

Report to	Extraordinary Meeting of the County Council
Date	14th December, 2012
Subject	Stage 1 Consultation for the Rhiannon Offshore Wind Farm
Portfolio Holder(s)	Councillor Robert LI.Hughes
Lead Officer(s)	Arthur Owen Director of Sustainable Development
Contact Officer	E.Gwyndaf Jones, Chief Planning Officer
Nature and reason for reporting	
<ol style="list-style-type: none"> 1. The report provides the response of the Council to the Stage 1 Preliminary Environmental Information (PEI) published by Celtic Array Limited for the Rhiannon Offshore Wind Farm 2. The Council should consider comment and endorse the content of this Report as well as the document appended (Appendix 1) as its formal response to the consultation, submitting its formal response before 20th December, 2012 	

A - Introduction / Background / Issues
<p>Under the provisions of Section 42 of the Planning Act 2008 Celtic Array Ltd. has a duty to consult on its proposals before they can apply to the National Infrastructure Directorate (NID) for development consent. Although the NID has determined that the Isle of Anglesey County Council (IACC) is not deemed to be a statutory consultee under the Act, Celtic Array Ltd. considers that, owing to the location of the proposed offshore wind farm and its onshore elements, their proposals will have an impact upon the island and its residents. The methodology setting out how Celtic Array Ltd. is going to consult has already been presented in its Statement of Community Consultation (SOCC) and endorsed by the Council on the 24 September, 2012.</p>

Celtic Array Ltd. intends to adopt a two staged consultation process. The first stage commenced on Monday, 29th October, 2012 and will run until Thursday, 20th December, 2012. The second stage is anticipated to take place during Quarter 3 of 2013, prior to submission of their Development Consent Order (DCO) in Quarter 4 of 2013. Although the project is located offshore in the Irish Sea, Celtic Array Ltd. will also submit planning applications to the IACC for onshore works associated with connection of the development to the national grid.

Celtic Array Ltd. anticipates that they will carry out specific consultation on the onshore Scoping Report and proposals, including substation and land based elements of the project in Spring 2013.

In accordance with Section 42 of the Act, the Stage 1 PEI seeks to inform technical consultees about the proposed offshore wind farm and describe the potential impacts associated with the construction, operation and decommissioning phases of the project. All responses received during the consultation will be reviewed by Celtic Array Ltd. and analysed to:

- Help make sure the potential negative and positive aspects of the proposed project have been considered;
- Take on board opportunities for improving the project design, where appropriate; and
- Produce a consultation report to accompany an application for a Development Consent Order (DCO) to the Planning Inspectorate.

To date officers have responded to 2 previous consultation documents which have assisted in informing the project namely the Zonal and Appraisal Planning (ZAP) and the Scoping Opinion provided to the Secretary of State in respect of the Environmental Statement (ES) for the Rhiannon Windfarm.

B – Considerations

As Members will be aware the Authority has entered into a 4 year Framework Agreement with the company, AMEC in order to provide a multi-disciplinary and professional expertise, skills and capacity to the Authority in order to assist it, when required, with dealing with the major infrastructure developments which it will impact upon the Island over the coming years.

Following meetings and discussions between the company and Officers a report (Appendix 1) has been produced in order to provide the response of the Council on the Rhiannon Off Shore Windfarm Stage 1 Consultation. The document should be read and acknowledged as the Council's comments on the content of Celtic Array

Ltd.'s consultation documents comprising:

- Stage 1 Community Consultation Document. This is the non-technical summary of the Stage 1 Preliminary Environmental Information (PEI);
- Stage 1 Preliminary Environmental Information (PEI). This is the technical report required under Section 42 of the Planning Act 2008 and describes the potential impacts of the RWF on the environment;
- Photomontages from seven viewpoints selected from coastal locations in the vicinity of Rhiannon Off Shore Wind Farm.

The primary purpose of the PEI is to provide sufficient information to inform consultation prior to the production of their Environmental Statement (ES).

The Members are requested to review and comment on the report appended as well as have regard to the comments below which have been received from the Economic Development Unit (EDU) . Members should note that some of the comments reiterate matters also referred to in the appended document and are covered therein.

The following comments can be summarised as:

- Any socio-economic figures and impacts should be at an Anglesey and not Wales level
- The significant impacts that could be had on tourism by the Project
- Exploiting the potential of Anglesey's coastline should be done in a sensitive manner
- The interdependent relationship between Celtic Array and National Grid should be explicitly referenced
- Cumulative impact of project should have been emphasised further

The section 'Description of Current Environment' in the Human Environment – Socio-Economic section of the PEI is far too broad. It is difficult to provide meaningful comments from a socio-economic perspective due to the lack of details on this subject matter. It is suggested that each section, i.e. employment, population demographics, be broken down into sub headings for each area, including Anglesey. It is appreciated that it is not possible for Celtic Array to quantify the economic benefit until the design of the wind farm is more certain.

Given that the proposed wind farm is only 19km from Anglesey's coastline, the socio economic figures and impacts should be at an Anglesey level and not a pan-Wales one. Recognition should be given to how the socio-economic context on Anglesey varies considerably to that of other Welsh Local Authorities.

In terms of construction, operation and maintenance of the wind farm it is recommended that Holyhead Port be used as a base. This should be explored further as part of the socio-economic impacts of the projects due to the associated job creations and opportunities for up-skilling the local workforce/community.

Tourism is a major industry on Anglesey, and is currently worth £240 million to the local economy and secures 4,000 jobs. The IACC's Destination Management Plan 2012-2016, identified issues and concerns surrounding wind turbines and pylons amongst tourism stakeholders. It is recommended that a detailed tourism impact assessment be carried out.

Any landfall and subsequent substation/converter station should take the sensitive and unique nature of the coastline into account. Over 300,000 walkers use the Anglesey coastal path annually which generates £14million for the local economy. Any visual impacts had by onshore and offshore developments should be mitigated so as to ensure no detrimental effect is had on the coastline and tourism.

Three sites on Anglesey have been identified by Celtic Array as sites for viewing platforms. What would this consist of and is there any potential to build on this concept as a tourist attraction along the lines of an environmental centre similar to the Ecotech Centre in Swaffham? Could Celtic Array consider the opportunity to innovatively design the substations in such a way that they could be used as a visitor/ learning centre as part of a legacy of the project? A collaborative approach with IACC is advised if this option is considered to provide further learning and development opportunities on the Island.

Potential impacts, both positive and negative on tourism during each phase of development need to be given consideration and will be greater than 'Effects on spending, income and employment patterns' alone. Celtic Array are advised to work closely with the IACC Tourism Team and any other tourism partnership bodies on the Island.

The Planning Inspectorate's response to the Scoping Opinion is welcomed in that a more detailed socio-economic impact assessment is a requirement. The impact of tourism should be fully considered along with the types of jobs expected to be created with consideration given to the available workforce.

Particular consideration should be given to the landfall sites and substation during the early stages of the project and adequate mitigation should be outlined to account for the short, medium and long term cumulative impacts. The Environmental Statement must include sufficient detail to allow IACC and the people of Anglesey to understand the relationship between the offshore and onshore elements of the project as noted by the Planning Inspectorate previously in its Scoping Opinion.

Any related works and new infrastructure, both onshore and offshore, need to be

carefully balanced with protecting Anglesey's assets including but not limited to its status as an Area of Outstanding Natural Beauty (AONB), Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI).

Explicit reference to the National Grid consultation process should be made on the basis that the consultation is running in tandem and the interdependent relationship had between the two projects. All stakeholders, especially the public, should be made aware of the cumulative impacts of the project which includes onshore infrastructure and transmission infrastructure development.

Two other potential development areas in the Irish Sea Zone are illustrated in the PEI. Yet no reference is made to how these future developments will be connected to the National Grid on and the potential impacts of requiring further transmission infrastructure on Anglesey. This requires further clarification.

Further consideration should be given to skills development, potential impacts on the Welsh language and the cumulative impact of this development with consideration given to the other two major energy infrastructure projects proposed on Anglesey, Nuclear New Build at Wylfa and the National Grid's North Wales connection project.

C - Implications and Impacts		
1	Finance / Section 151	
2	Legal / Monitoring Officer	
3	Human Resources	
4	Property Services (see notes – separate document)	
5	Information and Communications Technology (ICT)	
6	Equality (see notes – separate document)	
7	Anti-poverty and Social (see notes – separate document)	
8	Communication (see notes – separate document)	

C - Implications and Impacts		
9	Consultation (see notes – separate document)	Yes (Internal)
10	Economic	Comments included as part of the report.
11	Environmental (see notes – separate document)	
12	Crime and Disorder (see notes – separate document)	
13	Outcome Agreements	

CH - Summary
<p>It is important that the Council engages with the developer as part of the statutory consultation process in order to comment upon and endeavor to influence and mitigate the potential impact of the Off Shore Windfarm upon the Island and its residents. At this stage Celtic Array is seeking the views of the Council and other consultees on the content of the PEI. The Authority has already commented on the Celtic Array's SOCC. This first stage is a precursor to the next stage consultation in Q3 2013 when Celtic Array Ltd. will have worked up and refined its development proposals including its Environmental Impact Statement as part of its submission of the DCO.</p> <p>Whilst the wind farm is located 19km offshore and north of the Island Officers will engage further with the developer on the issues highlighted within the report as well as onshore developments linked to the wind farm. The Council will be consulted early next year on the Scoping Report which will cover cable landfall locations and substation requirements. These elements of the development which are deemed to be Associated Developments will fall to the Authority to be considered and determined.</p>

D - Recommendation

That the Council considers comments on and endorses the proposed response to the consultation as detailed in this report and Appendix 1 submitting its formal response before 20th December, 2012

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Job Title: Chief Planning Officer
Date: 6.12.12

Appendices:

IACC response to Celtic Array's Preliminary Environmental Information (PEI) Report

Background papers

Zonal Appraisal and Planning Report (ZAP) dated 30th April 2012.
IACC response to the Scoping Opinion provided by the Secretary of State in respect of the Environmental Statement (ES) for the Rhiannon Off Shore Windfarm.
Celtic Array's Statement of Community Consultation (SOCC) endorsed by the Council on the 24th September 2012.



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ISLE OF ANGLESEY
COUNTY COUNCIL



Isle of Anglesey County Council

Celtic Array Limited

Stage 1 Preliminary Environmental Information

Technical Review

AMEC Environment & Infrastructure UK Limited

December 2012

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E Gwyndaf Jones

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Isle of Anglesey County Council

Stage 1 Preliminary Environmental Information

Technical Review

AMEC Environment & Infrastructure
UK Limited

December 2012



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Executive Summary

Purpose of this Report

This document provides the response of the Isle of Anglesey County Council (IACC), also referred to hereafter as „the Authority“, to the Stage 1 Preliminary Environmental Information (PEI) Report published by Celtic Array Limited for Rhiannon Wind Farm (RWF), an offshore wind farm proposed to be located approximately 19km from the Isle of Anglesey. This response document has been prepared by AMEC Environment and Infrastructure UK Limited (AMEC) for IACC in liaison with the Authority’s officers.

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Figure 1 Blade Tip ZTV

Figure 2 Hub Height ZTV

1. Introduction

This document provides the response of Isle of Anglesey County Council (IACC), also referred to hereafter as „the Authority“, to the Stage 1 Preliminary Environmental Information (PEI) Report¹ published by Celtic Array Limited (Ltd.) for Rhiannon Wind Farm (RWF), an offshore wind farm proposed to be located approximately 19km from the Isle of Anglesey. The document has been prepared by AMEC Environment and Infrastructure UK Limited (AMEC) for IACC in liaison with the Authority’s officers. This is part of the ongoing process of engagement between IACC, the Energy Island Programme, and Celtic Array Ltd. which will be secured and resourced through a Planning Performance Agreement.

1.1 Background and Context

Under the provisions of Section 42 of the Planning Act 2008 Celtic Array Ltd. has a duty to consult on its proposals before they can apply to the National Infrastructure Directorate (NID) for development consent. Although the NID has determined that IACC is not deemed to be a statutory consultee under the Act, Celtic Array Ltd. considers that, owing to the location of the proposed offshore wind farm and its onshore elements, their proposal will have an impact upon the island and its residents. The methodology setting out how Celtic Array Ltd. is going to consult has already been presented in the Statement of Community Consultation (SOCC) and endorsed by the IACC on the 24 September, 2012.

Celtic Array Ltd. intends to adopt a two staged consultation process. The first stage commenced on Monday, 29th October, 2012 and will run until Thursday, 20th December, 2012. The second stage is anticipated to take place during Quarter 3 of 2013, prior to submission of their Development Consent Order (DCO) in Quarter 4 of 2013. Although the project is located offshore in the Irish Sea, Celtic Array Ltd. will also submit planning applications to the IACC for onshore works associated with connection of the development to the national grid.

Celtic Array Ltd. anticipates that it will carry out specific consultation on the onshore proposals, including substation and land based elements of the project in spring 2013.

1.2 Purpose and Scope of the Review

This document provides IACC’s comments on the content of Celtic Array Ltd.’s consultation documents comprising:

¹ Round 3 Irish Sea Zone Rhiannon Wind Farm Limited. Preliminary Environmental Information In Support of Section 42 of the Planning Act 2008. October 2012. The first Celtic Array offshore wind farm project within the Irish Sea www.celticarray.com

- Stage 1 Community Consultation Document. This is the non-technical summary of the Stage 1 Preliminary Environmental Information (PEI);
- Stage 1 Preliminary Environmental Information (PEI). This is the technical report required under S.42 of the Planning Act 2008 and describes the potential impacts of the RWF on the environment; and
- Photomontages from seven viewpoints selected from coastal locations in the vicinity of RWF.

The review has been prepared using available published information, legislation and guidance, inputs from IACC officers, and the professional judgement and experience of the technical team.

2. Technical Review

This section provides the technical responses and relates to all of the relevant chapters of the PEI for ease of reference.

2.1 Consultation

IACC recognises that the Planning Inspectorate (PINS) has determined that the Authority is not a statutory consultee under the Planning Act 2008. However, the Authority is central to the consenting of onshore associated developments that will be located on Anglesey. In this context it is appropriate that IACC has engaged with Celtic Array Ltd. to gain an understanding of the project as a whole, and in particular to be in a position to provide consultation responses on those offshore elements that are of material interest to the Authority in terms of potential impacts on Anglesey.

While the Authority has responsibility for determining a variety of statutory consents, under the Energy Island Programme the IACC has also been engaging with Celtic Array Ltd. as part of strategic initiative to encourage investment in low carbon energy projects on Anglesey.

Section 7.1 of the SOCC emphasises the role of Local Authorities in the DCO process and IACC welcomes Celtic Array Ltd.'s approach to consulting the Authority and the people of the Isle of Anglesey on the offshore element of the RWF project. The offshore elements of the project are closely linked to the onshore elements which directly affect Anglesey and its communities, and should therefore be addressed in an integrated way. Part B of the SOCC „*Consultation and Engagement*’ notes the importance of consultation occurring at a sufficiently early stage to allow consultees to have the opportunity to help shape the proposals as far as possible (Paragraph 8.5).

IACC welcomes the commitment in Paragraph 8.6 to present information on onshore elements in Anglesey during the offshore consultation stages. Figure 5 sets out the anticipated consenting and consultation programme, however IACC wishes Celtic Array Ltd. to provide a more detailed Consultation Plan setting out when and how consultations relating to all relevant topics will take place with IACC, with a provisional timetable that can be used to plan for and prepare information provision and consultation responses. This Plan would sit alongside the programme for public consultation set out in Figure 5 of the SOCC and should include information on what, and when, technical and design information will be provided to allow the Authority to provide timely inputs where the interests of Anglesey and its communities may be affected.

Comments are provided through the rest of the document illustrating where consultation on specific issues will be required and the Authority anticipates that these will be addressed in the Consultation Plan so that responses can be provided in advance of Celtic Array Ltd.'s. Stage 2 Preliminary Environmental Information report.

2.2 Planning policy and legislative development

The Authority notes that the introduction to the PEI (page xviii) states that the scope of the EIA shall continue to evolve through stakeholder and early survey work feedback and results. It will be necessary to ensure that any changes to scope, particularly those that make a material difference to scheme design and EIA methodology to that currently presented are clearly documented and agreed and IACC informed of such change.

Paragraph 5.2 provides a list of Planning Inspectorate guidance on the EIA process that Celtic Array Ltd. intends to take into account. IACC suggests that Advice Note 11: Working with public bodies is added to this list in line with the PINS Scoping Opinion.

Paragraph 1.5 (bullet point 2) and Paragraph 2.18 refers to the intention to apply for a Marine Licence inside Welsh territorial seas to the Welsh Government (Marine Consents Unit). IACC would expect to be consulted over such proposed applications. The Welsh Government's Interim Marine Licensing Guidance (2011) is not referred to in the PEI. The Authority wishes to see this Guidance included in the PEI, in line with the PINS Scoping Opinion recommendation.

The document rightly acknowledges that the onshore works will require planning permission from IACC. The Authority welcomes the stated provision of an initial onshore elements Scoping Report but would require clarification whether this is an initial options document for elements that are required as well as potential locations, or a more specific development led EIA Scoping Report. Early clarification of this point would enable IACC to identify its resource requirements and provide an opinion in a timely manner through the consultation process.

IACC notes that certain onshore infrastructure (such as underground cables and a substation) will be subject to a planning application and EIA submitted for the IACC's determination. The PEI correctly identifies the relevant legislation and procedures for this type of development and IACC welcomes the approach as outlined. As noted in the preceding paragraph the Authority would however like to have clarity if the Scoping Report that is referred to is for suitability/options/optioneering of these works and their location choice, or to support a full planning application. Will there be for instance, more refined route corridors in the Scoping Report? This is important to enable IACC and those who live and work on the island opportunity to comment on where these potentially extensive developments may be planned before an application is submitted.

Alternatives

Whilst the PEI makes the case that it is not the role of the Alternatives Section of the EIA to repeat the ZAP and other related process, there is no information on what type of alternatives should or may be considered. Celtic Array Ltd. should provide clarification and justification if there are to be no alternatives discussed, and IACC would like assurance that this should not be the approach for onshore works assessments.

Rochdale Envelope

IACC notes the inclusion of this principle and welcomes Celtic Array Ltd.'s acknowledgment that the „realistic worst case scenario“ should be included as part of the EIA. . Specific notice should be given to the reference to „realistic“; IACC notes that, at present, 15MW wind turbines are not available.

2.3 Site selection

IACC has already made comments on the ZAP and has no further comments to make here.

2.4 Project description

The description of the project at this stage is general and lacks detail. Although it is assumed that the project will be described in full within the Stage 2 PEI, it is essential that IACC is consulted at the appropriate time on such matters as turbine selection, turbine numbers, cable routing, construction methodology, impact assessment, proposed mitigation etc. before Stage 2. This should be addressed in the Consultation Plan referred to in Section 2.1.

2.5 Environmental impact assessment methodology

Definition of terms – The Glossary of key terms in the PEI includes reference to both impact and effect. The terms „impact“ and „effect“ are both used in the PEI in similar ways (e.g. Paragraph 4.1 „*potential environmental effects*.. .’ and Paragraph 3.8 „*the environmental impacts*...“). IACC recommend that for consistency one or other of these terms is used, or defined to mean clearly different things. It is recommended that their interchangeable use is avoided.

Stakeholders - Throughout the PEI (Paragraphs 4.40, 4.51, 5.14 *et seq.*) there is reference to stakeholders, key stakeholders and key technical stakeholders. While it is appropriate that Celtic Array Ltd. remains open to responses from all potential stakeholders, it would be helpful to provide a list of identified key stakeholders or key technical stakeholders as an Appendix to the PEI. This will help to inform future consultation involvement and liaison.

Integration of offshore and onshore elements, cumulative assessment - Although both the onshore and offshore elements of the project are referred to, the onshore works will be addressed through separate planning applications to IACC. Currently the PEI lacks sufficient detail on how the separate offshore and onshore and associated environmental impact assessments will be integrated. It is essential that Celtic array provides sufficient information during consultation to inform the Authority as to how the offshore assessment and onshore assessments will address this to ensure cumulative and additive impacts are fully considered.

As noted by PINS previously in its Scoping Opinion, the offshore Environmental Statement must include sufficient detail on the onshore infrastructure to allow IACC and the people of Anglesey to understand

the relationship between the offshore and onshore elements of the project, including any potential cumulative impacts and relevant onshore planning considerations. Paragraphs 2.20 and 2.21 state:

“The offshore ES will include sufficient detail on the onshore infrastructure to allow the Planning Inspectorate and stakeholders to understand the relationship between the offshore and onshore elements of the Project, including any potential cumulative effects and relevant onshore planning considerations. Other consents may be required to connect the onshore substation to the existing transmission network.”

IACC expects Celtic Array Ltd. to undertake timely and detailed consultations over all onshore proposals related to the project and for these to be integrated with consultations over offshore elements of the project as outlined in Section 2.1.

This need was also highlighted in the Scoping Opinion produced by PINS in Paragraphs 2.35, 2.36 and 2.49. However the Table of Key Changes made after receipt of the Scoping Opinion page xix of the PEI shows no change to the Environmental Impact Assessment Methodology after receipt of the Scoping Opinion. IACC requests that Celtic Array Ltd. provide further information on how the EIA and Environmental Statement will be structured to take this into consideration, and how this integration will be undertaken as a result of the consultation process.

Decommissioning - The inclusion of decommissioning impacts in the assessment, including the cumulative assessment, is welcomed.

Wastes - Little or no reference is made to impacts arising from wastes, or of waste management either onshore or offshore. Page 256 makes passing reference to waste in relation to water quality in Table 10.1. The Scoping Opinion provided by PINS (Paragraph 2.53) specifically requested that waste be considered. It is considered that insufficient explanation has been provided on waste generation, control or management, both for the offshore and onshore elements of the project.

Grid capacity - IACC notes that there are separate consultations ongoing with National Grid concerning the capacity of their network in North Wales. It will be important to include in the assessment the impact of Irish Sea Zone grid connection requirements in order to consider all associated and cumulative impacts of the project. IACC agrees that a proper assessment of the scheme will require an understanding of the full implications of cabling, grid connection and onward transmission, and would expect to be involved in discussions relating to cable routes, landfall locations and grid connection matters, and to see this issue reflected in the EIA.

Assessing significance - Paragraph 5.2 description of assessment guidance makes no reference to Institute of Ecology and Environmental Management (IEEM) guidance on ecological impact assessment, which is the standard methodology for ecological impact assessment. This should be included.

As set out in Section 2.8.4 of this document, all visualisations should be produced and presented in line with the guidance set out in *Guidance on the Assessment of the Impact of Offshore Wind Farms*:

Seascape and Visual Impact Report published by the DTI in 2005 and *Visual Representation of Windfarms Good Practice Guidance* published by Scottish Natural Heritage (SNH) in 2006.

Paragraph 5.12 – the likelihood or probability of an impact occurring is also a relevant contributory factor when assessing significance. IACC would wish to see this included in the description of the assessment methodology.

Alternatives (Paragraphs 1.2, 4.5 and 5.8) - Celtic Array Ltd. does not refer to consideration of alternative cable routes, although an „area of search“ for the cable route is currently under consideration. The assumption appears to be that the cable route makes landfall at Anglesey. Celtic Array Ltd. should provide evidence of assessing other alternatives, including the option of landfall being made outside Anglesey in order to present a transparent and balanced assessment of the alternatives considered and the preferred option. The Authority expects that Celtic Array Ltd. will provide more detailed information on the decision-making related to the indicative cable corridor and subsequently the more detailed cable route(s) as indicated in Figure 1.1.

Paragraphs 5.30 and 5.31 – IACC would expect to be consulted (as discussed in Section 2.1) over possible alternative landfall locations.

Timeframes - Paragraph 5.30 – the surveys and studies that are referred to should not be confined to the listed elements, including “*temporary construction impacts on local amenity*”. The duration of the construction period (likely to be a number of years) should also be taken into account. Local amenity and other environmental receptors may be affected during the operational and decommissioning phases of the project over the medium and long term. This also illustrates the importance of addressing the relationship between onshore and offshore impacts in an integrated way.

Welsh language impact assessment – IACC welcomes the commitment to a Welsh language assessment as part of the planning assessment and would wish to be involved, during consultations, in agreeing how this will be carried out.

Habitat Regulations Assessments (Paragraph 2.31) – IACC wishes to have reassurance that the Habitats Regulations Assessments will take into account inter-relationships between offshore elements, onshore sites, habitats and species. The Habitats Regulations Assessments must be properly scoped at a strategic level to reflect the number of bodies involved and the potential inter-relationships and in-combination impacts. IACC expects to have an active involvement during the Habitats Regulations Assessments. For example IACC expects to attend meetings on this subject in combination with CCW (or its successor in title) and other statutory bodies.

2.6 Physical processes

2.6.1 Water quality

Very limited information is presented within the PEI document (Paragraph 6.40) in respect of the assessment of the baseline offshore chemical water quality conditions. The report refers to the quality being good in respect of Bathing Water Directive (2006/7/EC) standards which are based on compliance with microbiological water quality in terms of *E.coli* and Intestinal *enterococcus* rather than chemistry. The main expected water quality impacts relating to the nearshore environment around Anglesey that may arise from the proposed wind farm will be related to sediment disturbance and spillage of chemical associated with construction and operational maintenance. Disturbance of marine silts in a reduced state may potentially result in local degradation of chemical water quality through reduction in dissolved oxygen concentrations and also lead to partitioning of contaminants from the sediments into the water column. Therefore assessment of the baseline characteristics of the chemical water quality status is of importance to determine the significance of these impacts.

Paragraph 6.16 indicates that surface suspended sediment concentrations within the Irish Sea Zone (ISZ) are typically low. The degree of suspended solids near the surface is important in determining primary productivity. However, it is indicated that there is only limited data, reported in the ZAP report, of suspended sediment concentrations in the lower water column and towards the seabed, which are likely to be higher due to tidal current disturbance. The baseline suspended sediment concentrations at depth should be compared to expected concentrations arising from sea bed construction activities to determine the magnitude of this temporary effect on local water quality status. The dispersion and deposition of this disturbed settlement in relation to important sessile marine ecological features such *Modiolus* reef should also be examined.

In terms of the physico-chemical water quality status it is indicated in the PEI that measurements of temperature and salinity have been limited to surface measurements. Ideally this should be extended to profiling work, including measurement of dissolved oxygen concentration, to show the absence of any thermal stratification during the summer months. The application site is reportedly in an area of well mixed water (Figure 6.4), which may be expected given the shallow water depths. Ideally this should be demonstrated as this may effectively reduce the magnitude and potential for localised declines in dissolved oxygen resulting from disturbance of anaerobic sediments.

For the inshore area associated with the main cable route connecting the turbine array to shore will require works to be undertaken within a Water Framework Directive (WFD) waterbody. The actual route is currently undetermined but will cross the Anglesey North C22 Coastal WFD waterbody which is described in the Western Wales River Basin Management Plan (RBMP). As such the water quality impact assessment will need take in to account and make reference to the WFD objectives and descriptors of this waterbody. There is a requirement to demonstrate cable installation will cause no deterioration of current WFD status or prevention of future objectives being met.

2.6.2 Sediment quality

Paragraph 6.40 indicates that sediment testing has been undertaken as part of the ZAP reporting. However, it is not state whether this testing is just from mobile superficial deposits or whether deeper sediments that will be disturbed during turbine installation have been examined.

The results from the sediment testing are reported to show uncontaminated sediments, with the exception of the presence of some elevated arsenic. There is no indication in the PEI report if any testing has been undertaken for organic chemicals or priority substances that should also be considered. It is understood that radiochemical testing will form part of future baseline characterisation studies.

Analysis should be undertaken to assess the effects of sediment disturbance on chemical water quality through partition analysis. This should be undertaken to show the expected concentration in the water column of contaminants resulting from the additive effects of baseline concentrations and those derived from disturbed silts to demonstrate if there is likely to be any temporary exceedences of saltwater environmental quality standard (EQS). This approach will be a particular necessity for the assessment of the inshore cable route zone that will pass through a WFD waterbody. The WFD coastal waterbody description includes a number of organic chemicals as part of the features determining water quality conditions that will need to be considered.

2.7 Biological environment

Paragraph 5.35 refers to intertidal ecology being fully addressed in the ES but not in the PEI as there is at present insufficient information on landfall or cabling routes.

Little reference is made to terrestrial ecology in this offshore focused document, with the emphasis on marine flora and fauna. However the Authority believes that terrestrial ecology and biodiversity must also be fully considered to determine whether or not there may be indirect impacts arising from the offshore elements of the project.

Local Biodiversity Action Plan fish species are referred to in Paragraph 7.74, but there is no further reference as to how potential marine (or terrestrial) biodiversity impacts will be addressed in the studies and the EIA. IACC would wish to see a fuller description of how biodiversity will be addressed.

Paragraph 4.51 refers to onshore works being subject to separate scoping and EIA(s) to be submitted to IACC. The Authority wishes to emphasise that these should detail how the cumulative impacts will be addressed with regard to biodiversity.

2.7.1 Benthic ecology

The potential for impacts set out within this section will be considered by the relevant statutory consultees and lie outside the scope of IACC's interest other than with regard to the potential for indirect

impacts upon commercial shellfish beds. In this regard IACC's comments are set out under Section 2.7.1.

2.7.2 Fish ecology

The Authority requests that the assessment of potential impacts on fish, shellfish and elasmobranch ecology (e.g. Paragraph 7.85) should cross-refer to the impact assessment for fisheries, including the potential impacts over time for construction, operation and decommissioning. This is discussed further in Section 2.8.1 below.

2.7.3 Marine mammals, turtles and basking shark

The potential for impacts set out within this section of the PEI will be considered by the relevant statutory consultees such as CCW, and lie outside the scope of IACC's interest other than with regard to the potential for indirect impacts upon marine tourism. In this regard IACC's comments are set out under section 2.7.2.

2.7.4 Ornithology

Due to the distance of the RWF from Anglesey the only potential impacts would be on feeding and wintering areas utilised by birds that nest on the island. The birds most likely affected would be auks (guillemot, razorbill and puffin) that utilise cliffs on the island. A series of ornithological surveys have been undertaken of the area, the results of which indicate that these three auk species may occur in important numbers within the ISZ with razorbill potentially occurring in nationally important numbers.

The report discusses razorbill and greater backed gull but additional information in relation to other auk species and other species breeding/wintering on Anglesey is required.

2.7.5 Nature Conservation designations

The baseline information gathering and assessment process should take into consideration offshore and onshore sites and species of nature conservation importance, including designated sites, which may experience direct, indirect or cumulative impacts as a result of the project. It is expected that this will mainly be addressed during the onshore scoping and EIA(s), and would be covered by the relevant statutory agencies including the Countryside Council for Wales. However the Authority would wish to see evidence that potential indirect and cumulative onshore impacts on Anglesey have also been taken into account in the offshore EIA as part of an integrated assessment of the entire project.

2.8 Human environment

Paragraph 8.214 refers to relevant legislation and development plans including but not limited to:

- Section 85 of the Countryside Rights of Way Act (CROW) Act 2000;
- National Parks and Access to the Countryside Act 1949; and
- AONB Management Plans.

The Authority therefore expects to see reference made to the Anglesey AONB Management Plan (2009-2014). As stated in the Authority's Scoping Report Response letter dated 6 August 2012, regard should be had to the Council's Rights of Way Improvement Plan (ROWIP) 2008-2018, especially the economic potential of access/rights of way; and the status of the All Wales Coastal Path and any associated Strategies produced by the Welsh Government.

2.8.1 Commercial fisheries

The survey of fish populations as reported in the PEI appears to be relatively comprehensive as does the thorough examination of commercial fishing which has shown good engagement with stakeholders.

The surveys have been based on the use of beam trawling sampling techniques and therefore will be biased towards the capture of demersal species and marine epifauna. These data will be of direct relevance in relation to the assessment of potential effects on commercial fisheries. There appears to have been no sampling undertaken using mid-water or pelagic trawling methods to provide a full description of the fish populations through the water column. The pelagic fish species may be of less importance to the main commercial fishing operations that mostly targets shellfish and sole, but are important in terms of ecosystem functioning and as a food source for sea birds and marine mammals. It should be noted that some commercial mid-water trawling operations are undertaken in the area for both whitefish and herring, thereby increasing the need for mid-water fish populations to be considered.

Inshore areas will require survey in relation to the proposed onshore cable route, once determined. As this route will cross a WFD coastal waterbody (North Anglesey) these surveys should include intertidal fish and mobile epifauna surveys using the best practice multiple sampling method approach. The use of multiple sampling techniques such as fyke netting and small mesh seine netting is important to fully describe the status of fish and epifauna communities in these dynamic intertidal areas. These surveys are of importance as the intertidal areas can provide important nursery areas for commercial fish species and feeding habitat for birds.

The need to assess the potential effects of electromagnetic fields (EMF) on potentially sensitive fish species such as elasmobranchs has been identified and the inclusion within the EIA is welcomed. The assessment should include a review of the latest research in this area.

There should be clear linkages between the assessments of potential impacts on and interactions between fish ecology (biological environment) and fisheries (human environment), in particular the potential impacts over time for fishing in North Wales. IACC expects to be consulted over fisheries and fish ecology baseline data studies and impact assessment as well as over any proposed mitigation.

2.8.2 Shipping and navigation

The focus of the PEI is entirely on marine traffic, and the Authority considers that the proposed scope of study in relation to marine traffic is appropriate. The stated buffer zones for the Anglesey and Liverpool Bay Traffic Separation Schemes (TSS) should be considered in detail as part of the EIA. IACC and the Maritime and Coastguard Agency (MCA), along with other key stakeholders, should be consulted at an early stage over potential marine traffic impacts, interactions and cumulative impacts with other schemes, and proposed mitigation.

With regard to recreational boating, likely impacts (page 185 of the PEI) do not consider the potential for economic impacts upon boat operators resulting from the development. These may include impacts upon operators of marine wildlife cruises which currently operate from Anglesey Ports. This should be covered within this section, or within the section related to socio-economic impacts.

Onshore transport

In its Scoping Report Response letter dated 6 August 2012, the Authority noted that if there are likely to be any onshore highway issues associated with the offshore development, this should be considered for inclusion as a Traffic Section within the EIA and Construction Phase Traffic Management Plan.

The PEI makes no reference to road or rail transport. While this would also be addressed under the separate onshore scoping and EIA, road and rail transport issues should also be addressed in the PEI and the offshore EIA to ensure proper integration of the assessments. The Authority requests that air quality and noise and vibration impacts are included as an integral part of the assessment process in association with traffic and transport assessments. IACC would expect to be involved and consulted (as described in Section 2.1) in relation to onshore transport and option appraisal both at a local and wider strategic level. Certain abnormal and indivisible loads (AILs) will need to be transported by sea and may require the use of Holyhead Port. There should also be early consultation with IACC on AILs.

2.8.3 Aviation

Paragraph 8.160 refers to helicopter operations servicing the oil and gas industry. The PEI should also refer to helicopter activities operated by RAF Valley (including the Search and Rescue service), North Wales Police and the Wales Air Ambulance. Paragraph 8.162 Table refers to continued consultations with ten Irish Sea helicopter operators; Celtic Array Ltd. should confirm that these consultations include the abovementioned emergency services.

Paragraph 8.162 – the table describes a potential for an impact on the air traffic control facility at RAF Valley arising from development within the ISZ. No reference is made to Maes Awyr Môn (Anglesey Airport), owned by IACC and situated at RAF Valley, which operates private and commercial flights. The impact assessment (including Table 10.1) should consider aviation issues associated with Maes Awyr Môn in consultation with IACC, as well as the military infrastructure and facilities administered by the Defence Infrastructure Organisation.

2.8.4 Seascapes, landscapes and visual amenity

The Authority considers that the PEI would require additional information in order to have confidence that the SLVIA to be undertaken as part of the EIA is likely to identify all potentially significant impacts. Particular omissions are in regard to indicative visibility, baseline data sources, proposed viewpoint locations, criteria for identifying potentially affected receptors and outline assessment methodologies.

ZTVs

ZTVs would have been useful to inform the PEI. To aid this review, AMEC has produced ZTVs to hub and maximum blade tip height for 5MW turbines (109m hub, 180m tip) and 15MW turbines (175m hub, 300m tip) for the IACC. The area covered by these ZTVs includes all areas within 60km of the RWF site boundary.² The blade Tip ZTVs are shown on Figure 1 and hub height on Figure 2 of this document.

Photomontages

The photomontages accompanying the PEI largely adhere to best practice and are of generally high quality. Wireframe views should be provided to accompany each photomontage. Wider horizontal angles of view may be required to allow cumulative assessment from some viewpoints. The number of viewpoints included in the PEI is small and appears to be a subset of a larger group. A map and table setting out all proposed EIA viewpoints should be provided so that any omissions can be identified efficiently. A justification for the viewpoint selection would also be helpful which should include evidence of consultation.

Study area

The 35km study area accords with best practice³. Whilst the proposed turbines may be considerably taller than any considered when drawing up the guidance, it may be that visibility beyond 35km would be severely restricted by atmospheric conditions whatever their height. It would be useful to have an analysis of visibility data from RAF Valley, which may be useful in determining how often objects are likely to be visible at various distances.⁴ This data could be used in conjunction with ZTVs to provide a „visibility baseline“.

² The ZTVs have been produced using an indicative layout based on the locations of the outer-most turbines of the 146 turbine scheme illustrated in Figure 4.4 of the PEI. The ZTVs were run using an 80km site-centred radius, which extends beyond the 60km site buffer at all points.

³ Paragraph 4.2 of Guidance on the Assessment of the Impact of Offshore Wind Farms: Seascapes and Visual Impact Report, 2005, DTI in association with The Countryside Agency, CCW and SNH.

⁴ Ibid Paragraph 4.2.9.

Landscape designations

The Lake District National Park (>60km distant) and Clwydian Range AONB (>50km distant) are unlikely to be significantly affected. The inclusion of these areas has the potential to divert assessment resources from areas where significant impacts are more likely to be experienced, such as the Anglesey AONB and visual receptors along the north Anglesey coast.

Paragraph 8.181 of the PEI states that “*those areas/features within designated landscapes are likely to be significantly affected*” will be identified once the worst case scenario has been established. What criteria will be used to identify such features? These criteria will need to be robust to ensure that potentially significant impacts are not excluded from the EIA.

Landscape character

This aspect of the SLVIA is covered in Paragraphs 8.189 – 8.196. The Authority understands that the Regional Landscape Character Areas for Wales are currently in draft. The reproduction of large segments of descriptive text from the draft assessments without further analysis is not helpful in defining the focus of the EIA. Assessment of impacts on landscape character should be made using LANDMAP. Whilst designed for use in assessing onshore wind projects, the approach set out in CCW’s LANDMAP Guidance Note 3: Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Turbines could readily be applied. It should be noted that if the approach set-out in Guidance Note 3 is adopted, only the Visual & Sensory Aspect of LANDMAP would need to be assessed due to the separation distances involved. The opinion of CCW should be considered in this regard when progressing to the Stage 2 PEI. Reference should also be made to the Anglesey Landscape Strategy Update 2011 which describes in detail the 18 Landscape Character Areas on Anglesey which have been assessed using the quality assured Landmap data.

Seascape character

This aspect of the SLVIA is covered in Paragraph 8.197. Whilst the Authority agrees with the use of the regional seascape units identified in the Seascape Assessment of Wales 2010 to provide a broad framework for the assessment, the PEI fails to provide analysis that might help focus resources for the EIA. It is also noted that whilst IACC requested that consideration be taken of the North Anglesey/North Wales seascape pilot study in its response to the ZAP in April 2012, this study is still not referred to in the PEI. The Authority wishes to highlight the forthcoming Seascape Character Assessment for Anglesey and Snowdonia which is due to be completed in the first half of 2013, and expects to see this made use of in due course.

Potential impacts (Paragraph 8.208)

Construction Vessels

Whilst it is agreed that potential impacts associated with the construction phase are inherently temporary, IACC understands that the construction period may last for a number of years and, as such, consider that these impacts should be considered.

Impacts on Wales Landscape Character Areas and Regional Seascape Units

See comments under Landscape character and Seascape character above in relation to areas to be assessed, and Study Area with regard to establishing a „visibility baseline“.

Impacts on designated areas

It is noted that the work undertaken to date has not been able to make suggestions as to which of the designated areas might be „scoped out“ and what the focus of assessment would be in those included. It would be helpful if reference were made to the Anglesey AONB Management Plan to identify the special qualities and key characteristics of the area(s) that may be affected by the proposed development.

Views from coastal settlements, recreational walkers/tourists, Impacts on other receptor groups

More detail should be provided with regard to which settlements will be included in the assessment and what viewpoints will be used for visualisations. Criteria should be set out for the identification of receptors to be assessed. The categories included within „other receptor groups“ are appropriate as is the inclusion of the Wales Coast Path.

Potential cumulative impacts

All wind energy and other developments identified to date should be listed (Table 5.3 of the PEI states 28 onshore wind farms) and criteria for developments to be included in the assessment set out. In cumulative impact assessment it is important that the incremental impact of the development under consideration is clearly identified. An outline methodology for this should be included.

Potential impacts (Table 10.1)

The entire assessment should take into account the potential for cumulative impacts with respect to other offshore wind developments within the Irish Sea Zone; this is considered to be a critical strategic element of the assessment.

The section of Table 10.1 headed „Potential impacts on visual amenity“ should be expanded to include separate rows for potential impacts on:

- Seascape character;
- Landscape character;

- Designated landscapes;
- Visual amenity, which might be usefully sub-divided into onshore and off-shore.

All of the above should include potential cumulative impacts. As noted above, the duration of the construction period and any associated impacts should be part of the assessment.

Recommendations for additional responses/inputs

The information included in the SLVIA section of the PEI may be considered insufficient to allow IACC to have confidence that all potentially significant seascape, landscape or visual impacts will be assessed/identified by the EIA. In particular:

- Hub height and blade tip ZTVs should be provided for all scenarios under consideration;
- A full list of proposed photomontage/wireframe viewpoint locations should be provided along with a brief justification for their selection;
- All visualisations should be produced and presented in line with the guidance set out in *Guidance on the Assessment of the Impact of Offshore Wind Farms: Seascape and Visual Impact Report* published by the DTI in 2005 and *Visual Representation of Windfarms Good Practice Guidance* published by SNH in 2006;
- Reference should be made to the Anglesey AONB Management Plan as requested by IACC in its responses to both the ZAP and the Scoping Report;
- Potential impacts upon both the Lake District National Park and the Clwydian Range AONB should have been scoped out by this point as their inclusion has the potential to divert assessment resources from the consideration of other, potentially significant impacts;
- It is considered that LANDMAP would provide a more detailed and robust basis for assessment of landscape character than the draft regional landscape character areas of Wales. If the methodology set out in CCW's LANDMAP Guidance Note 3 is adhered to, such an assessment should not be unduly onerous;
- Seascape assessment should make reference to the North Anglesey/North Wales pilot study as requested by IACC in its response to the ZAP and the forthcoming Seascape Character Assessment for Anglesey and Snowdonia;
- An outline methodology should be provided for the identification of visual receptors to be included in the assessment; and
- Outline methodologies should be included for:
 - Cumulative data collection;
 - Criteria to be used to determine which schemes would be included in the cumulative assessment; and
 - Assessing the incremental impact of RHW in a range of cumulative scenarios.

2.8.5 Other users of the sea

IACC notes that this section focuses upon other users of the Irish Sea not considered elsewhere in the PEI report which could potentially be affected by the development of the site. IACC is content to leave comment to the relevant regulators and statutory consultees. The requirement to consider recreational and fishery users of the sea is discussed elsewhere in this document.

2.8.6 Archaeology and cultural heritage

Paragraph 8.280 states “*This section characterises the archaeological and cultural heritage of the site ...*”. It is not made clear that “the site” in this context refers to the offshore installation. Nor is it made clear that baseline data discussed in the report only refers to offshore and intertidal archaeology.

Paragraph 8.281 referring to “*Main historic environment themes ...*” has no mention of potential impacts on settings of designated historic environment assets.

Chapter 8 addressing „*Seascape, Landscape and Visual Amenity*’ includes numerous references to onshore historic environment assets, including World Heritage sites; Caernarfon Castle, Beaumaris and Conwy Castle which for consistency should also be referenced under archaeology and cultural heritage.

Surveys and studies carried out to date

Paragraph 8.282 states that “*Celtic Array Ltd. commissioned an archaeological and cultural heritage study ...*”. Again, it is not made clear that “the study” focussed on offshore and intertidal archaeology.

Paragraphs 8.282 – 8.284 describes appropriate surveys and methods for offshore archaeological studies.

Paragraph 8.285 setting out relevant guidance documents have focussed on offshore and intertidal archaeology studies. For the assessment of potential impacts to the settings of designated heritage assets onshore, the following guidance should also be followed:

- Institute for Archaeologists” (IfA) Standards and Guidance for Archaeological Desk-Based Assessment (IfA 2011).
- Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Cadw, 2011).
- Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process, Revised (2nd) Edition (Cadw, 2007)

Paragraph 8.286 describes the legislation considered as part of the ZAP and the PEI, and has focussed on offshore and intertidal archaeology studies. For the assessment of potential impacts to the onshore historic environment resource and the settings of designated heritage assets, the following legislation should also be considered:

- The Ancient Monuments and Archaeological Areas Act 1979.
- The Planning (Listed Buildings and Conservation Areas) Act 1990.
- Chapter 6 of Planning Policy Wales (PPW) (Edition 4 - 2011).

This states the Welsh Assembly's objectives to „...*preserve or enhance the historic environment...*“, to „...*protect archaeological remains, which are a finite and non-renewable resource...*“ and to ensure the protection of historic buildings and conservation areas.

Advice on planning and the historic environment, given in Welsh Office Circular 61/96: Planning and the Historic Environment: Historic Buildings and Conservation Areas (and amendment Circular 1/98) and Welsh Office Circular 60/96: Planning and the Historic Environment: Archaeology, should also be followed.

Paragraph 8.287 refers to stakeholders consulted as part of the ZAP and the PEI. These stakeholders should also be consulted regarding the scope of desk studies to establish the onshore historic environment baseline.

Paragraphs 8.289-8.301 „*Archaeological Context*“ focuses on offshore archaeology. In order to fully assess the potential impacts on the historic environment, data is also required on onshore features which, although not within the offshore development area, may be indirectly affected.

A desk-based study, supplemented by visits to onshore receptors with potential to be indirectly affected, should be carried out in accordance with Institute of Field Archaeology (IfA) guidance to establish the historic environment baseline.

The scope of the desk study should be agreed with consultees described in Paragraph 8.287. The desk study should consider national and county based registers of known archaeological and historical sites; relevant historic maps and documents; place and field name evidence; aerial photographs and published sources. For the assessment of indirect impacts on settings reference should be made to the calculated Zone of Theoretical Visibility (ZTV) described in Paragraph 8.180 of Section 8.4.

As described in Paragraphs 8.211, 8.212 and 8.214 of Section 8.4, the assessment should assess archaeological and landscape impacts (onshore and offshore) in a consistent and integrated way across these disciplines.

It is likely that some of the heritage assets referred to, but not described in detail, in the designated landscapes sub-section (Paragraphs 8.182 – 8.207) of Section 8.4 will be scoped out following calculation of the ZTV, as stated in Paragraph 8.180. It should be acknowledged, however, that although the ZTV is a useful tool, particularly for initial appraisal, it cannot be used as the sole basis for assessment. Field visits, supplemented by wireframe illustrations, should be used to assess the likely visibility of turbines and their potential impacts on the settings of designated assets.

2.8.7 Socio-economics

The PEI states that the onshore elements of the project will be the subject of a separate planning application subject to full Environmental Impact Assessment (EIA) and separate Environmental Statement (ES). The PEI also states that the ES for the DCO application will include sufficient detail on onshore elements to understand the relationship between onshore and offshore elements.

Whilst the PEI and subsequent EIA process for the DCO focus on the offshore elements – this part of the project does have onshore implications for socio-economic receptors and as such needs to provide a view on these. At the current time the amount of detail and scope of the information provided does not provide sufficient information to allow the Authority to understand and consider the onshore impacts of the offshore activity.

IACC understand that Volume 2 (the environmental statement and appendices) should have more detail on these matters and as such have provided a view on some areas that we would expect this to cover.

IACC wishes to draw the attention of Celtic Array Ltd. to the presence of the Anglesey Enterprise Zone and would wish this to be taken into account during consultations and assessment.

Baseline

Level of detail

The PEI baseline information for socio-economics is very high level at this stage and does not provide sufficient detail to measure the potential impacts of the project. The economic conditions, demographic make-up and social characteristics of Anglesey and North West Wales are considerably different to Wales as a whole and need to be described in the baseline given it is this much smaller area that is likely to experience the significant impacts.

Further detail is needed on the areas where the socio-economic impacts have the potential to be significant. Whilst Celtic Array Ltd. cannot be 100% certain on elements of the project including the sub-sea cabling route, the location of the onshore sub-station and construction port locations at this stage it is clear that options are being considered. This optioneering process should be supported by the development of a socio-economic baseline for these more localised areas that may be affected. The socio-economic performance of any of these localised areas on Anglesey should be presented against figures for Anglesey as a whole alongside relevant national (Wales) comparators to provide context.

Given the overall scale of the project we would argue that this also warrants a more detailed baseline and impact assessment if a proportionate approach is to be adopted. This sets a clear precedent and process for undertaking later EIAs as additional areas in the ISZ are developed. The PEI notes the need for this more detailed information but has not yet provided this and the information within the socio-economics chapter does not provide information beyond what was included within the ZAP. The Authority wishes to see further detail on the following:

Labour market and workforce profile

It is critical for the Authority and its partners to understand the predicted labour and skills requirements of all elements of the project, offshore and onshore. Given the long lead in time to project construction this allows the existing skills and training infrastructure and investment programmes to be demand led, helps provide the correct training and enable s the local workforce to gain employment from the project. IACC would wish to see this information provided as part of consultation described in Section 2.1.

Given the other low carbon energy sector projects that are currently being developed e.g. Wylfa nuclear new build, Biomass proposals at Anglesey Aluminium site and other developments it is essential that a there is a clear view of the overall demand for skills and labour and the timing of projects to ensure that positive impacts on the local workforce and labour market are maximised. The information provided in the PEI is high level and does not provide the necessary level of detail on likely skill areas and occupations to allow an assessment of issues, opportunities and potential cumulative impacts.

The Authority wishes Celtic Array Ltd. to provide a skills profile of the construction and operational workforce requirements to inform the EIA. This should also consider how this can fit with existing work by Energy Island stakeholders to up-skill and re-train the local workforce to access new opportunities.

Sectors for analysis within the baseline

At present there is limited information in the PEI on some specific sectors of the economy that will be affected by the offshore and onshore elements of the project. Setting a baseline at this point provides a useful position against which to measure changes over time. Sectors that are likely/could be impacted include:

- Construction,
- Tourism
- Renewable energy
- Manufacturing
- Transport and logistics

Further detail on the scale, make up, size and prospects for each of the above should be provided to give a baseline for relevant sectors including the above list. As for the baseline material overall these should be presented at an appropriate geographic scale which takes into account where impacts will occur and availability of data.

Consistency

Work has already been undertaken by IACC to consider the wider socio-economic impacts of the Energy Island Programme and this information will be useful to Celtic Array Ltd. in setting the context and

providing a baseline from which to assess impacts. Further dialogue with the Authority should be undertaken on this issue to ensure a consistent approach.

Data presentation

The baseline information presented within the PEI is not very accessible and consists mainly of text. To improve accessibility greater use should be made of other formats including tables, charts and plans.

Impacts

Employment impacts

Whilst the PEI has indicated it is not possible to quantify economic benefits at this stage the Authority considers that an approximate/order of magnitude estimate based on past experience should be possible in understanding the potential employment impacts of the Rhiannon wind farm during both construction and operational phases and assessing the cumulative impacts of onshore and offshore work.

IACC would like to be provided with more detail on the potential employment impacts during construction during the consultation period. Again this can be reasonably approximated based on past experience of constructing offshore wind farms, for example:

- Where will workers be based?
- What are the broad parameters in terms of traffic impacts?
- What level of impacts can be expected on a day to day basis?

The Authority expects to see Celtic Array Ltd. provide demonstrable evidence that there will be employment benefits accruing from the overall project within the Authority area.

Supply chain

There is relatively limited information provided on the nature and scale of supply chain opportunities and subsequent impacts. This will be of interest to the Authority so that it can provide appropriate support, alongside Celtic Array Ltd. (and developers of other proposed schemes), to help SMEs access supply chain contracts and maximise the positive benefits to businesses at the local level. Further detail and discussion is required on this matter and IACC would wish to see this included in the consultation process.

Impacts on tourism

As noted in the comments on the baseline, there is very limited information provided on the tourism sector and specific tourism activities within the areas affected. Similarly there is no indication of how the impact on tourism will be measured. IACC is concerned particularly with regard to the potential for impacts upon businesses involved in marine and/or coastal tourism. Further detail on the approach here

should be provided to IACC, including evidence of how offshore and onshore impacts will be integrated in the assessment. IACC would expect Celtic Array Ltd. to align their proposals with the Destination Management Plan.

Indication of construction ports and roles

At the present time there is limited information on which port(s) will be utilised for the construction, operation and maintenance phases of the project. Whilst the project is at a relatively early stage of development there is a need for early consideration and planning of port facilities to maximise potential benefits and enable owners and port authorities to provide appropriate resources in a timely manner. As noted elsewhere there are a number of other investment projects which will be utilising port facilities in the region and there is a need for effective planning to deliver these. Further information should be provided to IACC on the anticipated port requirements and current thinking alongside discussion with port operators. IACC also expects to be kept informed and involved with the progress of the option appraisal process.

Methodology

Cumulative and in-combination impacts

The impact assessment will need to be aware of other significant projects, particularly in relation to the Energy Island programme. At the current time there are a number of projects at various stages of development which, in combination with the RWF project, will have impacts on the economic development and community aspects of everyday life on Anglesey.

Whilst the PEI lists a number of projects which should be considered in the cumulative impact assessment (of which we consider the most important of those listed with respect to scale to be: nuclear new build at Wylfa (Wylfa B), the extension of life at Wylfa A, the decommissioning works, and planned national grid transmission infrastructure), there are other developments that are not included which have the potential to overlap with the construction and operational phases of the RWF.

These include (but are not limited to):

- Lateral Power's biomass proposals at the Anglesey Aluminium site; and
- Npower/Marine current turbines tidal array located in the Skerries.

Further to this there is a need for additional detail and clarification as to how cumulative impacts will be measured or quantified. Key questions include:

- Which measures/indicators will be utilised?
- How will significant cumulative impacts be defined?

There is no indication within the PEI of how in-combination impacts from different topic areas will be treated or combined. The first stage should be to identify which topic assessments should be combined/integrated and for what purpose. IACC would expect to be involved in this process to ensure the potential combined impacts on Anglesey are fully addressed and mitigated where necessary. To facilitate combination and ensure a consistent approach across the EIA topics, IACC wishes to see included in the EIA methodology descriptions of how significant impacts are to be determined and recorded (i.e. justification of assessment and decision-making process supported by evidence).

Consultation

There is a need to maintain ongoing consultation with the Authority on a range of matters including socio-economic issues and the approach to assessing the project's impacts on the Island's economy, community and environment. As set out in Section 2.1 of this document, IACC wish to agree a more detailed consultation programme that addresses how information/involvement will be shared across all of the different elements of the various EIAs, based on an understanding of the need to integrate the offshore and onshore elements of the project.

Significance

It is currently unclear as to the definition of significant that is being used within the socio-economic assessment and for other disciplines. Further clarification should be provided to IACC on what constitutes a significant impact within the socio-economic and other EIA topic areas. For example whether the assessment looks at the sensitivity and magnitude of impacts on the resources and receptors affected, and what thresholds are being proposed to identify significant impacts. Where professional judgement is relied upon alone, this should be explained.

2.9 **Other Environmental Topic Areas to be included**

The Sections of the PEI headed Biological Environment and Human Environment do not refer to air quality and noise and vibration as headline topics, although noise is indirectly referred to in terms of potential impacts upon receptors. IACC provides comments below on these matters, considering them to be of sufficient importance to merit separate discussion.

2.9.1 **Noise and vibration impacts**

Onshore elements, including landfall, substation and connection to the Grid may result in potential impacts to sensitive biological receptors on Anglesey. These elements will be addressed through separate scoping, consultation and EIA. Offshore works in proximity to the Anglesey shoreline (e.g. cable laying) will also have potential noise and vibration impacts for onshore receptors. The Authority expects the impact assessments carried out for both the offshore and onshore elements of the project to cross refer as necessary to ensure that the assessments of noise and vibration impacts are consistent and integrated.

Construction noise and/or vibration impacts on marine fauna fall under the jurisdiction of other statutory bodies, and will be addressed by them. Likewise, noise impacts on bird populations, including migration routes, resulting from construction, operation and decommissioning of the wind farm will be considered by other statutory bodies.

Noise impacts on users of the sea, for example recreational cruises, wildlife watching or fishing trips are not referred to in Table 10.1 and should be included in the impact assessment.

There may be indirect impacts resulting from noise disturbance to marine wildlife on which IACC will expect to be consulted, including:

- displacement of commercial fish populations due to noise and vibration stimuli which might result in economic disbenefits for Anglesey-based fisheries; and
- displacement of marine or terrestrial species affecting species diversity and/or population size at coastal or inland locations such as Puffin Island, indirectly having potential impacts on recreation and tourism (pleasure cruises or recreational fishing) based on Anglesey.

2.9.2 Air quality impacts

Other than Chapter 2 *Planning Policy and Legislative Context* (e.g. Paragraphs 2.3, 2.5, 2.10), which refer to national policy on energy and greenhouse gas emissions, there is no discussion of air quality or greenhouse gas emissions in the PEI. In line with the Scoping Opinion provided by PINS, IACC believes that air quality impacts should be fully assessed in the ES for both offshore and onshore elements of the proposal. This should include direct and indirect impacts and mitigation as appropriate. Air quality should also be an integral part of the assessment process in association with traffic and transport.

While the potential for impacts from emissions to air from shipping associated with the offshore phase are likely to be low and not deemed to be of material consideration, it is considered that this aspect should be addressed if only to demonstrate this view.

Fuel combustion related emissions from ships can make a significant contribution to air pollution. In particular, ships are major sources of sulphur oxides (SO_x) and nitrogen oxides (NO_x) which lead to acidification and eutrophication as well as the formation of ground level ozone and particulate matter (PM), thus causing a range of environmental and health impacts.

The International Maritime Organization (IMO) and the European Commission have already taken actions to reduce emissions of air pollutants from shipping. Firstly, the IMO has introduced regulations, such as Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) that sets limits on SO_x and NO_x emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances. Secondly, the European Commission has adopted a strategy to reduce atmospheric emissions from seagoing ships. One result of the Commission's strategy was the Sulphur Content of Marine Fuels Directive (SCMFD), which is linked to MARPOL Annex VI and sets limits on SO_x and NO_x emissions from ship exhausts.

Paragraph 8.116 of the PEI refers to an average of 48 vessels in the ISZ and buffer per day during the respective March and June 2011 monitoring periods. Technical guidance issued by Defra⁵ indicates that shipping has the potential to lead to exceedences of the 15-minute mean sulphur dioxide Air Quality Objective (AQO), but only where the relevant exposure is within 250 metres of berths and main areas of manoeuvring where there are greater than 5000 movements per year. Consideration should therefore be given to the potential increase in vessel movements during the construction period at potential locations of relevant human and ecological exposure which fall within these criteria.

The construction of the RWF and the physical presence of turbines during the operational phase may reduce the current available area around shipping lanes in the vicinity of the Site and therefore lead to a displacement of shipping vessels, *i.e.* commercial, fishing and recreational vessels, from main routes including the availability of adverse weather routing.

While it is noted that the ZAP report has '*informed the selection of the Site so as to allow the maximum number of vessels to continue on existing routes or with minimal deviation*' and that the separation distances between the main shipping routes and areas of relevant exposure are likely to be sufficient enough not to be of material consideration, the potential for an increase in the number of shipping routes to be brought into closer proximity to areas of relevant air quality exposure in terms of both human and ecological receptors should be acknowledged.

The assessment of potential cumulative impacts should address potential in-combination impacts of any future increase in shipping vessel traffic, associated with construction and installation activities of the Site, with vessel traffic associated with other schemes, including the construction of Wylfa power station on Anglesey.

2.10 Proposed structure of the Environmental Statement

Section 8 *Offshore Physical Environment (c) Underwater Noise* does not refer to underwater vibration, nor does it appear to include surface noise and vibration baselines (relevant where there is the potential for nearshore or onshore impacts).

Section 9 *Offshore Biological Environment (e)* refers to nature conservation designations. It should be clarified whether or not this includes onshore designations with potential to be affected by the project.

There is no stand-alone section on cumulative impacts. If cumulative impacts are being assessed within individual topic areas, this should be noted in the outline structure. The Environmental Statement should also include a discrete section addressing the overall cumulative assessment.

A section or chapter describing Consultations should be included.

⁵ Department of the Environment, Food and Rural Affairs (2009) Part IV of the Environment Act 1995 – Local Air Quality Management: Technical Guidance, LAQM.TG(09).

2.11 Potential impacts of the project

Comments on Table 10.1

Overall the Table provides a helpful summary of the environmental topic areas to be considered in the EIA and contributory studies. However the Description column of the Table lacks consistency through the different topics and its purpose is not clear. For some topics the Description column describes what will be examined, for others it refers to likely type or significance of impact and to mitigation. The Authority would like to see greater detail and consistency in the Description column.

Alternatives – for completeness the Authority would wish to see evidence presented of how the cable route options have been or will be assessed, including consideration of alternatives to landfall on the Isle of Anglesey.

Climate change – no reference is made to wider sustainability issues during construction or decommissioning stages of the project. The Authority would wish to see this aspect included in the assessment.

Other users – no reference is made to fisheries or recreation interests.

Paragraph 8.208 refers to potential impacts on Seascape, Landscape and Visual Amenity, and in the table includes consideration of coastal facilities and beaches used by recreational walkers/tourists along the North Wales Coast. No specific reference is made to an assessment of the impacts on recreational and tourism amenity use or to the potential socio-economic impacts arising from this for Anglesey.

Table 10.1 refers to Tourism Impacts only in how the wind farm could attract tourism, affect current tourism trends and indirectly affect transportation. The Authority considers that this gives inadequate weight to tourism and recreation and amenity and does not reflect the importance of these activities to the Isle of Anglesey in particular. The Authority would wish to see specific assessment of potential impacts on tourism, as well as on recreation and amenity, and to be consulted on these aspects.

Waste – although waste management is mentioned under Water Management, there is little or no wider consideration of wastes and by-products during construction or decommissioning.

Cumulative Impacts

The cumulative impacts should address nationally significant infrastructure projects proposed on Anglesey during a similar timeframe to this proposed development. This section of the EIA should measure the cumulative impacts of this proposed project against the backdrop of other projects and associated developments. The cumulative assessment should take into account the anticipated timeframes for construction of RWF and other developments, and possible overlap periods.

2.12 Conclusions

To conclude, IACC welcomes the work that Celtic Array Ltd. has undertaken to prepare the Stage 1 PEI and the commitment made by the company to engage with IACC and the people of Anglesey through consultation and public engagement. The Authority is pleased that Celtic Array Ltd. is committed to carrying out this engagement in both Welsh and English. A number of clarifications with respect to the Authority's requirements for involvement, and requests for further information have been set out in this document, to help inform the consultation and project assessment process. IACC expects to this process to continue with openness and transparency as the project evolves, helping to deliver outcomes which are beneficial to the people and economy of Anglesey, while reducing the risks to Celtic Array as a developer.



