 provides a useful demonstration of how environmental considerations have influenced the preparation of the Plan.</p>	<p>Noted.</p>

Summary of Comments Received	Response
<b>Project Level Mitigation</b>	
The project level mitigation measures identified are appropriate to address the concerns identified throughout the impact assessment process.	Noted.
<p>More detail is required on the project level mitigation.</p> <ul style="list-style-type: none"> <li>■ There is not sufficient mitigation to prevent damage to protected benthic features and protected sites.</li> <li>■ Specific mitigation for potential effects on the intertidal area should be included.</li> <li>■ Pre-construction geophysical surveys are required.</li> <li>■ Prior to the commencement of installation activities, ground investigation surveys should be undertaken to establish the exact physical extent of any feature of cultural heritage significance</li> <li>■ Mitigation to protect cultural assets should follow the guidance in “Historic Environment Guidance for Wave and Tidal Energy” (2013).</li> <li>■ The Protocol of Reporting Archaeological Finds should be followed and a Written Scheme of Investigation (WSI) should be required for each development.</li> </ul>	<p>In addition to following the Routeing Strategy and Principles which promote mitigation through strategic routeing and design some generic mitigation has also been identified in the Plan. These mitigation measures are based on typical good practice methods which should be followed during more detailed design as well as installation and construction. These measures are not intended to be exhaustive but help to set out good practice which should be followed, where relevant, in constructing and installing offshore electricity network infrastructure. More detailed mitigation will continue to be required on a project-specific basis taking account of project-level impact assessments.</p> <p>Following comments made during consultation a number of amendments have been made to the mitigation measures in Section 8.3 of the Plan.</p>
<b>Plan Actions</b>	
Comments on Actions are provided in Table 2.3 above.	
<b>Monitoring</b>	
<ul style="list-style-type: none"> <li>■ It is believed that monitoring should be incorporated within the Plan to ensure commitment to a monitoring program and ensure that any potentially significant adverse effects are monitored.</li> <li>■ Details of the monitoring proposed within the Plan should be provided in greater detail. In particular the environmental criteria to be monitored, the bodies responsible for monitoring and the frequency of monitoring should be provided in greater detail.</li> <li>■ The Marine Strategy Framework Directive (MSFD) is currently being transposed in to national legislation in Ireland. It is anticipated that this will be accompanied by a programme of measures to achieve particular environmental targets. These should be incorporated in to any monitoring plan developed as part of the Plan.</li> </ul>	<p>A proposed monitoring framework is set out in Chapter 5 of this document. Given the objectives of the Plan, the monitoring framework focusses on the influence the Plan has on informing projects and the resulting environmental and social effects; and how new evidence from future projects can be used to refine and improve the Locational Guidance for development.</p>

**Table 2.5 Comments on HRA**

Summary of Comments Received	Response
<b>Legal context</b>	
The relevant legislation in each of the jurisdictions that has been derived from the European Habitats Directive should be reviewed and the process for undertaking an HRA should be clarified.	A section on the HRA legal context, including reference to the relevant Habitats Regulations in each of the jurisdictions, is provided in the HRA Pre-Screening Report.
<b>Assumptions</b>	
Any assumptions within the HRA must be communicated to individual project developers to minimise risk and uncertainty in the consenting process.	It will fall to the competent authorities in each of the national administrations to communicate this advice to developers whether or not the plan is adopted by partner countries.
<b>Spatial Scope of HRA</b>	
Exclusion of onward connections/ onshore infrastructure.	The ISLES Spatial Plan focuses on the marine areas extending as far as the mean high water mark as this establishes the jurisdictional limits for marine planning and licensing of any offshore hubs and subsea cables which could be developed in the ISLES Zone. The Sustainability Appraisal report (including the HRA) assesses the effects of the Plan based on its defined jurisdictional limits.
<b>Baseline</b>	
Information on European site interest features in the UK is available from the Joint Nature Conservation Committee's (JNCC) website.	This information has been obtained from the JNCC website.
Omission of possible future or draft European sites.	Known proposals for future European sites have been reviewed in the HRA report. Only those that are proposed or designated, however, have been formally screened into the assessment. Any future proposed or designated sites will need to be taken into account by developers as part of the project level HRA. There is also a further opportunity for these sites to be considered and the HRA implications to be reviewed if and when the ISLES Spatial Plan is integrated in full or in part into a future plan.
Should provide information on the species comprising waterfowl assemblage interest features of European sites.	It is not considered feasible or necessary at the plan level to list all the species present in each bird assemblage interest feature. The effects on all bird species have been assessed generically. This will be undertaken where relevant at the project level.
Inconsistencies in the presentation of Irish and UK data.	Inconsistencies in the presentation of transboundary data has been minimised in the final HRA report.

Summary of Comments Received	Response
A number of additional references on seabird ecology have been provided.	These have been reviewed and incorporated in the final HRA report where relevant.
<b>HRA Screening</b>	
Further modelling may be required at project level to determine spatial limit of impact.	Maximum spatial changes are considered to be encompassed by the approach used in the plan-level HRA. However, it may be necessary to undertake specific modelling at the project level in order to confirm the overall spatial extent of effect.
Need to ensure features have been screened in and out of the assessment in a consistent manner.	The European sites and features have been reviewed to ensure that all interest features that could have ecological connectivity to the plan have been screened into the assessment.
Review the distance that has been used for screening marine mammals.	The screening distance is based on the maximum area of potential behavioural avoidance given that the impacts of marine cables and associated infrastructure are well known and only temporary. The evidence and rationale for choosing this approach is provided in detail in the HRA Pre-Screening Report.
Review the distance that has been used for screening otters.	The screening distance has been used in a number of past plan-level HRAs in the UK. It is considered to be sufficiently precautionary based on available evidence on the homing range of otters in coastal habitats (which is less than in freshwater habitats).
Bat interest features should be screened into the assessment.	New evidence on bat foraging was published following the publication of the draft HRA report. However, there is no clear impact pathway from the ISLES Spatial Plan that will result in a likely significant effect. The final HRA report has been updated to provide further clarification.
<b>Assessment of effects</b>	
Sensitivity of habitat features is not always clearly justified.	The sensitivity of features takes account of the mitigation measures that are embedded in the ISLES Spatial Plan including avoiding particularly sensitive habitats such as reef features. However, we recognise that there could be indirect impacts on these features and for this reason the HRA has screened them in for these effects alone. The final HRA report has been updated to provide further clarification.
Inconsistent use of terminology (e.g. vulnerability).	A thorough review has been undertaken to ensure they are being used correctly and consistently in the final HRA report.

Summary of Comments Received	Response
Assessment of vulnerability is not always clear.	A review has been undertaken to ensure there is greater clarity and transparency in the final HRA report.
Range of habitat interest features that has been assessed is not clear.	The interest feature list has been reviewed and further clarity has been provided on how the broad habitat categories have been derived in the final HRA report.
Collision risk and barrier effects on seabirds have not been considered.	Offshore renewable energy does not form a component of the ISLES Spatial Plan. The cumulative and in-combination assessment has considered other projects, plans and activities, including offshore renewables.
Need to consider favourable condition status of features of European sites.	This is most appropriate and feasible at the project level and is included as a recommendation in the HRA report.
Assessment should be made in the context of specific conservation objectives of each of the European sites screened into the assessment.	This is not considered to be feasible or necessary for a plan-level HRA. The approach of using generic conservation objectives has been used in past plan-level HRAs. Specific conservation objectives will need to be considered by the developer as part of project-level HRAs when details of individual projects and activities are known.
Omission of a number of relevant impact pathways.	These have been reviewed and included in the final HRA report where relevant.
More detailed assessment may be required at the project-level.	A more detailed assessment will be possible at the project-level when there is a greater level of information available on the proposed location, scale and nature of activities.
Large level of uncertainty.	Issues of uncertainty are fully recognised in the HRA. There is good existing knowledge about the generic risks and scale of impacts from marine cabling and associated infrastructure which has allowed a high level vulnerability assessment to be undertaken.
<b>In-combination effects</b>	
Omission of a number of relevant projects, plans or activities.	The list of projects, plans and activities has been reviewed and updated accordingly in the final HRA report.
In-combination effects need to be adequately assessed to address cumulative impact.	There are practical difficulties in carrying out a meaningful in-combination assessment for a plan that is not well defined and is only likely to be implemented in the medium to long-term as the precise cable routes and timings will strongly influence the potential for in-combination effects.

Summary of Comments Received	Response
<b>Mitigation</b>	
Further clarification on the overarching ISLES steering committee/group that will be created as a measure to mitigate potential effects and ensure no adverse effect on integrity of a European site.	See comments on Action 1 in Table 2.3 above. Should any future plan that promotes ISLES be adopted, the relevant Competent Authority(ies) will need to account for any residual issues or uncertainties relating to the HRA through a process of iterative plan review. This approach has previously been accepted by UK SNCBs as a pragmatic way of dealing with the inherent uncertainties associated with plans.
Further clarification how undertaking a project-level HRA will ensure no adverse effect on integrity of a European site.	A more robust assessment of the project and in-combination impacts can be undertaken at the project-level when there is a greater level of information available on the proposed location, scale and nature of activities associated with the project.
Clarify how mitigation measures will be communicated to developers and regulators.	Future consenting processes by the relevant authorities will take into account the advice provided in the Locational Guidance as well as the broad findings of the Sustainability Appraisal (including the HRA). In addition, at the project level an HRA will need to be undertaken and the relevant Statutory Nature Conservation Body(ies) will have the opportunity to advise the developer and relevant Competent Authority(ties) to ensure that they are applying the necessary mitigation measures.
Mitigation measure is required to avoid an increased risk of colonisation by invasive non-native species from vessels and plant	Mitigation for this pathway based on industry standard practice is already included in the HRA report. The need for additional mitigation can be reviewed at the project-level by the individual developer as necessary.
Further mitigation required to prevent damage to protected benthic habitat features.	The routing principles embedded in the plan already avoid sensitive protected features (e.g. Annex 1 reef and intertidal mudflat) and promote cable burial where possible. Further mitigation measures are also included to avoid an adverse effect on protected habitats and benthic features.

**Table 2.6 Comments on SEIA**

<b>Summary of Comments Received</b>	<b>Response</b>
<b>Scoping</b>	
Agree to scoping oil and gas out of the assessment given the future uncertainty in this sector. The option to scope this topic back in the future in response to any future developments (or oil and gas licensing rounds) should be reserved.	Noted. Furthermore, the SEIA recognises that the assessment will need to be re-visited if any of the underlying assumptions in the ISLES Spatial Plan change.
<b>Methods</b>	
The development of a clear, proportionate and evidence-based framework to balance the interests of different users of the sea and resolve any conflict is supported.	No action required.
A clear framework, informed by a cost-benefit analysis of all cable protection options, would allow the right approach to be adopted on a case-by-case basis in light of the best available evidence.	A case by case consideration will be required and decisions will be location specific. However, this is beyond the scope of this strategic study. The general principle should be that developers seek to achieve adequate burial of cables wherever possible to minimise impacts on other users in line with co-existence policies in marine plans.

## 2.5 Transboundary Consultation

As part of the consultation process, key representative and stakeholders in transboundary locations were also invited to comment on the findings from the Sustainability Appraisal and the content of the Draft Plan. This included consultation with the Isle of Man, Welsh Government and governmental agencies in England including the MMO and Natural England. The full list of organisations that responded to consultation is provided in Section 2.2 above.

## 2.6 How the Responses Received from Consultation have been used to inform the Preparation of the Plan

A summary of the responses received on the Draft Plan is included in Table 2.3 above, and comments on the Sustainability Appraisal reports in Tables 2.4 to 2.6. Where appropriate the comments raised on the Plan and Sustainability Appraisal have been incorporated into/have been taken into account in the preparation of the final Plan. However, it should be noted that some comments received applied to subject matters that were outwith the main scope or purpose of the Plan. Therefore, while these comments have been acknowledged as part of the consultation process and reviewed accordingly, there may have been no direct action taken to address the comment directly as part of the Plan.

# 3 Incorporating the Findings from the SA into the Plan

## 3.1 Introduction

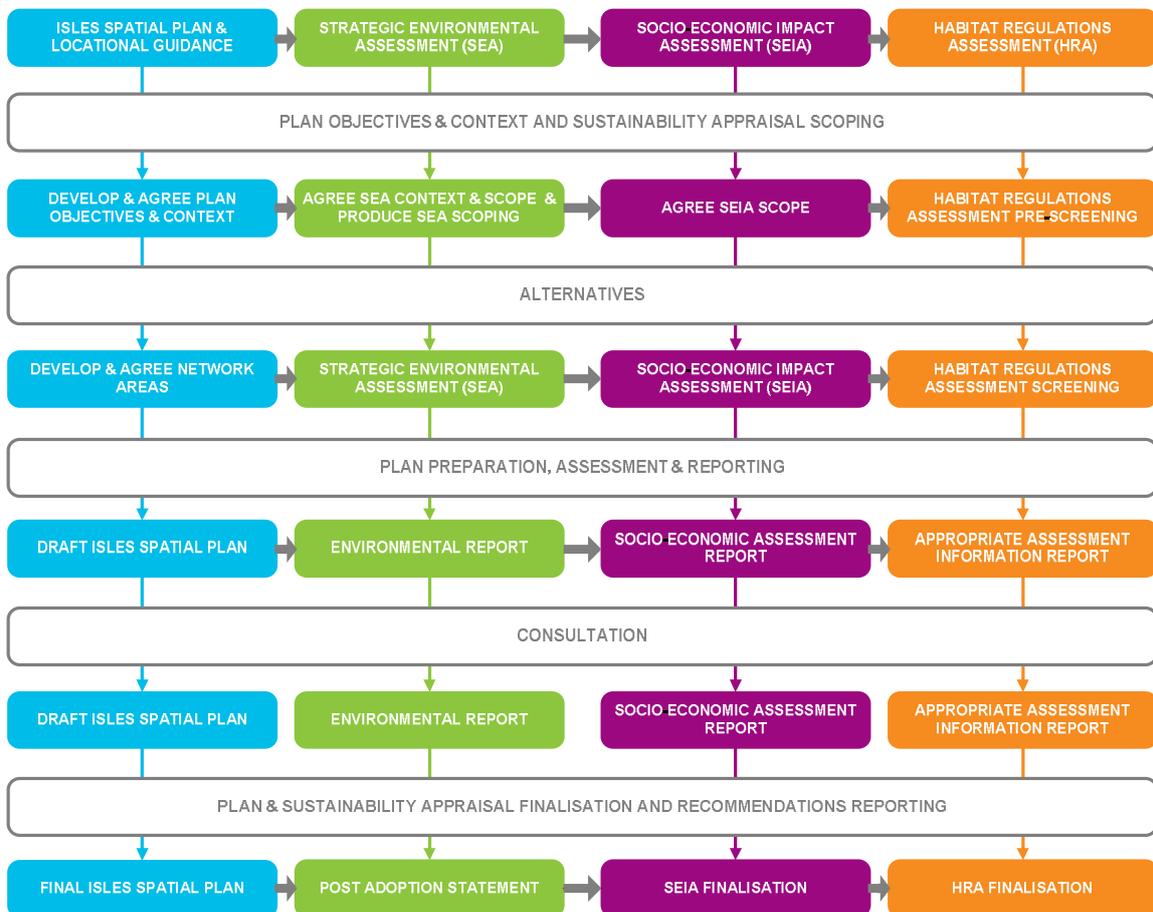
The following provides an overview of how the findings of the Sustainability Appraisal were used to inform the preparation of the Final Plan. The purpose of this chapter is to address the following requirement of the SEA Regulations:

- (a) how environmental considerations have been integrated into the plan or programme; and
- (b) how the environmental report has been taken into account.

## 3.2 Links between the SA and Preparation of the Plan

The objective of the Sustainability Appraisal is to describe the likely effects of the Plan and identify measures to ensure a high level of protection to the community and environment, and to contribute to the integration of environmental and social considerations into the preparation and adoption of the Plan. In doing so the Sustainability Appraisal ensures that the objectives of the Plan can be achieved. Figure 3.1 below illustrates how the Sustainability Appraisal was integrated into the preparation of the ISLES Spatial Plan through all stages of the process.

**Figure 3.1: Integration of Plan Preparation and Sustainability Appraisal Studies**



The Locational Guidance has been prepared in tandem with the Sustainability Appraisal of the ISLES Plan. The Sustainability Appraisal describes the environmental, social and economic effects that could occur from offshore grid infrastructure and identifies the mitigation measures that should be applied to avoid, reduce or offset these effects. The Locational Guidance therefore incorporates the findings of the SA in a number of ways:

- The Locational Guidance and Routeing Strategy inform the development of offshore electricity networks in a manner that can ensure environmental, social and economic impacts are appropriately mitigated. A set of Routeing Objectives and Principles has been established to underpin the Routeing Strategy. In the first instance these promote the avoidance of sensitive or important environmental, social and economic constraints through careful routeing. The potential environmental, social and economic effects were identified by the SA and used to inform the constraints analysis.
- Outline mitigation considerations which could be applied, depending on project-specific circumstances, have been identified drawing on industry standard approaches to mitigation measures. These project level mitigation measures are based on the results of SA, and in turn the SA has used the outline mitigation in the Plan as a basis for assessing effects.
- The consultation processes for the Plan and Sustainability Appraisal have been fully integrated.
- Actions identified in Chapter 4 of the Plan have been informed by the need to mitigate the potential effects of development promoted by the Plan and to monitor the Plan's implementation based on the recommendations from the SA.

In summary, many of the effects of an offshore electricity network are limited to the installation and construction stages relating to the temporary disturbance this causes. Assuming cables can be buried, and within the majority of the ISLES Plan area cable burial is considered likely to be possible, permanent effects are limited subject to careful routeing. Where cables can't be buried or where collector hubs are located noticeable permanent effects are possible but these can typically be mitigated through routeing, siting and project level design. In conclusion, the Sustainability Appraisal demonstrates that if the approach described within the Locational Guidance is applied, offshore grid networks can be developed with no significant adverse environmental or social effects.

# 4 Consideration of Alternatives

## 4.1 Approach to Alternatives

As required by SEA Directive and the relevant national SEA Regulations the reasons for choosing the plan as adopted, in the light of the other reasonable alternatives are explained.

The main purpose of the Plan is to promote an integrated offshore electricity transmission network and to identify key strategic considerations for developers to take into account at the licensing stage. The Location Guidance, which forms part of the Plan, presents three possible Network Areas in which grid infrastructure could be development. Within these broad areas, multiple options exist for connecting offshore generation developments and grid infrastructure.

The ISLES Spatial Plan has not been prepared with the aim defining preferred projects or selecting preferred route corridors. Instead a flexible approach has been adopted to take account of the limited details about potential generation projects within the ISLES Zone and to allow for a number of possible development options.

The Plan does not therefore specify alternatives. Instead it provides guidance which, if followed, will allow developers to consider alternative route options and to select the option that does not result in significant effects on the environment.

## 4.2 No Plan Alternative

The no-plan scenario is the status quo i.e. each offshore renewable power project is assumed to include an independent connection to the electricity network, as opposed to the consolidated approach to developing infrastructure that ISLES promotes. In comparison with ISLES, in marine and coastal areas the no plan scenario is likely to involve:

- A greater number of landfalls locations being affected
- A longer total length of marine cable.
- No requirements for offshore hubs.

The greater number of landfalls and greater length of marine has the potential to result in a higher level of impact than the ISLES solution. As a result, the promotion of ISLES is likely to result in a reduced impact in comparison with the status quo in which all generation projects are connected to the grid independently.

A possible exception to this conclusion may result from offshore hubs which have the potential for adverse effects, particularly on landscape/seascape (depending on their location and distance from shore).

Both the Plan and no plan scenarios will require additional onshore infrastructure, the assessment of which is outside the scope of this Sustainability Appraisal. This is because the Spatial Plan focuses on the marine areas extending as far as the mean high water mark as this establishes the jurisdictional limits for marine planning and licensing of any offshore hubs and subsea cables which could be developed in the ISLES Zone.

# 5 Monitoring Framework

## 5.1 Proposals for Monitoring the Environmental Effects of Implementing the Plan

The SEA Directive and Regulations require that proposals for monitoring the environmental effects arising from the Plan are described. With respect to the ISLES Spatial Plan a number of factors need to be considered in developing a monitoring framework:

- As explained in Chapter 4 of the Plan, each jurisdiction will make use of the information in the Plan in different ways and only in Scotland will the Plan be integrated into emerging marine planning policy. It is therefore not possible at this time to provide an overarching monitoring framework for the ISLES Spatial Plan covering all jurisdictions.
- The Plan promotes offshore grid network projects. The focus of any monitoring framework should therefore be linked to project development.
- The SA concludes that it is possible to develop offshore grid networks without significant adverse effects on the environment, assuming that the Plan and Locational Guidance are followed. Monitoring should aim to establish whether this conclusion is correct and if not, establish why and take corrective action for future projects.
- Any monitoring proposed need to be proportionate and practicable. Following Action 5 in the Plan, *the consent process should, where necessary, require developers to put in place appropriate monitoring programmes to assess the effectiveness of their mitigation measures used to avoid, reduce or offset the effects of their development. Monitoring should be proportionate and only required where relevant to the development being permitted.*

Taking these considerations into account the following general approach to monitoring is proposed:

- The authority responsible for adoption of the Plan should review the effects of projects against the recommendations in the Locational Guidance and against the results of the SA. In doing so, they should take into account all relevant data sources, including any new or updated data not included within the Plan and SEA.
- Table 5.1 below sets out the broad routing principles underpinning the Locational Guidance and the potential environmental and social effects that could result from development. This table can be used as a checklist to review Projects.
- Should any project proceed it will be necessary for the developer to undertake environmental impact assessment sufficient to obtain the necessary consents and licenses. The results of these reports produced by developers provide a basis against which the effectiveness of Locational Guidance can be judged.
- In addition, some projects, or aspects of projects, may be subject to construction and operational phase monitoring (following Action 5). Such monitoring will provide an additional evidence base against which to review the effects of projects.
- Project reviews will identify whether any adverse significant adverse effects have been identified during the consenting process or during the installation or operation of projects. This will provide a measure as to the overall effectiveness of the Plan and Locational Guidance.
- Where adverse effects do occur it will be necessary to update and amend the Locational Guidance as appropriate.

Table 5.1 Monitoring Checklist

Topic	Locational Objectives	Guidance for Grid Infrastructure	Effects to be reviewed
Biodiversity, Flora & Fauna	Avoid, as much as possible, developing offshore cable routes or positioning collector hubs in areas which would detrimentally impact on the qualifying features or interests of European or national protected sites and/or impact protected ecological or ornithological species, features, habitats or migratory routes.	<p><b>Marine cable</b></p> <p>Whilst it is preferable to avoid protected sites, habitats and species in the routeing of marine cables in some instances this may not be possible. Typically the effects of cables will be temporary limited to the disturbance occurring during installation. By following good practice at a project level such as ensuring cables are buried, using less disturbing installation methods or timing the works to avoid sensitive periods, potential impacts can be effectively mitigated.</p>	<ul style="list-style-type: none"> <li>■ Effects on benthic and intertidal habitats from the installation of cables and any associated rock armouring or matressing and construction of collector hubs.</li> <li>■ Disturbance of species (noise and visual) during the installation of marine cables and construction of collector hubs.</li> <li>■ Collision risk or barriers to species movement during the installation infrastructure.</li> <li>■ Loss of foraging areas.</li> <li>■ Presence of hard structures (e.g. rock armouring) on seabed has the potential to change prey and species behaviour.</li> <li>■ Loss of food resource from the covering of habitat by rock armour or matressing and the foundations of collector hubs.</li> <li>■ Pollution from cable and collector hub installation vessels or increases in turbidity.</li> <li>■ Effects on marine species from electric magnetic fields.</li> </ul>
		<p><b>Collector hubs</b></p> <p>Collector hubs should not be sited in protected sites or habitats in order to prevent permanent changes in habitat. Unlike buried cables collector hubs have the potential to permanently alter habitat cover and as such should be located in areas of less sensitive or lower value habitats.</p>	
		<p><b>Landfall locations</b></p> <p>As with marine cables landfall locations which avoid protected sites or habitats would be preferable but this will not always be possible. At a project level the use of less disturbing landfall installation techniques such as HDD or timing the works to avoid sensitive periods, potential impacts can be effectively mitigated.</p>	
Population & Human Health	Avoid, as much as possible, developing offshore cable routes or positioning collector hubs in areas which would detrimentally impact on commercial and recreational	<p><b>Marine cable</b></p> <p>Key shipping lanes or important fishing areas should be avoided by cables but in some instances this may not be possible. However, assuming cable burial in most instances the impacts on shipping or fishing activities should be limited to temporary displacement during installation.</p>	<ul style="list-style-type: none"> <li>■ Effects on marine and coastal recreation during installation of cables and construction of collector hubs.</li> <li>■ Effects on marine users (fishing / shipping and navigation) during the installation of marine cables</li> </ul>

Topic	Locational Objectives	Guidance for Grid Infrastructure	Effects to be reviewed
	<p>uses of the sea and seabed including commercial fishing and aquaculture, shipping and navigation and recreational uses.</p>	<p><b>Collector hubs</b> Collector hubs must avoid being sited within key shipping lanes or important fishing areas in order to prevent permanent displacement of these activities. When siting collector hubs consideration must be given to the location including exclusion zone in order to prevent displacement.</p> <p><b>Landfall locations</b> In selecting landfall locations key considerations are the coastal and near-shore activities such as tourism. Whilst landfall selection should seek the least disturbing option potential impacts occur over a small area can be effectively mitigated at a project level.</p>	<p>and construction of collector hubs.</p> <ul style="list-style-type: none"> <li>■ Effects on marine users (fishing / shipping and navigation) from the development of collector hubs.</li> <li>■ Effects on navigation occurring as a result of electric and magnetic fields (EMFs).</li> <li>■ Effects on coastal communities as a result of construction related disturbance at landfalls.</li> </ul>
<p>Water, Soil, Geology &amp; Coastal Processes</p>	<p>Develop, as much as possible, offshore cable routes and collector hubs in areas of optimal conditions which avoid or prevent detrimental environmental impacts and reduce engineering or technical complexity.</p>	<p><b>Marine cable</b> In order to prevent environmental impacts and provide protection to marine cables it is preferable to seek to bury as much of a cable route as possible. To that end routeing should focus on areas of softer sediment which facilitate cable burial, and hence provide effective protection. Where routeing cannot avoid areas of harder sediment in which cables must be is surface laid additional protection measures such as rock placement will be required.</p> <p><b>Collector hubs</b> Collector hubs should be located within areas in which the underlying sediments support less complex engineering or construction, for example avoiding complex piling requirements.</p> <p><b>Landfall locations</b> In selecting landfall locations it is preferable to route cables towards open soft sediment beaches. These should provide less complex landfall options with good access from both the sea as well as land.</p>	<ul style="list-style-type: none"> <li>■ Effects on marine and coastal water quality from installation of cables and construction of collector hub foundations.</li> <li>■ Effects on marine and coastal water quality from pollution incidents from cable lay vessels and the construction and operation of collector hubs.</li> <li>■ Disturbance to contaminated sediments during the installation of marine cables and construction of collector hubs.</li> <li>■ Effects on marine and costal processes from the placement of rock armouring and mattresses and the construction of collector hub foundations.</li> <li>■ Effects on coastal processes during cable landfall installation.</li> </ul>

Topic	Locational Objectives	Guidance for Grid Infrastructure	Effects to be reviewed
Cultural Heritage	Avoid, as much as possible, developing offshore cable routes or positioning collector hubs in areas which would detrimentally impact on protected archaeological sites and other heritage interests.	<p><b>Marine cable</b> Whilst cultural heritage features should be avoided it is recognised that they occupy relatively small or contained areas on the seabed. From the outset developers should seek to avoid features such as wrecks but these can be more easily avoided at the project level during detailed routeing and design.</p>	<ul style="list-style-type: none"> <li>▪ Loss or damage to known and unknown archaeological sites and wrecks through the installation of marine cables and construction of collector hubs.</li> <li>▪ Effects on the setting of World Heritage Sites and coastal heritage assets from the construction and location collector hubs and any associated terrestrial infrastructure.</li> </ul>
		<p><b>Collector hubs</b> The siting of collector hubs should take account of both the location of wrecks as well as the potential to impact on the setting of protected heritage features such as World Heritage Sites or scheduled monuments in coastal areas. As much as possible hubs should be located in offshore areas where setting effects are prevented.</p>	
		<p><b>Landfall locations</b> In selecting landfall locations consideration should be given designated sites such as scheduled monuments or listed buildings and for the potential to archaeological remains of historic landscapes to be present. Such as issues can be effectively mitigated at a project level.</p>	
Landscape & Seascape	Avoid, as much as possible, developing offshore cable routes or positioning collector hubs in areas which would detrimentally impact on landscape and seascape character, in particular areas of the highest amenity value.	<p><b>Marine cable</b> There routeing of marine cables is not informed by consideration of landscape and seascape.</p>	<ul style="list-style-type: none"> <li>▪ Effects on landscapes / seascapes during the installation of marine cables.</li> <li>▪ Effects on landscapes / seascapes from the development of offshore collector hubs.</li> </ul>
		<p><b>Collector hubs</b> Collector hubs should be located in deeper water offshore where they are less likely to be visible and as such are unlikely to impact on landscape or seascape including designated or protected landscapes.</p>	
		<p><b>Landfall locations</b> Cable landfalls will be buried with no discernible above ground infrastructure present and temporarily affected land around the landfall can be reinstated. However, careful consideration should</p>	

Topic	Locational Objectives	Guidance for Grid Infrastructure	Effects to be reviewed
		be given to developing landfalls within or adjacent to protected landscapes where there may be a need for significant additional infrastructure required to connect to the onshore network.	
Material Assets	Avoid, as much as possible, developing offshore cable routes or positioning collector hubs in areas which would detrimentally impact on other users of the sea, seabed and coast including defence interests, other cables and pipelines, offshore power generation, oil and gas interests, and aggregates and coastal flood defences.	<p><b>Marine cable</b> Existing and potential developments should be avoided as much as possible in the routeing of marine cables. This will reduce the risk of physical damage to existing assets (or proposed electricity infrastructure) as well as prevent sterilisation of potential resource areas (offshore energy, oil &amp; gas and aggregates).</p> <p><b>Collector hubs</b> With the exception of energy generation sites which are being connected to new grid infrastructure, existing and potential developments should be avoided as much as possible in the siting of collector hubs.</p> <p><b>Landfall locations</b> It is preferable to select landfall locations in less developed sections of the coast in order to avoid other infrastructure constraints but this will not always be possible. Where other assets are present for example flood defences, developers should use less intrusive installation techniques such as HDD.</p>	<ul style="list-style-type: none"> <li>▪ Effects on other development opportunities associated with the installation of marine cables and the construction of collector hubs.</li> <li>▪ Effects on existing infrastructure through the installation of marine cables (cable and pipeline crossings) and construction of collector hubs.</li> </ul>
Climatic Factors and Local Air Quality	No applicable	Not applicable	<ul style="list-style-type: none"> <li>▪ Greenhouse gas emissions associated with manufacture, construction and operation of infrastructure.</li> <li>▪ Emissions from vessels during construction and operation affecting local air quality</li> </ul>





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