

Northern Ireland Offshore Wind and Marine Renewable Energy SEA

Summary of Consultation Responses

Introduction

The following document provides an overview of the approach taken to consulting on the findings of the Strategic Environmental Assessment (SEA) of Northern Ireland Offshore Renewable Energy Strategic Action Plan (ORESAP) 2009-2020 and the main responses received as part of that consultation exercise.

Consultation on the SEA Environmental Report

In December 2009, AECOM and Metoc issued, on behalf of the Department of Enterprise, Trade and Investment (DETI), an Environmental Report as part of the SEA of the ORESAP. The Environmental Report and supporting Non-Technical Summary (NTS) document the main findings from the SEA including:

- Introduction to the SEA and ORESAP;
- Assessment of Alternatives;
- Summary of the approach to scoping the SEA and responses received from consultation on the scope of the SEA;
- Review of relevant plans, programme and environmental protection objectives;
- Assessment methodology;
- Review of technologies and resource areas (offshore wind, wave and tidal);
- Review of baseline environment;
- Assessment of potential effects – generic assessment through to resource zone specific assessment;
- Assessment of cumulative effects and transboundary effects;
- Plan and project level mitigation measures; and
- A framework for monitoring the implementation of the ORESAP.

The SEA Environmental Report was issued to the statutory consultees (Department of Environment NI) for formal consultation on the 14th December 2009. It was also made available to a wide range of stakeholders via the NI Offshore Renewable Energy SEA website (www.offshoreenergy.ni.co.uk).

All consultees were invited to submit their comments on the SEA by 8th March 2010. A summary of the main written comments received as part of this consultation exercise is presented in Table 1 below. In total, responses on the SEA Environmental Report were received from 31 organisations. The respondents are listed below:

Consultation Respondents

- Mutual Energy
- Causeway Coast & Glens Heritage Trust
- Invest NI
- Northern Ireland Environment Agency (NIEA)
- Copeland Bird Observatory
- Anglo North Irish Fish Producers Organisation (ANIFPO)
- The Crown Estate
- Lunar Energy
- Maritime & Coastguard Agency
- B9 Energy
- NI Environmental Link
- NIE plc
- The National Trust
- Harland and Wolff
- Environmental Protection Agency, (RoI)
- The Consumer Council
- Pure Marine
- Council for Nature Conservation and the Countryside (CNCC)
- Bord Gáis Energy
- Coleraine BC
- Renewable UK
- SSE Renewables
- Scottish Power Renewables
- Evelop Ontwikkeling BV
- RES Ltd
- DP Energy
- National Federation of Fishermen's Organisations (NFFO)
- Chamber of Shipping
- RSPB
- ESB International
- MFV Quicksilver, BRD662

Full details of the responses received from each of the respondents listed above are available to view on the NI Offshore Renewable Energy SEA Website www.offshoreenergyni.co.uk.

SEA Consultation Workshop

In addition to the preparation of the SEA Environmental Report, a consultation workshop was held in Belfast on 4th February 2010 as part of wider consultation on the SEA. The workshop was attended by more than 100 delegates from a range of stakeholder groups including environmental authorities, NGOs, marine (wave and tidal) and offshore wind developers and other interested organisations.

The format of the workshop included presentations on the ORESAP, the SEA process and key findings from the SEA followed by two separate workshop sessions. The workshop sessions included:

- Workshop Session 1: SEA Environmental Report and Key Findings
- Workshop Session 2: Integrating the findings from the SEA into the ORESAP

Summary of Consultation Responses

A summary of the key points made in written responses received on the Environmental Report and the feedback received during the consultation workshop sessions is presented in Table 1 below. Additional comments received on the Strategic Action Plan (SAP) are presented in Table 2.

The comments received during the workshop generally reiterated the key points that were raised in the written responses received from individual groups and organisations. To avoid duplication, both sets of comments have been combined in the summary of responses presented in Tables 1 and 2 below. This is an overview of the main comments received. Not all detailed comments are included in this summary, although they will, where appropriate, be addressed within the SEA Post Adoption Statement.

Next Steps

It is planned to finalise the draft ORESAP in Winter 2010 leading to the launch of an Offshore Renewable Energy Leasing Round in Northern Ireland waters later in 2010 – 2011. Figure 1 below illustrates the SEA and ORESAP Preparation processes to date and future steps in these processes.

Figure 1: Relationship between the SEA and ORESAP Processes.

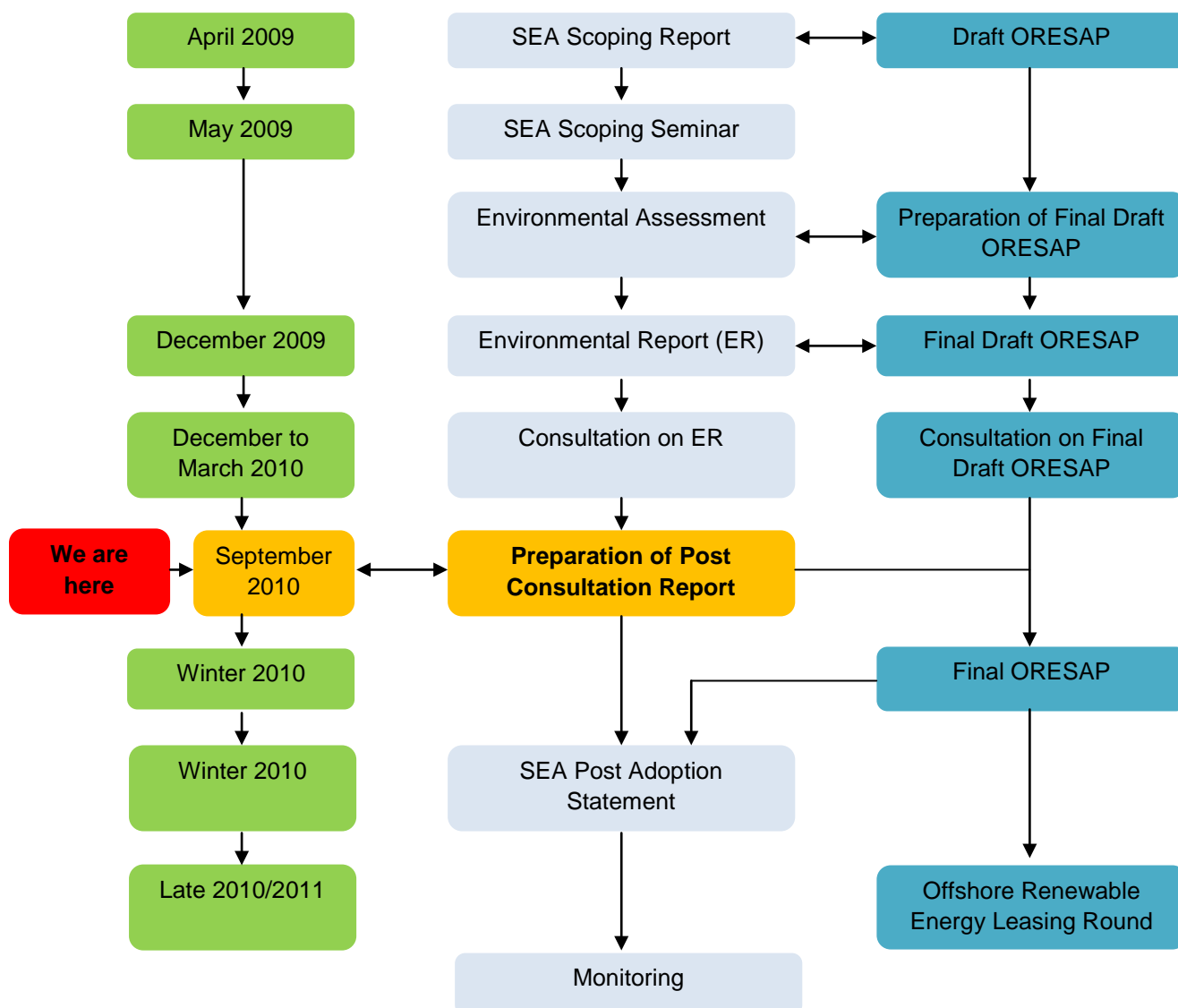


Table 1: Summary of Scoping Responses Received on the Environmental Report

Table 1: Comments on the Environmental Report		
Topic	Summary of Comments Received	Response
SEA	<ul style="list-style-type: none"> • Commend approach to the Strategic Action Plan (SAP) and accompanying Strategic Environmental Assessment (SEA). • Welcome the commitment to the draft SAP that the development of NI's offshore renewables sector "must be done in a sustainable manner". • We are of the opinion that the Offshore Renewable Energy Strategic Action Plan 2009 to 2020 Environmental Report has been produced and carried out to a very high standard. We are of the opinion that the topics of biodiversity, flora and fauna and landscape and associated SEA requirements have been researched and assessed in appropriate scope and detail. • SEA (Environmental Report) appears to be a well researched document. • Welcome consultation and commend efforts to involve stakeholders in proactive policy development work . 	<ul style="list-style-type: none"> • Comments noted.
Baseline Data and Data Gaps	<ul style="list-style-type: none"> • Need to gather more data for a detailed analysis and decision making • SEA recognised a number of knowledge gaps which are critical to assessing whether commercial offshore wind is viable in the intended resource areas. • It is understood that significant modelling or survey work is required to fill these known gaps. • Unless response to the existence of these gaps is handled in a pragmatic manner there is real danger that early development activities may be hindered on the basis of an overly cautious approach. • Need to invest in a structured programme of survey and research. Studies need to focus on delivering greater understanding within the key areas of uncertainty and addressing and prioritising research and survey needs in these areas. • Sufficient funds need to be invested in addressing known and as yet unknown areas of knowledge to facilitate development and avoid data gaps becoming or being perceived as a barrier to progress. • Co-ordination for filling data gaps should be the responsibility of the Offshore Renewable Energy Forum. 	<ul style="list-style-type: none"> • The SEA is a strategic level desk-top assessment based on available existing data sets and sources of information. • This SEA has been carried out for an environment (marine) and technologies (in particular wave and tidal) where there are notable gaps in the data/information that is available for use in the SEA. • These data and information gaps are recognised in the SEA as are the limitations associated with these data/information gaps e.g. reduced confidence in the assessment of potential effects. • Due to the scale of the study area (Northern Ireland territorial waters) and nature of some of the data gaps, it is likely that filling these gaps would require extensive research and survey programmes, some of which are likely to take more than 12 months to deliver. • Survey and research programmes of this nature are beyond the scope and requirements of the SEA (as set out in the SEA Directive). However the need to fill some or all of the key data/information gaps has been identified as a priority by the SEA for taking forward the ORESAP. • In order to address the issue of data gaps the SEA made a series of recommendations which have been integrated into the ORESAP as a

Table 1: Comments on the Environmental Report

Topic	Summary of Comments Received	Response
	<ul style="list-style-type: none"> • Consider prioritising and also allocating responsibility for the tasks to appropriate departments. • Research and a cross departmental approach to filling strategic data and knowledge gaps is needed. • Comprehensive offshore database required. • Concern that leaving the necessary surveys to the Environmental Impact Assessment (EIA) stage will not afford adequate protection for birds and other wildlife. Need confirmation of the types of data that will be collected at a strategic level, as opposed to at the project (EIA) level. • Only at the SEA stage can likely cumulative effects be assessed, and this depends on adequate baseline data being available at the SEA stage. • Risk that adequate resources will not be allocated to data gathering, with the potential for delays to the Appropriate Assessment process. • Advise the use of historical benthic ecology data from earlier surveys such as the 'Inshore Marine Life of Northern Ireland Surveys' and any data that can be found from earlier records. This will help to avoid 'shifting baselines' in terms of the marine data not representing the dramatic changes that have occurred in many areas of the marine environment • Knowledge sharing should be encouraged. • World Heritage Sites should be added to the appropriate map. • Suggest gathering data on the behaviour of bats at sea and their migratory patterns as part of the strategic level studies being proposed. • Strategic level surveys for birds and marine mammals suggested. • Data gaps, especially navigation and munitions could be filled by including reports undertaken for the Scottish Marine SEA 2007. • If surveys conducted in 2007 and 2008 were available there should have been sufficient time to interpret the data for a more accurate inclusion in the SEA. • Qinetiq munitions assessment carried out for the Scottish Marine SEA could have been used given the proximity to Beaufort's Dyke. 	<p>series of Actions. These SEA recommendations included:</p> <ul style="list-style-type: none"> ➤ Establishment of an Offshore Renewable Energy Forum ➤ Addressing data and knowledge gaps at a strategic level ➤ Application of the 'deploy and monitoring' approach to the management of development. <ul style="list-style-type: none"> • The main focus of the recommendations listed above was to establish a formal collaborative approach to the identification of data/information gaps, prioritisation of filling those data/information gaps and developing methodologies for delivering necessary survey/research programmes for collating data/information. • One of the other recommendations presented in the SEA was to produce Regional Locational Guidance for the main resource zones. The aim of this would be to examine some of the potential competing interests/environmental effects of offshore renewable in certain locations in more detail. This would involve extensive consultation with stakeholders and would help to identify key data/information gaps that need to be filled in certain locations. This information would be used by the Forum to assist with prioritising the filling of data gaps. • It is envisaged that the Forum will develop a prioritised programme of actions which would include a collaborative approach to the collection of data and establishment of a centralised database comprising data from a range of sources/collected over a range of timescales.
Alternatives	<ul style="list-style-type: none"> • A key part of the SEA must focus on identifying alternatives within the plan, and therefore the least environmentally damaging plan for marine renewable power generation in NI. 	<ul style="list-style-type: none"> • As part of the cumulative assessment the SEA considered a range of alternatives in terms of the different levels of development within the resource zones (which enabled the assessment of different targets for

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	<ul style="list-style-type: none"> Recommend that the SEA considers and assesses: <ul style="list-style-type: none"> ➢ alternative targets for offshore wind, wave and tidal power; ➢ alternatives for spatial distribution of marine renewables, and; ➢ alternative environmental criteria within the SAP Highlight that consideration of alternatives will also be key at the project level, in particular considering the options regarding device design and the resulting construction methods. 	<p>inclusion in the ORESAP). It also included an assessment of different distributions of development (various technologies) within each of the zones and across the wider study area.</p> <ul style="list-style-type: none"> The consideration of alternatives at the project stage was identified as part of the project level mitigation considerations.(see later sections).
Other Plans and Programmes	<ul style="list-style-type: none"> Similar methodologies should be consistently applied across the border in view to achieve a level playing field for the sea users The opportunity has been missed to join up with other governments in approaching offshore renewable energy. A joined up approach with Great Britain and the Republic of Ireland has the potential to provide economies of scale which in turn should lead to a lower cost for final consumers. Need to be harmonised between Northern Ireland, the rest of the UK and the Republic of Ireland in terms of exploitation of the resource and development of the infrastructure required to fully utilise renewables. Useful if timescales could be provided and how the SEA's may well fit into and interact with one another. There is a need to take into consideration in finalising the SAP the content of the draft ROI Offshore Renewable Energy development Plan which is currently underway and the findings of the SEA and AA of this plan. 	<ul style="list-style-type: none"> It is recognised that there is the potential for significant benefits in adopting a joined up approach to the development of marine renewable in both a UK wide and ROI context as all are undertaking this work within the framework of the EU SEA Directive. However, establishing mechanisms for this to occur are beyond the scope of the SEA both in terms of the mechanisms used to licence developments e.g. The Crown Estate leases in UK waters and Foreshore Licences in Irish waters and the different timescales over which plans for offshore renewable energy developments are being prepared. As part of the SEA, ROI has been consulted on a transboundary basis during both Scoping and Consultation on the Final Environmental Report and Draft Plan. These consultations will continue, where appropriate, as part of the finalisation and implementation of the ORESAP. An assessment of the proposed developments likely to occur as a result of implementation of different plans being prepared in UK and Ireland waters was carried out in the SEA as part of the assessment of cumulative effects. However, it should be noted that some plans considered are only in their early draft stages and therefore the full extent of development that was likely to occur was unknown. The British Irish Council comprises representatives from the British and Irish Governments and the Devolved Administrations and provides a forum within which members can consult and exchange information. One of its workstreams is focussing on marine energy and this provides a useful vehicle for broader consideration of offshore renewable developments.
Habitats Directive and	<ul style="list-style-type: none"> Further information about how and when the Habitat Regulations Assessment (HRA) will be undertaken is required. 	<ul style="list-style-type: none"> It is recognised a Habitat Regulation Assessment (HRA) under Article 6 of the Habitats Directive is required to be undertaken for the ORESAP before

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Appropriate Assessment	<ul style="list-style-type: none"> • Appropriate Assessment of the SAP and future licensing/leasing proposals should be undertaken. • Expect potential cumulative effects to be identified and assessed as part of the appropriate assessment process. This may result in clear recommendations to address specific risks. • Need to clarify the extent to which the requirements for HRA/AA under the Habitats Directive have been/will be integrated into the SAP. • The HRA is required to consider in-combination effects which will include 'transboundary' effects. • There are a number of examples of good practice as to integrating the AA and SEA processes into plans and programmes. • The SAP should promote the setting up of procedures to ensure compliance with the requirement of Article 6 of the Habitats Directive during the consenting of development likely to arise during the implementation of the SAP. 	<p>it is adopted and this work is underway.</p> <ul style="list-style-type: none"> • Further information on the outcome from the HRA (Appropriate Assessment) will be included in the final ORESAP and the formal SEA Post Adoption Statement.
Assessment Method	<ul style="list-style-type: none"> • In some areas more up to date studies could be cited. • Assessment tends to assume a negative starting position of potential adverse impact with little balancing of potential impacts with 'real world' accounts of the situation post construction or from parallel industries and or activities. • The process for reaching decision needs to be more transparent. • SEA has been carried out in a relatively thorough way following many principles of good practice. • SEA takes a precautionary approach too frequently and liberally. A precautionary approach should not be adopted in areas where sufficient data from previous studies exists and the effects are well understood. • "Significant adverse" effects on a number of potential receptors were arrived at without the benefit of baseline studies and appropriate mitigation measures being evaluated. • The systematic approach taken by the SEA welcomed. • Welcome the fact that the SEA's scope does not 'replace the need for developers to collect detailed project specific baseline data'. • There is concern over the wording for significant adverse effects in that the 	<ul style="list-style-type: none"> • The assessment method and criteria used in the SEA was presented in the Scoping Report which was issued in April 2009 to a wide range of stakeholders and was discussed in detail at the Scoping Workshop in May 2009. • The method and criteria applied to the assessment was developed in accordance with the requirements of the SEA Directive and reflected the level of baseline data available to inform the assessment, the scale and characteristics of the study area and the distribution of marine renewable energy resource within Northern Ireland waters. • In some cases, where there are notable gaps in baseline data it was considered to be appropriate to adopt a 'precautionary approach' to the assessment of potential effects. The results from the assessment, and the targets presented in the ORESAP reflect this approach. • It should be recognised that this SEA and the ORESAP is a 'starting point' which focuses on targets to 2020. As the industry develops and expands and data gaps are filled through research, surveys and the implementation of projects, these initial targets may be subject to change to reflect a greater confidence in the assessment of potential effects based on

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	<p>addition of an 'artificial reef' is likely to result in permanent, long term or irreversible change that would be positive rather than negative.</p> <ul style="list-style-type: none"> • Optimism about the ability of proper siting of wind farms to overcome problems and result in negligible impacts upon other users. • The SEA should identify whether buffer zones in some sensitive areas may be required advising the adoption of the precautionary principle with regard to the spacing and distance of buffer zones. • The SEA should fundamentally assess potential transboundary effects. • More caution needs to be exhibited regarding the residual effect significance (with mitigation) grading allocated to effects where data confidence is low and more data needs to be collected. • Have the impacts on consumers and others been taken into account and if so is there any detail on the potential impacts? • References should be provided to support assessment statements. 	<p>increased knowledge and understanding.</p> <ul style="list-style-type: none"> • Transboundary effects were assessed as part of the cumulative assessment presented in Chapter 13 of the Environmental Report. • As noted in Chapter 1 Section 1.10.1 socio-economic effects have not been covered explicitly in this SEA. The SEA has explored potential effects on groups such as tourists, wildlife groups and fisheries under the topic of population and human health in terms of disruption to certain activities or direct negative effects on features that are of importance for a certain groups e.g. tourism. However, the assessment does not quantify these in terms of economic value or effects on the wellbeing or livelihood of these groups. The Offshore Renewable Energy Forum will include key external stakeholders to ensure that other marine users' interests are fully taken into account in the implementation of ORESAP. • References will be added to the Environmental Report. This addition will be noted in the SEA Post Adoption Statement.
Resource Zones	<ul style="list-style-type: none"> • The statement within SEA that no areas are closed to development is welcomed but there is concerned regarding the negative language used in respect to some of the identified resource zones - each technology should be judged on its own merits. • Welcome confirmation that the SEA does not preclude development in areas outside the main resource zones. • Normal practice when defining a resource has been to use velocity at mean spring peak. Not average spring and neap velocity. 	<ul style="list-style-type: none"> • The resource zones were identified based on a range of operational parameters for different technologies including water depths, tidal stream velocity, wind speeds etc. The parameters used were based on information provided by developers in response to the developers' questionnaire issued during the scoping stage and from other publicly available information. These optimum ranges for the operational parameters were then buffered further to allow for technologies that would look to exploit resource outside of the operational parameters that were identified. • Due to the vast range of devices that are still being developed and tested, in particular for wave and tidal technologies, it was agreed at the scoping stage that, in keeping with the strategic nature of this assessment, the assessment of effects would focus on certain characteristics of those devices e.g. seabed mounted, floating, moving parts etc as opposed to individual technologies. • All developments taken forward, either within the resource zones or outside the resource zones will be subject to a project level EIA. The resource zones do not represent the only areas where development can

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		occur. They simply indicate where the main resource is located for a number of different types of device and therefore where commercial development may be focused in the future. Further information on this is provided in the following sections.
Specific Assessment Comments	<ul style="list-style-type: none"> • Zone 1 will also impact on Binevenagh AONB. Consideration of archaeology along the coast especially in relation to connection to the grid is needed • Zone 2 - potential impacts on landscape from the connection to the grid needs to be considered • Zone 3 – Needs to consider Antrim Coast and Glens AONB. • Tidal Zone 5 should be re-evaluated as a pre-commercial development zone for tidal power devices based on a realistic potential small array size (~5MW) and subject to further baseline studies being carried out. • SEA seems to place a lesser emphasis of caution on offshore wind developments in Wind Resource Zone 2 • Need to include typical descriptions of cable deployment and cable landing operations including HDD and protection • The area requirements for spacing of tidal devices are theoretical and in the open seas the layout and density of the devices will also be influenced by the actual sea bed bathymetry. • Assessment should have considered where, based on benthic and intertidal ecology, export cables should/should not come ashore. • Suggested amendments to text in the ER on baseline information to be updated/amended based on suggested changes. • Damage to built heritage in coastal locations should be avoided. • Given proximity to Beaufort's Dyke then installation of devices and cable laying could disturb dumped munitions which have drifted from the dumping ground. 	<ul style="list-style-type: none"> • Zone specific comments on omissions and minor amendments to the baseline data and results from the assessment will be included as an errata to the Environmental Report. This will be referenced in the SEA Post Adoption Statement. • The main focus for the SEA was on commercial scale development at levels that will contribute to the overall targets for renewable electricity generation for Northern Ireland. • The assessment of each of the zones in terms of development capacity is therefore based on commercial developments. The conclusions from this assessment indicate that there would be limited, or no potential, for commercial tidal development (e.g. of a scale >50MW) in Tidal Resource Zone 5. However, these conclusions do not exclude opportunities for smaller pre-commercial developments to occur in this location, these are just unlikely to contribute to the wider ORESAP targets. Any proposals for a pre-commercial development in this location are also likely to require more detailed site/project specific assessments (e.g. EIA and Appropriate Assessment) to determine their environmental acceptability. • The SEA (and the ORESAP) is focused at a very high strategic level. It does not identify any specific sites for development; it simply identifies how much development could be accommodated within each Resource Zone based on a set of operational parameters for the different technologies. Consequently it is not possible at this strategic level to include detail on export cables and the location of possible cable landfalls, although their effects on benthic ecology have been considered as part of the generic assessment. The assessment of possible landfall locations and export cable routes could potentially be considered in more detail as part of the preparation of Regional Locational Guidance for the resource zones. Further information on Regional Locational Guidance is provided in the following sections.

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Landscape	<ul style="list-style-type: none"> • Binevenaugh AONB not mentioned (covers the coastal area west of Portstewart to the Roe Estuary in Lough Foyle) and should be identified as a key receptor. • Proximity of Lough Foyle Ramsar could be considered in Zone1 and maritime archaeology is particularly important around the Barmouth and the Bann Estuary. • Zone 3 - Antrim coast and Glens is not an ASSI, but an AONB. • Zone 4 - Copeland Island is not designated as an AONB. • Seascape - Most of north coast is an AONB from Larne to Lough Foyle. Clarification on their extent into the sea is being sought by NIEA. • Antrim coast and Glens AONB (2008) does consider the marine area as part of the plan English and Welsh coastal area.AONB do not consider seascape issues in their management plans. • The consideration of seascape within AONB management plans or individual project assessment should not be confused with statutory extension of boundaries and limits and the latter does not seem like an appropriate approach to the problem of the former. • Some distortion of the appropriate weighting given to visual and sea/landscape issues for Tidal Resource Zone 2. • Robust sea and landscape assessments must take place on proposals for the zones off the North Coast. 	<ul style="list-style-type: none"> • As noted above, specific comments on omissions and amendments to the baseline data and results from the assessment will be included as an errata to the Environmental Report. This will be referenced in the SEA Post Adoption Statement.
Commercial Fisheries	<ul style="list-style-type: none"> • Although the ER accurately identifies many of commercial fisheries in each zone, there is still some information missing, in particular, on presence of spawning and nursery grounds for herring and cod in Wind Resource Zone 2: East Coast and the fact that there are a number of 'closed areas' and other technical restrictions in place in this zone that limit fishing activity at certain times of the year. • There is also no evidence to support the statement that the exclusion of commercial fishing activities from certain areas could have positive residual effects on fish stocks. 	<ul style="list-style-type: none"> • As noted above, specific comments on omissions and amendments to the baseline data and results from the assessment will be included as an errata to the Environmental Report. This will be referenced in the SEA Post Adoption Statement.
Noise	<ul style="list-style-type: none"> • Assessment of noise from piling misleading as it evokes images of the traditional piling. Offshore structures in Northern Ireland are more likely to employ coring / drilling to create holes for subsequent installation of insitu 	<ul style="list-style-type: none"> • As noted above, specific comments on omissions and amendments to the baseline data and results from the assessment will be included as an errata to the Environmental Report. This will be referenced in the SEA

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	piled foundations.	Post Adoption Statement.
Seabirds	<ul style="list-style-type: none"> There is concern about the potential effect of offshore wind development in Resource Zone 2: East Coast on breeding seabird populations associated with the Copeland Islands SPA (which was incorrectly identified as an AONB and ASSI). In particular the potential affects on migratory movements around the Copeland Islands and east Co. Down needs to be considered in much greater detail, specifically for Manx Shearwaters which only visit the breeding site at night. Development also needs to take into account Arctic Tern Breeding Grounds in this area and Auk Colonies at the Gobbins and Muck Island. Information that the Outer Ards is a significant area for breeding birds is incorrect as the area is relatively insignificant for breeding birds. However, it is significant for non breeding shorebirds for which it was declared an SPA. The assessment mentions BAP species but does not mention the Birds of Conservation Concern in Ireland (BoCCI) List. 	<ul style="list-style-type: none"> As noted above, specific comments on omissions and amendments to the baseline data and results from the assessment will be included as an errata to the Environmental Report. This will be referenced in the SEA Post Adoption Statement.
Marine Mammals	<ul style="list-style-type: none"> SEA does not recognise the importance of the waters around the Copeland Islands for Harbour Porpoise and that the potential effects of tidal developments on these species in this location have not been adequately addressed or fully examined in the SEA. 	<ul style="list-style-type: none"> As noted above, specific comments on omissions and amendments to the baseline data and results from the assessment will be included as an errata to the Environmental Report. This will be referenced in the SEA Post Adoption Statement.
Shipping and Navigation	<ul style="list-style-type: none"> Comprehensive coverage given to the issues that impact shipping operations, services route and business competitiveness in the UK. Pleased to note clear recognition that there is a need to address shipping and navigation concerns. Key is to strike a balance between valuable opportunities and potential threats. No single formula is likely to be suitable for all proposed sites. 	<ul style="list-style-type: none"> Comments noted.
Tourism	<ul style="list-style-type: none"> Tourism is a major economic driver on the economy of County Antrim and County Londonderry. There would be significant concern over any potential effects on the natural resources that this tourism relies on (both land and marine elements). However, it is recognised that the SEA is a very high level assessment. Further discussion and consultation would be 	<ul style="list-style-type: none"> Comments noted. Work to date on the development of offshore renewables has involved significant engagement with marine stakeholders and it is planned that this would continue both at the strategic and project level.

Table 1: Comments on the Environmental Report

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	welcomed with regard to specific projects.	
Cumulative Impacts	<ul style="list-style-type: none"> • Cumulative impact assessment needs to provide alternative options or measures that other sea users should adopt to mitigate navigational risks that might be posed as a result of a proposed development. • Cumulative impact needs to consider new development, together with developments with consent or where consent is likely. • Has the cumulative impact assessment considered wind farms onshore and offshore when looking at seascape and landscape impact • Ensure that schemes under 50MW (tidal) and 300MW (offshore wind) are also subject to cumulative assessment. • The SEA should adopt a precautionary approach to assessing cumulative effects. • The cumulative effect of undertaking development to capacity simultaneously in all of the potential two wind and two tidal zones was not considered. • SEA might consider the development of clear recommendations to help manage the risk of cumulative impacts on European Protected Species (EPS). • Cumulative impacts of size must not be ignored and it is vital that initial decisions are taken on the basis of full assessments of potential environmental impacts. • No mention of the cumulative impact that the introduction of a number of wind farms would have upon fisheries and the displacement of effort that would be involved. Nor is there any consideration of the downstream effects of displacement of effort as critical demand is withdrawn from necessary infrastructure and processing units. 	<ul style="list-style-type: none"> • As noted previously, the focus of the assessment was on commercial scale development of 50MW for Tidal and 300MW for offshore wind. Although the potential for smaller pre-commercial developments have not been excluded from the SEA, they have not been specifically included within the overall MW targets for the ORESAP. • In terms of potential cumulative effects associated with pre-commercial developments, these will have to be examined for each individual project as part of the project level EIA in relation to other proposed and existing development . • In terms of the potential cumulative effects of onshore and offshore wind, further consideration of this will be included as an addendum to the Environmental Report. This will be referenced in the SEA Post Adoption Statement. Additional information on potential cumulative effects in relation to onshore wind will also be taken into consideration in the Onshore Renewable Electricity Strategic Action Plan that is being prepared by DETI and is also subject to an SEA. • There could be an opportunity to explore options for reducing the risk of potential cumulative effects on European Protected Species (EPS) as part of development of the project level mitigation strategy. This will be informed by additional data collection and findings from the Regional Locational Guidance. • The potential cumulative effect that the introduction of a number of wind farms would have on commercial fisheries was included in Chapter 12. • In terms of assessing the potential effects on supporting infrastructure and processing units within the fishing sector, this is beyond the scope of the SEA.
Mitigation Measures	<ul style="list-style-type: none"> • We welcome the range of mitigation measures identified during the SEA process and the associated framework that is envisaged to ensure the appropriate implementation of strategic mitigation measures. 	<ul style="list-style-type: none"> • One of the roles of the Offshore Renewable Energy Forum ,which will include representatives of the key stakeholder groups, will be to examine the range of potential project level mitigation measures that have been

Table 1: Comments on the Environmental Report

Topic	Summary of Comments Received	Response
	<ul style="list-style-type: none"> • Potential offshore renewable developers should in future conduct a comprehensive navigation risk assessment that would incorporate the recommendations made in the SEA report. If shipping is forced to deviate from the existing route then a suitable compensation should be payable (subject to an impartial assessment). • Mitigation measures are considered in isolation and the totality of their introduction renders effective development very challenging. • Where broad mitigation measures are recommended an assessment should be made of the cumulative overlaps to understand the totality of the effects of the mitigations. Particular significant for offshore working where installation seasons are very short. • Development of a project level mitigation strategy is a positive initiative. However, it could constrain development if the development of novel mitigation measures is not allowed and encouraged. • Cost associated with the mitigation strategy should be provided in the SAP along with details on how and from whom the costs will be recovered? • SEA's conclusions assume mitigation (for biodiversity, scenic value and other potential negative impacts) will be put in place by all proposals. The SAP must help drive mitigation in practice and DETI must ensure that mitigation is implemented on every project. • Mitigation measures are vital: these must indeed be included as 'actions' and 'targets' in the final SAP, which needs to be more robust in this area. • The finalised SAP needs more detail in this as to who will drive the strategy, when will it be implemented and how will its effectiveness be measured? Who ultimately will be responsible for the regulatory 'aftercare' of implemented schemes? • The proposals for mitigation are heavily influenced by the perceived role of the FLOWW Group. In fact, the perception of the FLOWW Grouping is erroneous; mitigation has not been achieved within this body where the concerns of the fishing industry have been consistently ignored and ridden over roughshod (unlike the experience with the Oil and Gas Industry). • Like to see a measurement which ensures mitigation measures are carried through by schemes throughout their lifetimes. 	<p>identified and included in the Environmental Report. This will be supplemented by knowledge/experience from other projects as they emerge including best practice elsewhere to enable the Forum to advise DETI and NIEA in particular, as the main regulators, on the establishment of a clear project level mitigation strategy. This will include, inter alia:</p> <ul style="list-style-type: none"> ➤ Review the suggested mitigation measures to ensure they are practical and appropriate for different types of development/technologies. ➤ Review of suggested mitigation measures for entire projects rather than individual elements of a project in isolation to reduce the risk of establishing a framework that includes competing or conflicting measures. ➤ Identify clear and transparent mechanisms for ensuring the implementation of mitigation measures at a project level. ➤ Identify clear lines of responsibility for the implementation and monitoring of mitigation measures. <ul style="list-style-type: none"> • The project level mitigation strategy will also be informed by the Regional Locational Guidance, in particular, the outcome from detailed consultation on solutions for resolving competing interests. • Further information on the project level mitigation strategy will be included in the final ORESAP. • In terms of considering alternative devices for certain locations – there is potential that certain characteristics of particular devices may not be appropriate in some locations where as other types of device/technology with different characteristics may have lower environmental effects and would therefore potentially be more acceptable. For example fully submerged devices are likely to have different effects on seascape than device that protrude above the water surface. • Tables 11.6 to 11.13 in Chapter 11 present a summary of the likely potential effects, and residual effects taking into account mitigation, on each of the SEA topics within each of the resource zones. The mitigation measures considered in determining residual effects are also fully documented in these tables. • Options for considering consistency with mitigation measures proposed in

Table 1: Comments on the Environmental Report

Topic	Summary of Comments Received	Response
	<ul style="list-style-type: none"> No specific targets attached, transposing the mitigation measure to the SAP in its current form is unlikely to assist with the implementation of a challenging action. Suggest removing 'Use alternative devices...' as mitigation. This is rarely an option due to the JVs that have been set up between technology developers and utilities. There would be merits in linking the mitigation measures proposed with key likely significant effects identified in the environmental assessment. Where a clear link is not directly evident there may be merits in distinguishing between mitigation measures associated with identified significant effects and key strategic level recommendations which have informed the SEA process. The project level mitigation strategy is a welcome recommendation. There would be merits in this measure considering transboundary issues/effects and assigning timescales to the delivery of this recommendation in the Final SAP. Consideration must also be given to the weather windows for installation of the devices as well as breeding and spawning seasons. 	<p>other areas (transboundary) can be explored by as part of the development of the mitigation strategy.</p>
<p>Assessment Results (conclusions / recommendations)</p>	<ul style="list-style-type: none"> Should be a presumption against energy development for sites of high nature conservation value unless it can be proven that there will be no significant effect although the precautionary principle should be adopted in the absence of data, especially in advance of the completion of ecologically coherent networks of Marine Protected Areas (MPAs). In the SEA proposals there are areas listed that are of prime importance as marine nature conservation sites. In the absence of an ecologically coherent MPA network these areas should be eliminated from the development of commercial renewables without thorough scientific investigation. Query over why the resource zones at the Copeland Islands, Strangford Lough or Maiden Islands have been considered unsuitable for development. These areas are deemed to be exploitable and any environmental constraints or needs of other users could be accommodated in development plans and device design. 	<ul style="list-style-type: none"> Where possible the assessment has taken into account information relating to known and potential areas of high conservation interest including sites that may be designated in the future as MPAs. Where sites of high conservation value or potential MPAs are located within or near to a resource zone, the presence of these sites has been taken into account. The assessment of potential capacity for development in these areas has then been based on the fact these sites would be avoided (taking account of the precautionary principle). However, the assessment does identify that whilst known and potential sites of conservation importance can be avoided, more survey work is required to understand the potential effects of developments on transient species associated with these sites and other European Protected Species (EPS). As discussed previously, the focus on the SEA was the assessment of commercial scale developments. Taking into account the known conservation value of the Copeland Islands, Strangford Lough and the

Table 1: Comments on the Environmental Report

Topic	Summary of Comments Received	Response
		<p>Maiden Islands compared with the available resource in these areas it was assessed that there is likely to be limited to no opportunity for the development of commercial scale developments in these locations. However this does not preclude these areas from consideration as future areas for smaller pre-commercial scale developments, although any application in these locations would be subject to project level EIA and Appropriate Assessment before the suitability of these areas for development can be determined. .</p>
<p>Site development/ Taking Projects forward</p>	<ul style="list-style-type: none"> • Site development must be permitted to continue on the basis of existing knowledge, proportionate precaution and a sound EIA methodology. • Integration of all aspects of any development should take place through a single EIA for any proposal. The importance of sharing information across projects should be emphasised and ensured through the monitoring Forum. • The range of actions, going to The Crown Estate for competitive tenders, etc., does not seem unreasonable but if decisions are to be made on the basis of proper information and data the timetable looks vulnerable to slippage. • The safety of navigation and potential impacts on shipping routes needs to be considered at an early stage when identifying and deciding on future development sites. • Siting near shipping lanes should be subject to a comprehensive assessment. • SEA should determine the impact of any offshore wind farm within 12 nautical miles on freedom of navigation beyond 12 nautical miles - outcome should clearly enlist identification of areas where there would be a presumption in favour of development, those where there would be a presumption against development and areas where special conditions may be applied and possibly areas that could not be developed because of their sensitivities. • SEA should provide an integrated approach in a coherent manner to address wider sea-use planning and its impacts on all sub-surface users. • Developments should be outside areas important for navigation, should consider military use including interference with reception and 	<ul style="list-style-type: none"> • One of the recommendations from the SEA is to produce Regional Locational Guidance for main resource zones that will inform DETI and TCE in the preparation and development of TCE leasing round in NI waters. • This guidance and advice could be presented in the form of Locational Guidance. This would be a non statutory document that would: <ul style="list-style-type: none"> ➤ Identify areas of opportunity for offshore wind, wave and tidal development within the identified Resource Zones. ➤ Identify competing interests (e.g. between developers and other marine sectors) that could affect development within certain locations and recommendations for resolving competing interests including requirements for additional studies and surveys etc. ➤ Identify ways of managing overlapping interests in a way that can be agreed by all stakeholders. ➤ Provide criteria that developers would need to meet in order to demonstrate the acceptability of their proposals. ➤ Provide locational guidance for multiple developments in certain locations. • As part of the development of the Regional Locational Guidance and the development of the mitigation strategy relevant guidance and existing protocols and methods for the implementation of mitigation measures will be taken into account. • In NI, DOE is leading on significant UK wide work to introduce a legislative framework for an integrated approach to the management of the marine environment, based on the principles of sustainable development. While it is not the role of the offshore renewable SEA or ORESAP to consider

Table 1: Comments on the Environmental Report

Topic	Summary of Comments Received	Response
	<p>discrimination of military radars, consider civilian aerodromes and radar systems, oil and gas facilities and other sea users such as marine aggregate extraction, telecommunication and other cables, disposal of capital and other dredging wastes, fishing grounds, tourism, recreation and quality of life.</p> <ul style="list-style-type: none"> • There is a potential risk of conflict with commercial fisheries. This is reinforced by the perception from commercial fisheries in England that offshore wind farm developments have priority over commercial fisheries. • Particular need to encourage earlier and continuous engagement with developers and commercial fisheries to minimise the risk of conflict and ensure that offshore wind farms are constructed at appropriate times of the year to minimise both short term disturbance and longer term effects on fish stocks. • There is a need to examine the protocols and methods/approaches for coexistence with commercial fisheries that have been effectively developed and applied by the oil and gas industry to see how these can be adapted for the offshore renewable energy industry. This requires a willingness to cooperate as well as good spatial planning and appropriate dialogue. • It may be useful to differentiate between the offshore wind and marine renewable energy markets as they are different with different paybacks. It may be necessary to consider different approaches to the Crown Estate leasing/licensing rounds to recognise the differences in these industries. • In particular it will be important to create a mechanism for developing the sites in a way that recognises and allows for timescales/developer needs associated with the levels of technical and commercial uncertainty that exists within the marine renewable energy industry. • Is there provision or option for one site to accommodate more than one form of renewable generation. 	<p>wider marine planning issues, both documents will be of benefit as the DOE led work progresses.</p> <ul style="list-style-type: none"> • The assessment of the resource zones identified that, within Northern Ireland waters the resource that is available in each location tends to be fairly discrete for each of the three technologies (wave, tidal and offshore wind). There is some overlap between the resource areas off the north coast, although the main areas of resource are still fairly discrete. • Devices that accommodate more than one form of renewable generation are currently being developed. There may be an option for taking these into account the implementation of the ORESAP. • The concerns of the shipping and commercial fishing sectors are noted and will continue to be taken into account at all stages as development work on NI offshore renewable resource progresses. • Ongoing consultation with key stakeholders and other interest groups/organisations will be a key element of the Regional Locational Guidance which will be prepared as part of the implementation of the ORESAP. This will include area based consultations e.g. with local councils covering a wide range of topics, and topic based consultation e.g. consultation on Navigation and Fisheries.

Table 1: Comments on the Environmental Report		
Topic	Summary of Comments Received	Response
<i>Development outside designated zones</i>	<ul style="list-style-type: none"> Confirmation that the SEA does not preclude development in areas outside the main resource zones is welcomed. Concern that areas outside of the identified zones will not be considered for development as a consequence of the SEA. Suggest a softening of the tone towards these other zones and an upfront statement stating that areas not identified as a potential zone are not being excluded from future renewables development. Developments outside the zones are subject to a generic assessment but it is important that the EIA process is robust, particularly if baseline data have not been collated for areas outside the designated zones (more robust assessment than is currently suggested in the Strategic Action Plan (SAP)). Any new areas would not have gone through part 2 & 3 assessment (including assessment of cumulative impact). It would be better to establish that for any new proposals outside the zones examined by this SEA a further SEA assessment will be required - albeit that much of the generic assessment data from the present exercise can be directly imported. Disagree that generic assessment would be sufficient for non-Resource Zones and that further SEA required. Pre-commercial arrays are essential for the development of the sector – areas should be designated for this. 	<ul style="list-style-type: none"> The SEA and ORESAP <u>do not</u> preclude development in areas outside the main resource zones. The focus of the SEA was to assist in the identification of targets for commercial scale development of offshore renewable energy in Northern Ireland waters. The zones identified represent the areas that, based on the assessment of available resource, review of current and emerging technologies and consultation with developers, are most likely to be identified for the deployment of commercial scale development. However, it is recognised that areas outwith the resource zones could also offer potential for development of smaller scale developments e.g. pre-commercial scale developments. However, although the resource zones have been subject to a more detailed assessment than the areas outwith the resource zones, the Environmental Report clearly identifies that the SEA does not remove the need for more detailed project level assessments (e.g. EIA), irrespective of whether the project is located within or outside of a resource zone. The level of detail within the SEA is appropriate to the level of detail within the ORESAP. Unless a specific plan is prepared for the development of areas outside the Resource Zones, any particular development application in these areas would be subject to a project level assessment e.g. EIA rather than another SEA.
<i>Deploy and Monitor Approach</i>	<ul style="list-style-type: none"> Deploy and Monitor approach welcomed and will provide much information and learning and helps to address uncertainties regarding environmental effects. We support the adoption of the deploy and monitor approach to the deployment of commercial scale devices. Pragmatic solution to learning from initial experience in a cost-effective and risk-reduced manner where it does not lead to any additional consenting delays or uncertainties. Costs for such monitoring must be proportionate to the project costs and should not impede development. Approach could cause delay in the setup of commercial sites and there is concern that the approach will unnecessarily hinder the installation of 	<ul style="list-style-type: none"> The deploy and monitor approach, being implemented for the recently announced Pentland Firth marine developments, will be explored in more detail by the Offshore Renewable Energy Forum. The main focus for the deploy and monitor approach is to increase the knowledge and understanding on how different technologies interact with the environment. The emphasis therefore will be on emerging technologies e.g. wave and tidal rather than offshore wind where there are already large amounts of evidence and knowledge in relation to potential environmental effects. Proposals for implementing this approach should reflect the natural scaling up of developments, in particular tidal, that is likely to occur as this industry grows and expands.

Table 1: Comments on the Environmental Report		
Topic	Summary of Comments Received	Response
	<p>commercially proven technology.</p> <ul style="list-style-type: none"> • Need to emphasise the fact that the uncertainty relating to new and unproven technology that gives rise to this deploy and monitor approach may result in the potential targets for offshore wind and tidal energy not being fulfilled. • Recommend that if the deploy and monitor approach is being adopted, priority should be given to developments outwith protected sites. • Care needs to be taken here to ensure that the approach does not lead to consenting delays as stakeholder and/or regulator wait for results to become available. • Concerns re the deploy and monitor approach and the precautionary principle should be used. • Not sufficient coverage given to the significant operating and environmental monitoring knowledge gained from the MCT/SEAGEN project. 	<ul style="list-style-type: none"> • However in addition to the deploy and monitor approach to development, there will still be a requirement for certain surveys/research to be undertaken for all types of project (including offshore wind) as there are still a number of notable gaps in the baseline data for which further information will be required to determine the environmental acceptability of certain projects.
Regional Locational Guidance	<ul style="list-style-type: none"> • Preparation of location guidance is particularly relevant. • Query timing of guidance. • Any such guidance should be criteria based rather than location -driven so as not to preclude the selection by developers of sites outside of any areas specified. • Location guidance will be advantageous, but it must be ensured that developers are left to decide where the best location for a project is. • Given the impending deadline for applications to The Crown Estate for development licenses, this may be too late. • The proposed Locational Guidance is a welcome recommendation. There would be merit in this measure considering transboundary issues/effects and in assigning a timeframe for the delivery of this recommendation in the Final SAP. 	<ul style="list-style-type: none"> • It is proposed that the Regional Locational Guidance will be prepared before the announcement of The Crown Estate leasing round later in 2010-2011. This will help to inform the selection of sites for development and the tendering process. • In the context of the ORESAP the Regional Locational Guidance will focus on identifying solutions for resolving competing interests through more focused consultation and stakeholder engagement and more detailed analysis of existing data. However, it should be noted that no additional data involving marine surveys or research will be collected as part of the Regional Locational Guidance. The Guidance will however help to identify key data gaps in specific locations, priorities for the collation of certain data and could also be used to assist the Offshore Renewable Energy Forum with developing methods/approaches for data collection/research/surveys. • The final ORESAP will set out proposed timescales for all actions.
Development criteria	<ul style="list-style-type: none"> • Support the intention to establish criteria against which development will be assessed, but would like to see these criteria published and available for comment. 	<ul style="list-style-type: none"> • As part of the preparation of the Regional Locational Guidance, environmental criteria will be proposed to guide developers in the initial selection of sites and to assist regulators with the assessment of development proposals.

Table 1: Comments on the Environmental Report		
Topic	Summary of Comments Received	Response
		<ul style="list-style-type: none"> Specific criteria relating to the TCE Leasing Round would also be developed and announced as part of that process in due course.

Table 2: Comments on the Offshore Renewable Energy Strategic Action Plan (ORESAP)

Table 2: Comments on the ORESAP		
Topic	Summary of Comments Received	Response
<p>This next section deals with the comments received on the draft ORESAP. As a number of the issues and comments raised relate to both the SEA and the ORESAP, these two sections on the Post Consultation report should be read together.</p>		

Table 2: Comments on the ORESAP		
Topic	Summary of Comments Received	Response
Chapter 1 Introduction	<ul style="list-style-type: none"> The decision to press for 40% of Northern Ireland's energy to come from renewables by 2020 seems somewhat excessive given that current targets are for 12% by 2012 with 85% coming from wind (both onshore and offshore). No mention of the level of energy security that could be achieved through offshore renewable energy and whether Northern Ireland can achieve complete security of supply through renewable energy. 	<ul style="list-style-type: none"> DETI consulted widely in 2009 on a draft Strategic Energy Framework which proposed new renewable electricity targets of 40% by 2020 to improve NI security and diversity of supply and to reduce carbon emissions. The proposed targets were universally welcomed and the new Strategic Energy Framework (SEF) will be published shortly. The development of further on and offshore renewables will contribute to energy diversity and security. It would not be prudent to focus on one form of energy but is important to have a broader energy mix. While increasing levels of renewable generation are being pursued, it should be noted that conventional generation will still be required alongside renewable energy for security of supply and managing any intermittency issues in the medium term.
Chapter 2 The productive and sustainable use of the sea	<ul style="list-style-type: none"> Cost per MW for offshore wind and tidal energy deployment is likely to be considerably higher than £2.2 million per MW (in the region of £5-10 million per MW). SAP should also make explicit reference to the economic benefits associated with the provision of additional security through the harnessing of an indigenous energy source. Details of direct benefits to NI economy should also be set out. Important to ensure that any technology is fully costed for its lifetime carbon as well as financial costs and that these figures are a major aspect of promotion of schemes to ensure public support. May be additional useful information on the economic importance of the marine environment in two documents available online: <ul style="list-style-type: none"> ➢ Valuing Our Environment – The Economic Impact of the Environment in Northern Ireland. A study commissioned by the Northern Ireland Green NGOs and the Environment & Heritage Service of Northern Ireland, 2007. ➢ Report into the economic implications of a Marine Management Organisation in Northern Ireland. Produced for the Northern Ireland Marine Taskforce by Tony McCusker, 2009. Useful if the SEA considered, even at a high level, the socio-economics of the proposed renewables developments 	<ul style="list-style-type: none"> Opportunities for including additional information on these economic aspects will be considered as part of the finalisation of the ORESAP. As noted in Chapter 1 Section 1.10.1 socio-economic effects have not been covered explicitly in this SEA. The SEA has explored potential effects on marine users. However, the assessment does not quantify these in terms of economic value or effects on the wellbeing or livelihood of these marine users. The ORESAP does include reference to the potential economic benefits of offshore renewable energy developments. However, this is based on high level strategic information. Further consideration of costs and benefits will be included in the final ORESAP. Ongoing consultation with key stakeholders and other interest groups/organisations will be a key element of the Locational Guidance. This will include area based consultations e.g. with local councils covering a wide range of topics, and topic based consultation e.g. consultation on Navigation and Fisheries. Comments on the need to consider existing and future utilities infrastructure are noted. Where appropriate this information will be

Table 2: Comments on the ORESAP

Topic	Summary of Comments Received	Response
	<ul style="list-style-type: none"> • Positive economic impact could be much smaller than suggested. Figures relating to investment and jobs in paragraphs 6 and 7 of the SAP are potentially misleading economic benefits to Northern Ireland not quantified. • Costs associated with using onshore wind as a primary source of renewable energy and identify the cost of meeting the 2020 renewable electricity target through onshore wind should be included. Estimated figures on the costs offshore wind compared to onshore wind should also be included in the SAP. • Estimated cost and benefit analysis on the various sites and look at the combined costs and benefits associated with different combinations of developments at each resource zone – all scenarios should be considered. • Costs and benefits to the consumers should be included. There are zero carbon emissions associated with renewable energy, this should reduce or eliminate the carbon tax associated with energy which in turn could lead to a reduced cost of energy for consumers. <p>General comments from other marine users</p> <ul style="list-style-type: none"> • Poor experiences of fishing industry in GB waters and hope that lessons learned in NI developments. • Fishing sector does not oppose wind and marine developments and recognise strategic benefits such projects could bring. However, keen to be involved with identification of sites to avoid conflict witnessed elsewhere. Fishing sector willing to engage in dialogue with the renewables sector. • The Protocols developed through FLOWW should be followed. Key is to see guidance and best practice reflected on the ground. • Costs of optimising one factor over another, nor how they are to be traded off against other priorities are not included. This unidimensional approach (absence of consideration of socio-economic factors and a cost benefit analysis) is a serious weakness in the SAP. • Consideration of the economic impacts and any consequent need for financial compensation for the loss of business or incurring additional charges needs to be made. • Ensure shipping interests are not jeopardised or neglected in order for the 	<p>updated and referenced in the SEA Post Adoption Statement.</p>

Table 2: Comments on the ORESAP		
Topic	Summary of Comments Received	Response
	<p>Government to achieve its renewable energy targets, especially if this results in disruption to the existing shipping lanes. Needs to be mandatory early consultation.</p> <ul style="list-style-type: none"> • Important that the Councils are consulted on any specific proposals which may emerge at the project drafting stage. Cautious welcome to the proposals outlined in principle but discussions /consultations and more detail required on any draft projects both in terms of scale and location. • Need to ensure that the gas and electricity interconnection infrastructure is considered and owners made aware of possible future developments • It is important that corridors for future utility connections are allowed for in order to ensure the development of offshore renewable energy does not prevent the development of future offshore infrastructure required for energy or other. 	
Chapter 3 Offshore Renewable Energy Forum (OREF)	<ul style="list-style-type: none"> • Offshore Renewable Energy Form welcomed. • Forum of great importance if structured in a workable way and representative of stakeholders from all sectors, development interests and select consultants/advisors. • Needs a focused remit on resolving potential conflicts in a time and cost-efficient manner in order to achieve the plan's overall targets. • With a high number of developers undertaking EIA in a relatively small area, a coordinated approach to data sharing is required. • May be helpful to look at the remit and work of the Scottish Marine Energy Spatial Planning Group (MESPG). • The recommendation for setting up an Offshore Renewable Energy Forum is welcomed and there would be merits in including relevant representatives of statutory authorities and key stakeholders in ROI. 	<ul style="list-style-type: none"> • The establishment of the Forum will build on the cross departmental co-operation to date and will involve key external stakeholders e.g fishing, maritime and environmental sector to ensure that the interests of other marine users are fully taken into account. • Its main focus will be to advise DETI on a prioritised programme of actions to assist the implementation of the ORESAP, including the SEA recommendations as follows. <ul style="list-style-type: none"> ➤ Establishment of a collaborative cross departmental and stakeholder approach to the identification of data and information gaps, prioritisation of filling data and information gaps, sharing and managing data. ➤ Development of a project level mitigation strategy again maximising the opportunity for collaborative working and establishing a joined up approach to mitigation across a number of Government Departments and other regulators, ➤ Examine the opportunities for preparing Regional Locational Guidance and the development of the project level mitigation strategy.

Table 2: Comments on the ORESAP

Topic	Summary of Comments Received	Response
<p>Chapter 4 Targets</p>	<ul style="list-style-type: none"> • Support for DETI's ambition for the production of 40% electricity from renewable sources. • Emphasis on the selected development capacities as being based on current understanding and best practice with an opportunity to review potential installed capacities as technology moves forward. • There is no reference to the capacity factor assumed for tidal or offshore wind to enable an installed MW target to meet a GWh energy demand. Tidal is considered to be 20-25% in good streams and offshore wind is around 35-40%. • Welcome potential development targets of between 600 and 900MW of offshore wind and 300MW from tidal resources in NI waters taking into account environmental effects. • Provided that mitigation measures are in place, and individual schemes are subject to case-by-case assessment, the targets of 600MW of offshore wind and 300MW of tidal are acceptable. • Target of 300MW of tidal energy in Northern Ireland waters by 2020 is considered to be a realisable target, although it is likely that much of this development will occur in the period 2017 to 2020. • The targets seem realistic based on the findings from the SEA. These should be kept under continual review to ensure they are as high as possible. • The targets identified are appropriate provided Government funding and commitment is available to deliver the infrastructure, grid, legislative changes that will be required. • Agree with targets subject to no adverse effects on European wildlife sites, the species they support or other internationally protected species. • Ensure that these targets are not misconstrued as the estimate of total resource potential. Targets should not be construed as an upper max for the award of contracts. • Concern about the practicalities of delivering targets in the timescale. • Given the stringent planning and consents regime under which we develop projects, what extra capacity has been built onto the resource zone capacity exercise to balance losses if some project planning applications are unsuccessful? The assessed resource capacity of the zone should be greater than the amount of 	<ul style="list-style-type: none"> • The development parameter used in this SEA took into account a number of factors: <ul style="list-style-type: none"> ➢ Currently no commercial scale tidal developments/tidal arrays in operation and although larger scale development have been proposed for the Pentland Firth, focus on this SEA was to look at overall targets for development. Average size of 50MW reflects current development proposals within the industry. ➢ It is acknowledged that in terms of Offshore Wind there are a number of developments both proposed and in operation that are more than 300MW. However, the majority of these larger offshore wind developments are located in offshore locations (e.g. beyond 12nm). ➢ The development parameters used in this SEA therefore reflect the scale of commercial developments that, for tidal, are likely to occur by 2020, and for offshore wind, reflect the character of the Northern Ireland waters and the study area (all development would be within the 12nm NI territorial limit). • Targets set in the ORESAP reflect the potential contribution which it is considered the offshore renewable sector could make to the new 40% renewable electricity target by 2020. It is not a capped level of development or total resource potential. • The targets presented in the ORESAP are currently focused on a 2020 timeframe. It is likely therefore that these targets will be reviewed at key points during the life of the ORESAP and as technologies develop and baseline data and knowledge on the interactions between different devices and environmental receptors increases. • Consequently, these targets may be subject to change depending on a number of factors. • The Resource Zones identified as part of this SEA may also change to reflect increases in data and knowledge. For example, surveying and monitoring may identify that an potential effect on a certain

Table 2: Comments on the ORESAP

Topic	Summary of Comments Received	Response
	<p>resource required to meet NI Targets to balance any projects lost through site-specific consent applications.</p> <ul style="list-style-type: none"> • A 900MW for offshore wind may be an appropriate aspiration but it should not create any corresponding dilution of the onshore targets as the onshore renewable are certainly more likely to be delivered before offshore renewables. This would also affect grid infrastructure plans. • It would be preferable for the Government to set targets based on the capital that would be required for the necessary infrastructure and grid. • It is crucially important for the overall targets for the extent and location of renewables to be established and agree in sufficient time for the infrastructure to be planned and delivered • Reservations in respect of the 1200MW figure that is quoted against the 2020 timeframe. Some of this capacity is theoretical resource that will need to be demonstrated probably via a very extensive pilot. If feasible it will then need very substantial investment to develop. A number of factors e.g. gaps in baseline data etc suggest that such capacity is unlikely to be achieved within this period • There is concern over how the targets in the SAP have been interpreted from the results of the ER which concludes that between 900MW and 1200MW of electricity could potentially be generated based on a number of assumptions. In particular there is concern over the level of proposed development around Lough Foyle. Clarification is required in the SEA Statement as to the extent of potential development at the mouth of Lough Foyle. • Until there is a proper cost benefit analysis of the developments it is not possible to say whether targets are appropriate. • Do not believe that setting targets for individual renewable technologies is the best approach. • Tidal energy - nominal project sizes of 50MW is questionable. 50MW for tidal energy is based on the limitations of current technology and does not consider future potential developments. Too big for an demonstration array and too small for fully commercial - suggest 2x 150MW • Wind target of 600 MW is relatively small compared to Round 3 ; important to consider number of projects and “ not put all eggs in one basket “ . Consider “ over awarding “ contracts to allow for reductions through the EIA and consenting 	<p>receptor has not, and is not likely to occur. In these circumstances the area where this receptor is present, which may have previously been excluded from development, could in the future be identified as a potential development site.</p> <ul style="list-style-type: none"> • In terms of grid connectivity to support offshore renewable energy developments and the delivery of the targets presented in the ORESAP it is recognised that there are wider onshore environmental factors that will influence the availability of grid connections in certain locations. • A number of these onshore environmental constraints are already being considered by DETI and NIE in the context of future grid reinforcement works and upgrades and associated SEA work of the draft NI Strategic Action Plan for Onshore Renewable Electricity Generation. The main objective of that Plan is to optimise the amount of renewable electricity generated from renewables, to contribute to proposed renewable electricity targets of 40% renewable electricity by 2020. The Plan will consider various generation options, including offshore renewables, to meet the 40% target and will also consider the electricity grid network in light of these increased levels of renewable electricity. • It has been identified in comparison to offshore wind and tidal energy, the available wave resource in Northern Ireland is fairly limited and constrained to a small area off the north coast. Consequently, wave energy has not been included in the overall targets for offshore renewable energy in Northern Ireland. However, as with smaller pre-commercial sites, this does not exclude wave energy developments in Northern Ireland.

Table 2: Comments on the ORESAP		
Topic	Summary of Comments Received	Response
	<p>procedure.</p> <ul style="list-style-type: none"> • Arguable that target is not sufficiently high to reach the ultimate target of 80% GHG reduction by 2050 • As there is currently limited potential in terms of wave resource, it is sensible that this technology has been excluded from the overall potential target. However, it is also welcomed that wave has not been excluded from the SEA or the SAP should wave projects come forward. This is a prudent approach. DETI should consider providing further support for developing wave pilot schemes in NI waters. This may have future economic benefits. • The SEA findings of potential for 600MW in the Portrush to Ballycastle area appears to correspond to previous studies into potential resource in this area for development by 2020. However, there is concern over the 600MW identified off the East Coast (Carlingford Lough) area as this was not identified in previous studies due to grid connection issues. 	
Timelines	<ul style="list-style-type: none"> • Estimated timeline be more explicitly expressed. • Concerned timescales are slightly too long. • The SAP should provide details of an estimated timeline for the project highlighting key action points and targets as well as budgets for each stage of the development. • More detailed timeline required especially for the proposed TCE competitive call. • Timeline in the SAP is challenging and does not provide consumers with the necessary detail. The timeline does not take account of the limited resources which are required for deployment and the dates in which these resources will not be available due to use elsewhere in the UK or in Europe. 	<ul style="list-style-type: none"> • Comments noted. Further detail on proposed timelines for all actions will be provided, where possible, in the final ORESAP.
Action 12.1 Grid Connections	<ul style="list-style-type: none"> • The planned electricity grid strengthening in Northern Ireland is welcomed. This grid strengthening should aim to provide all consumers with equal access to the electricity grid and should not come at an unfair cost to the consumer. • NIE should commence detailed design work on making 300MW capacity available by 2020 for tidal connection in parallel with the announcement of the Marine Leasing Round. • Support the on-going work taking place within SONI and NIE building on the All-island grid study. • The Grid SEA needs to be aligned with the current offshore SEA to ensure there 	<ul style="list-style-type: none"> • As noted above - In terms of grid connectivity to support offshore renewable energy developments and the delivery of the targets presented in the ORESAP it is recognised that there are wider onshore environmental factors that will influence the availability of grid connections in certain locations. • A number of these onshore environmental constraints are already being considered by DETI and NIE in the context of future grid reinforcement works and upgrades and associated SEA of the draft NI Strategic Action Plan for Onshore Renewable Electricity

Table 2: Comments on the ORESAP

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	<p>are no gaps and effective cross-linkages are needed.</p> <ul style="list-style-type: none"> • Further information should be included in the final version of the SAP on how and where grid connections to schemes in the proposed zones might make landfall.. • Need more detail in the reports on the potential impacts of grid connections. • Consideration needs to be given at the strategic level for the support infrastructure for the renewable energy operations. This will require closer coordination with the land use planning and future marine spatial plans. • Useful for the reports to indicate the magnitude of grid infrastructure required to take up the 900-1200MW. • Need for major change and upgrading of the electricity grid system to accommodate large scale input from renewable sources presents a financial and logistical challenge which it is vital to address in conjunction with the development of the offshore resources. • Welcome recognition of the necessity to ensure timely grid reinforcement for the marine renewable sector. Strategy for grid infrastructure reinforcement and upgrading should be developed and implemented. • A critical strategic action is the need to secure grid infrastructure by means of an accelerated planning and consenting process. This is particularly important given that a 2020 timetable for complete development of the grid is currently not feasible given the consenting and wayleaveing difficulties that will be faced unless there is a substantial change in the planning regime. • Major investment scheme for upgrading the grid also brings in a number of risks for the development of offshore wind. • Should be emphasis on ensuring that the requirements for strategic grid infrastructure reinforcement are identified as a matter of urgency and that the planning and consenting process for these works is initiated as soon as possible. • Consider offshore technologies to be more uncertain than mature onshore ones for grid consideration. 	<p>Generation.</p>
<p>Action 12.2 Isles Project</p>	<ul style="list-style-type: none"> • This type of offshore grid could prove beneficial in the long term, but power will initially need to be brought onshore as it will be required in NI. Hence land based connections must be the initial target, with the connections of these nodes to the offshore cable at a future date beyond 2020. 	<ul style="list-style-type: none"> • Noted

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Action 12.3 Infrastructure and supply chain	<ul style="list-style-type: none"> • Consideration needs to be given at the strategic level for the support infrastructure for the renewable energy operations. This will require closer coordination with the land use planning and future marine spatial plans. • Northern Ireland has the potential to develop technology and a specialist supply chain for this emerging industry. The development of local tidal resource has the potential to assist this process but the really big economic opportunity for Northern Ireland is the opportunity to export these skills and technologies to the rest of the world when large scale wave and tidal contracts are being tendered in the next decade. However, this will require DETI to encourage the development of skills and technologies as well as the exploitation of the local marine energy resource. • Suggest the inclusion of working with the wider UK renewables market to ensure a coordinated approach to supply chain development, ensuring that developments with NI are complimentary. This will facilitate a coherent supply chain and secure maximum benefit of NI plc. • Suggest form a trade association for the marine sector. • Require DETI to encourage the development of the skills and technologies as well as the exploitation of the local marine energy resource. • How does NI intend to secure the supply in order to compete with other International offshore wind developments? • More emphasis needs to be made on the requirement for a strong supply chain in NI to meet the demands of the offshore renewable sector, to secure work locally. 	<ul style="list-style-type: none"> • Supply chain development is the main focus of Invest NI work with DECC and Crown Estate. Invest NI has facilitated and supported the formation and development of collaborative networks for supply chain development in wind and marine. • Northern Ireland universities and regional colleges have developed courses and training that will provide skills and knowledge related to work in the renewable energy sectors. • Comments noted and will be taken into account in the preparation of the final ORESAP.
Action 12.4 Marine boundaries	<ul style="list-style-type: none"> • Welcome commitment to establish practical way forward with role for handling offshore renewable energy applications in areas where jurisdiction, ownership and consenting processes are not clearly defined. • Suggest that cross-border cooperation would be needed, as Loughs Foyle and Carlingford are both designated as European sites under the Birds and Habitats Directives. 	<ul style="list-style-type: none"> • Noted.
Action 12.5 Broader marine planning activities	<ul style="list-style-type: none"> • Need to demonstrate support for a cross-department approach to all marine issues. • Welcome that the SAP recognises the need for DETI to engage with the Marine Bill process. The SAP should play a crucial part in delivering Marine Protected Areas and help drive future marine spatial plans. A simplified and streamlined 	<ul style="list-style-type: none"> • It is acknowledged that it is not the role of the SEA to identify MPAs. • Where information on potential future MPAs has been provided as part of the SEA process these have been included in the SEA and potential areas of nature conservation importance avoided in the identification of potential development capacity within each of the

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	<p>process should not only make for a smoother development process, but allow greater transparency and scrutiny of individual proposals from an environmental point of view as well.</p> <ul style="list-style-type: none"> • Lack of a Marine Bill in Northern Ireland and a coherent system of marine spatial planning and Marine Protected Areas (and the underlying research required to deliver these) is a serious concern. Without this knowledge and supporting structures it will be very difficult to ensure that the rapid development of marine renewables takes place in the best places and to ensure the protection of the marine environment and vital marine resources. • The NI Offshore SEA has a critical role to play in supporting the faster delivery of Northern Ireland's Marine Protected Area (MPA) network and future marine spatial plans. • Merit of the development of an integrated consenting process/mechanism for developments which will facilitate the delivery of a sustainable offshore renewable energy industry. Such a process should take into account the potential for transboundary and cumulative effects associated with the development of the industry. 	<p>resource zones.</p> <ul style="list-style-type: none"> • As part of the preparation of Regional Locational Guidance there will be a requirement to look in more detail at proposals for the development of a coherent network of MPAs. However it still will not be the role of the ORESAP or any Regional Locational Guidance to designate these sites.
Action 12.6 Consenting and licensing regime	<ul style="list-style-type: none"> • Urge the government to provide a streamlined and robust consenting regime that isn't hindered by delays to allow all renewables to meet their potential to deliver by 2020 and beyond. • Whilst developing streamlined administrative guidance, The Crown Estate and the Northern Ireland Environment Agency should work in collaboration with the Infrastructure Planning Commission, Marine Management Organisation, Welsh Assembly Government and Marine Scotland. This will ensure a coherent licensing process and knowledge transfer between central government and devolved administrations. Most notably developing knowledge transfer and lessons learnt will fast track the development pathway. • Consents should not be granted where development would lead to interference with a recognised sealane essential to international navigation and obstruction of or danger to navigation. • More measures are needed to accelerate the approval process for the installation of test devices • Support development of a streamlined consenting system. 	<ul style="list-style-type: none"> • Comments noted and will be taken into account in the preparation of the final ORESAP.

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Action 12.7 Decommissioning regime	<ul style="list-style-type: none"> • Support for a decommissioning regime to ensure no subsequent environmental damage. • Welcome intention to bring NI in line with rest of the UK in terms of the establishment of an appropriate decommissioning regime. 	<ul style="list-style-type: none"> • Comments noted and will be taken into account in the preparation of the final ORESAP.
Action 12.8 Support regime	<ul style="list-style-type: none"> • Strongly in favour of the introduction of a single UK-wide banding level for different technologies. There are significant disadvantages of one jurisdiction maintaining a different ROC regime to that of another regime in terms of attracting project investment. Thus, the repatriation of the vires to Northern Ireland should only be undertaken if there is the intent and commitment to offer ROCs at the same level at least as the highest offered in other jurisdictions for the same technology. • Approve of the aim for DETI to work with DECC to rapidly gain the necessary powers to issue (NI) ROCs for schemes in NI waters: plugging a widely recognised gap. • Will NI receive the same ROCs and lead tariffs as other areas? • Welcome initiative to transfer the vires for issuing offshore ROCs from DECC to DETI. In favour of single UK-wide banding level for different technologies. 	<ul style="list-style-type: none"> • Comments noted and will be taken into account in the preparation of the final ORESAP.
Action 12.9 Support Regime	<ul style="list-style-type: none"> • There is potential for NI to become a significant force in the wave and tidal industry as it matures but there is concern that there is reluctance for NI Invest to support applications for their own R&D Fund (either from inward investment companies or local companies) due to the long term nature of the development of this market. • Economic downturn having key impact on this emerging marine sector – difficult environment for early stage / high risk projects. • Consideration should be given to ROC level and possible introduction of support scheme along lines of the WATES in Scotland. 	<ul style="list-style-type: none"> • Invest NI's R&D programme is a competitive fund for all types of technology which renewable energy technology companies can investigate as a source of development funding. Invest NI also provides funding for the Carbon Trust's Innovations work programme which has funded and continues to fund marine energy technology development. A number of local companies have been able to access assistance from the Carbon Trust to date. • Most of the early stage support for offshore renewables is UK wide and NI companies can access these funding streams. • NI ROCs are currently linked to the DECC levels and a study is currently underway by DECC and the Scottish Government about future marine ROC levels.
Chapter 4: General Comments	<ul style="list-style-type: none"> • Consider for inclusion in the SAP – include the term sustainable within the description of the overall aims of the SAP; the legal basis for ORESAP ;a series of schematics highlighting the key legislative aspect under which the implementation of the SAP and development proposals arising will operate; a schematic which 	<ul style="list-style-type: none"> • Comments noted and will be taken into account in the preparation of the final ORESAP

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	indicates the link between the SAP process, other statutory processes including SEA and AA and other relevant plans and programmes; specific timescales for the delivery of the actions; detail on the resource zones .	
Chapter 5 Reporting, Monitoring and Evaluation Proposals	<ul style="list-style-type: none"> • Feel that a review of progress in delivering the SAP in 2013-14 is too far in the future. The review should be undertaken every 2 years beginning in 2012 to assess progress and take corrective actions if progress is not proceeding to 2020. • Agreement with the monitoring and evaluation proposals. • A smaller sub group should meet on a more regular basis to take ownership of these actions and drive delivery of offshore renewables with NI. • Merit in making a distinction between the Monitoring and Evaluation in the context of the Implementation of the SAP's Objectives and Actions as distinct from the SEA and AA related monitoring of the significant environmental effects of the implementation of the SAP as required by Article 10 of the SEA Directive. • Provisions for monitoring do not appear to include monitoring the overall significant environmental effects. • The current proposed monitoring of only mitigation measures and individual projects are not adequate. • Should be a strategic level process of monitoring overall cumulative environmental effects. • The SAP's proposals for reporting, monitoring and evaluation could and should be made more robust i.e. with a clearer line of accountability for performance. • Monitoring should include environmental impacts as well as progress against targets. • The monitoring and consenting programme should also be defined in the pre-application process, to ensure robust financial modelling can be applied to assist project deployment. • Sites for renewables may also be used as highly protected sites that would serve as excellent exclusion zones for scientific monitoring and study. The Universities in Northern Ireland may well be keen on being involved with research and monitoring projects that would arise through initiatives such as this. • Consideration should be given to an Annual Conference /Workshop to consider progress. 	<ul style="list-style-type: none"> • As part of the SEA, it has been identified that two types of monitoring are required, strategic monitoring which includes monitoring the implementation of the ORESAP and the actions contained within the plan and monitoring potential significant adverse effects. • Initial mechanisms have been identified in the ORESAP for monitoring the delivery of these actions therefore ensuring that appropriate measures will be put in place and the Forum will review the proposals for strategic and project level monitoring as part of its work. • In finalising ORESAP more frequent, formal review points during the life of the Plan to assess progress will be included.