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Offshore Energy SEA 3 Scoping
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4th September 2015

Dear Carol

Consultation on UK Offshore Energy Strategic Environmental Assessment (UK OESEA3) Scoping Report

Thank you for consulting the Natural Resources Body for Wales (Natural Resources Wales) on the above document. The purpose of the Natural Resources Wales (NRW) is to ensure that the environment and natural resources of Wales are sustainably maintained, sustainably enhanced and sustainably used now and in the future. Our comments are therefore provided in the context of this remit and our role as a consultation body under the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, as further amended by paragraph 189 of the Natural Resources Body for Wales (Functions) Order 2013, and as advisers to Welsh Government on the natural heritage and resources of Wales and its coastal waters.

NRW welcomes and supports the strategic approach to the assessment of offshore energy that the OESEA3 aims to achieve. We consider that a robust strategic assessment of environmental issues associated with the plan/programme will help to reduce risks to the environment and minimize the consenting risks and uncertainties for project promoters by identifying environmental baselines, key constraints, sensitive receptors, potential impacts, alternatives and mitigation approaches.

Our comments on the scope of the SEA can be summarized as follows:

1. The plan currently takes only limited account of the location of potential development. This is reasonable where future development locations are unknown which is the case for most of the technologies that the plan will cover. However, NRW recommend that the SEA should identify potential development in a way that is as spatially well-defined as possible, with an emphasis on establishing the right technology in the right place.

2. In particular, NRW has a number of concerns about the assessment of tidal range elements of the plan. These relate to lack of spatial definition of future tidal range development within the plan itself, but also to the characterization of the status of projects currently in the planning process, the need for the SEA to more clearly distinguish assessment of wave/tidal stream and tidal range technologies and the need to consider tidal range-specific effects more comprehensively. For example, the effects on flood risk management/mitigation and any associated impacts to coastal communities and/or human health have not been adequately considered.
3. The use of MSFD (and in some cases WFD) as the primary guiding indicator for the SEA is insufficient. NRW consider that, although the MSFD provides a framework, key legislation (e.g. Habitats and Birds Directives) should be more clearly reflected to establish the full range of statutory requirements.
4. There are a number of inaccuracies and omissions in relation to the management of the marine environment in Wales, including the Marine Licensing process, relevant legislation (e.g. Environment Bill) and designation of protected sites (E.g. MCZ, SPA and SAC). NRW would also request greater clarity around the role of Wales within the plan/programme.

In the following pages we have expanded on the issues summarised above to provide more detailed advice on the scope of the SEA to help ensure a robust assessment of the implications of offshore energy developments.

NRW would appreciate early clarification about timescales for future consultations related to the SEA as soon as they become available.

If you have any questions regarding this response please contact our Marine Industries Manager, Andy Hill in the first instance at (Andrew.hill@naturalresourceswales.gov.uk or 03000 653871).

Please note that any future consultations on the OESEA3 should also be sent to the NRW 'Porth' (strategic assessment gateway) at: strategic.assessment@cyfoethnaturiolcymru.gov.uk

Yn Gywir / Yours sincerely,



Rhian Jardine

Head of Sustainable Communities / Pennaeth Cymunidae Cynaliadwy

Annex 1 – NRW’s Main Comments on the Scope of the SEA

General

- 1.1. The plan currently takes only limited account of the location of potential development. This is reasonable where future development locations are unknown which is the case for most of the technologies that the plan will cover. NRW recommend that the SEA should identify potential development in a way that is as spatially well-defined as possible, with an emphasis on establishing the right technology in the right place. Discussions in previous Offshore Energy SEA’s about the location of offshore wind farm developments were also informed by the identification of areas preferred for such development by the Crown Estate. This provided valuable spatial context for discussion to allow a meaningful evaluation of alternative locations.
- 1.2. The location of a number of tidal range developments are reasonably foreseeable. As the scoping report itself recognizes, a number of tidal lagoon projects are currently in planning, with one of those partially consented. Early plans are also being drawn up for a number of other tidal lagoons in other locations. Given the scale of these developments and the difficulty of mitigating or compensating for some of their effects, alone or in combination with other developments, planning for these technologies (and subsequent consenting) NRW strongly advises that the assessment should include more detailed consideration of the risks associated with the proposed locations of likely development.
- 1.3. WG are likely to publish the Wales National Marine Plan (WNMP) before OESEA3 is due to be completed and should be fully taken into account by the OESEA3.
- 1.4. In general the document focuses strongly on the offshore marine area in the way it characterises the marine environment, addresses the scope of related plans and how it considers potential impacts. A significant amount of development is likely to arise from the draft plan/programme in inshore and coastal areas, and from other activities associated with wave & tidal, CCS and hydrocarbon gas storage developments. To ensure that the SEA remains robust and comprehensive, the scoping should better reflect the issues associated with development in inshore and coastal (including intertidal) areas generally, and address the need for new research to understand potential impacts of the newer technologies.
- 1.5. NRW consider that further consideration of required permits and consents should be considered, for example, with regards to tidal range development, due to the likely interaction with the terrestrial planning system and range of other consenting regimes where the development meets the coast.
- 1.6. The draft SEA Objectives are inadequate, partly because they should be set within UK Government’s wider policy framework for the marine area but also as a consequence of the lack of a broader technological and inshore focus. The objectives should describe the need to protect environmental features beyond those protected at European level and should also more comprehensively reflect the risks posed by the full range of activities that might be anticipated given the broad technological and geographical range of the draft plan/programme.
- 1.7. Furthermore, NRW note that there are no objectives relating to flood risk management. A relevant objective could potentially be included under the topic ‘Population and Human Health’ (p.109), and/or ‘Geology and soils’ (p.107). Indicators should acknowledge the entire coastline (not just those within designated sites) and acknowledge the potential impacts that coastal process could have on on-shore flood risk.
- 1.8. NRW also consider that flood risk should be considered throughout the SEA (E.g. ‘Population and Human Health’, ‘Geology, substrates and coastal processes’), including within any consideration of potential sources of effect.
- 1.9. A number of important recommendations were made in the post-public consultation report that followed completion of the first Offshore Energy SEA. The current SEA should consider the

requirements of these earlier recommendations. In particular, NRW believes that there is an ongoing need for the SEA to address the following issues:

- Identification of the nature and extent of noisy activities planned by oil and gas and offshore renewables developers and establishment of mechanisms to coordinate or restrict noisy activities to avoid significant impacts (recommendations 10,11)
- Improvements to baseline information particularly in relation to the distribution and ecology of birds, mammals and the effects of electromagnetic fields on fish (recommendation 16).
- Coordination of strategic research and information gathering. A considerable amount of strategic research and monitoring has been conducted, particularly in support of Round 3 offshore windfarm development. Research has also been conducted to examine the implications of the other marine energy related activities that the SEA will cover (e.g. wave & tidal), and the SEA should examine how research to support such activities can be best coordinated and prioritised. This includes considering how best to streamline and consolidate research conducted under the auspices of the SEA with the Offshore Renewables Joint Industries Programme (ORJIP) for Offshore Energy, which has recently published a revised Ocean Energy Research Strategy for the UK¹. We are pleased to see that the work of ORJIP Ocean Energy will be reflected in the SEA. We highlight the informal advice previously provided by NRW to DECC (and to ORJIP Ocean Energy) (emails to Hartley-Anderson dated 30th April 2015) about the scope of research needed to inform planning and consenting for tidal range.
- The need for better access to data (recommendation 15). There may be significant benefit in better coordinating access to marine environmental data. NRW believes that the Marine Environmental Data Information Network (MEDIN), established by Government to improve access to, and sharing of, marine data, continues to have an important role to play in facilitating better access to data.
- Development of best practice to minimise the volumes of material used in cable armoring, scour protection and pipeline armoring (recommendation 17). NRW supports the intention to consider the draft plan/programme in the context of climate change (*Section 2.5*). We consider the SEA should fully assess the effects of planned activities in terms of resulting carbon emissions, seek to recommend operational carbon emission reduction measures, examine potential conflicts between energy generation sectors.

1.10. Many of the high energy areas conventionally identified as suitable for wave & tidal stream device deployment also support biodiversity and habitats that are of significant nature conservation importance and are protected by legislation which requires that significant damage or disturbance is avoided. NRW consider that the SEA should examine whether or not areas of lower energy resource, that may also have lower environmental sensitivity, might also be exploited by the sector, and consider how technologies might need to develop to exploit marine areas with lower amounts of wave and tidal energy.

1.11. NRW request clarity on whether the current sources of potential significant effect include indirect effects such as removal of prey species or damage to habitat of prey species. It is NRW's view that indirect effects should be considered.

1.12. NRW advises that the draft programme/plan will be subject to the need for a Habitats Regulations Assessment under the Conservation (Natural Habitats &c) Regulations 2010.

¹ ORJIP Ocean Energy. The Forward Look; an Ocean Energy Environmental Research Strategy for the UK. Version 3. July 2015.

Wave & Tidal Stream and Tidal Range

- 1.13. Greater clarity and distinction between the wave and tidal **stream** and tidal **range** sectors would be welcomed in this scoping document. NRW recommend that information in the Environmental Report should be presented separately for tidal range to that for wave and tidal stream energy, owing to the differences in technology, impacts and commercial scale of developments likely during the lifetime of the plan/programme. NRW have identified several areas for that would benefit from clarification, identified in points 1.14-1.18.
- 1.14. NRW consider that the differences in the consenting requirements for tidal range developments alluded to on p.15 should be further described for clarity.
- 1.15. NRW note that the statement 'The Crown Estate has not, to date, carried out any wave or tidal energy leasing round for English and Welsh waters...' (p.15) should be clarified. There are 6 UK demonstration zones recently leased (via a leasing round) by The Crown Estate, located throughout UK, with two in Welsh waters. In addition, a further project site was leased to Minesto as part of this leasing round for their Deep Green project in Holyhead Deep. To note, Atlantis Resources Ltd have recently announced their acquirement of Marine Current Turbines from Siemens, which includes the seabed right to develop the Anglesey Skerries site. This clarification should also be reflected on p.18.
- 1.16. Please note that contrary to the statement on p. 18 that 'Exploitation of wave and tidal energy is not yet fully commercial in UK waters', tidal range developments are at a fully commercial scale and one project has been consented (Tidal Lagoon Swansea Bay has been granted a DCO), with others also in development. This should also be clarified again on p.42 with regards to the line '...wave and tidal energy are likely to be represented by demonstration phase or pre-commercial devices or developments...', and on p.75 'projects in these areas are either in demonstration phase...'
- 1.17. NRW note that *Figure 1.9* is incorrect. The figure identifies tidal **stream**, not tidal **range** leasing areas. For clarity, Tidal Lagoon Swansea Bay is a partially consented tidal range development at a commercial scale and is not part of a leasing process. We advise that tidal stream and tidal range developments and leasing rounds are not presented in a single figure to avoid confusion. Please note that two further developments have been registered with the Planning Inspectorate (PINs) (Tidal Lagoon Cardiff and Tidal Lagoon Newport), which are not shown on figure 1.9.
- 1.18. Please note that the following line (p.102) is also incorrect: 'Similarly there are a number of tidal lagoons which have received planning permission and could be deployed within the currency of the OESEA3.' Please note that only **one** project, Tidal Lagoon Swansea Bay, has received partial consent (DCO), two have been registered with PINS and there are a number of proposed tidal lagoon developments at varying stages of pre-application planning. It is nevertheless possible that a number of tidal lagoons could be deployed within the currency of the OESEA3.
- 1.19. It is particularly important that the SEA should draw heavily on lessons being learnt from the assessment of tidal range technologies in the Severn (Severn Tidal Power Feasibility Study²). This should include a wider consideration of the main stages of development for tidal range, as outlined on p.19. NRW consider that any strategic assessment of tidal range under OESEA3 should also consider conflicts with other coastal development and the Shoreline Management Plans (SMP2). In addition, any consideration should also acknowledge the impacts (E.g. to landscape/seascape) due to the development being connected to the coast.
- 1.20. NRW disagrees with the statement that 'there are no anthropogenic activities which are likely to cause significant regional scale changes to geology and sediments'. The potential for tidal range development to cause regional scale changes was assessed as part of the Severn Tidal Power (STP) Feasibility Study SEA and some changes in the far field were noted for both water levels (and hence

² <https://www.gov.uk/government/collections/severn-tidal-power-feasibility-study-conclusions>

potentially coastal processes) and sediments (E.g. effects on sandbanks). NRW recommend considering Chapter 39 (Hydraulics and Geomorphology)³ of the STP SEA, which includes a summary and cross reference to the more detailed reports.

- 1.21. NRW advises that, with regards to climate change, the SEA should consider impacts to flood risk and the potential in-combination effects regarding tidal lagoon schemes (E.g. with sea level rise, changes to coastal processes), including those onshore.

Oil & Gas

- 1.22. The adequacy of emergency response vessels should be considered within the discussion on regulatory and safety procedures for the oil and gas industry on p. 59.

Reliance on the MSFD in the assessment

- 1.23. NRW recognise that the use of MSFD in the scoping document provides a useful strategic overview with which to consider implications for the SEA. However, we consider that further detail should be included to ensure that the statutory requirements (E.g. Habitats & Birds Directives/HRA) have been fully and appropriately considered. For example, on p.87, the implications of oil spills are in context of the MSFD descriptor target suggesting the impacts of oil spills should be 'minimised', however an HRA would require a conclusion of 'no likely significant effect'.
- 1.24. Further explanation should be provided alongside references to the MSFD to acknowledge the measures identified in the Programme of Measures (e.g. HRA, the target of achieving Favourable Conservation Status).
- 1.25. Please note that the scope of the Marine Strategy Framework Directive does not include estuaries as they are considered as transitional waters under the WFD. NRW advises that explicit reference to the Habitats and Birds Directives should be made to ensure adequate consideration is made of impacts (in particular to estuaries), and in general the SEA should avoid assumptions that the MSFD or WFD will provide adequate consideration for all relevant sites and features.

Clarification of the Welsh context

- 1.26. NRW note there is a poor coverage, and some inaccuracies and inconsistencies in the description of marine management in Wales.
- 1.27. NRW note that there are several inconsistencies with regards to Marine Licensing in Wales, including a number of instances where the MMO are incorrectly named as the lead authority for Marine Licensing in Wales. These include:
- On p.15 the document states a ML is required for activities previously covered by FEPA and CPA, whilst this is true, NRW would welcome more explicit recognition that in English waters these are determined by MMO and in Welsh Waters (out to 12 nm) these are determined by NRW.
 - On p.29, please note that distinction should be made between England and Wales with regards differences, for example the transfer of EPS powers from Natural England to MMO in England. To clarify, in Wales these powers were transferred to the Countryside Council for Wales (CCW), which are now held by NRW.

³ 39. Severn tidal power: Hydraulics and geomorphology topic report for the strategic environmental assessment (SEA) <https://www.gov.uk/government/publications/39-severn-tidal-power-hydraulics-and-geomorphology-topic-report-for-the-strategic-environmental-assessment-sea>

- On p.58 the document incorrectly states '*Activities (in England and Wales) will be regulated by the MMO*'. Marine Licence activities in Welsh waters (out to 12nm) are regulated by NRW on behalf of Welsh ministers, and not the MMO. Only consents under the Electricity Act (s36) and Harbours Act are issued by the MMO.

- 1.28. Please note that Inshore Fisheries and Conservation Authorities (IFCAs) (as described on p.60) only exist in England. In Wales, the Welsh Government are responsible for the management and regulation of all marine fisheries including inshore fisheries. NRW consider that a comprehensive description of each countries fishery management measures would be appropriate to avoid confusion.
- 1.29. With regards to the list 'Other Users and Material Assets' provided on pages 56 – 58, NRW recommend the inclusion of a number of Welsh Statutory Instruments (E.g. The Scallop Fishing (Wales) Order 2010, reference to the Welsh Government Marine Fisheries Legislative Review and the forth coming Assessing Welsh Fishing Activities programme of work). NRW would advise any further information required is sought from Welsh Government.
- 1.30. NRW note that the OESEA3 makes no reference to three key pieces of Welsh legislation (for example on p.28): The Environment Bill (Wales) (due to be enacted in 2016), The Wellbeing of Future Generations Act (Wales) 2015, and the Planning Act (Wales) 2015.
- 1.31. Please note that in Wales, SSSIs designated after 2002 extend down to Lowest Astronomical Tide, not 'Mean Low Water' as proposed.
- 1.32. Please note, the 'MCZ project' only covers English and offshore waters and not 'England and Wales' as stated on p.31. NRW advise that the information on the Wales MCZ Project (p.32) is outdated and clarity should be sought from Welsh Government as to the current information.
- 1.33. The discussion regarding Marine Nature Reserves on p.30 is incorrect. For clarification, in 2015, Welsh Government brought into force Part 5 of MaCAA (2009) which resulted in Skomer Marine Nature Reserve becoming Wales' first MCZ⁴. Part 5 of the Marine Act repeals the Marine Nature Reserve (MNR) powers under the Wildlife and Countryside Act 1981 (as amended) and replaces it with a new mechanism for protecting marine biodiversity through the designation of Marine Conservation Zones. A reference should also be made to Skomer MCZ on p.83.
- 1.34. NRW request greater clarity be provided about which country the text is referring to as it is very confusing in places. Some of the general statements are not necessarily applicable to all countries.
- 1.35. Please note that the Welsh Assembly Government (WAG) should now be referred to as the Welsh Government (WG).

Water Quality/WFD

- 1.36. Please note that WFD seeks to achieve good status (not just Good Ecological Status) and that this should be reflected in the document (E.g. p.37, paragraph 4).
- 1.37. Please note the WFD jurisdiction is reported incorrectly (p.45). To clarify, ecological status is to 1nm and chemical status is to 12nm. The jurisdiction should also be recognised on p.37.
- 1.38. NRW consider that descriptors 1, 2 and 4 are also relevant on p. 45 (paragraph 4), as WFD will also contribute significantly to them. More widely, the potential for WFD to contribute to other MSFD descriptors should be recognised.

⁴ Please note that this is not 'highly protected'.

General points for clarification

- 1.39. With regards to the statement: 'Overarching National Policy Statements for Energy are also relevant, and provide planning policy in relation to nationally significant energy infrastructure projects (NSIPs), as defined in the Planning Act 2008 – this includes almost all offshore renewable energy projects in England and Wales, and onshore aspects of projects which may have offshore elements (e.g. CCS, gas storage and oil and gas pipelines)' (p.10). NRW request clarity on whether this would also capture Underground Coal Gasification. If so, NRW would request further discussion on this issue.
- 1.40. For accuracy, we also note that the final sentence on p.14 should read 'which extends **above** the **mean low water spring tide mark** is subject to the terrestrial planning system'.
- 1.41. NRW consider that the inclusion of bats and otters under 'Marine Mammals' is misleading and should be presented as a separate section (as turtles have been).
- 1.42. Figure 1.6 does not include the two Round 3 zones in Welsh waters (the Bristol Channel and Irish Sea zones). NRW request clarity in the OESEA3 as to the status of these zones and the likelihood that offshore wind development may still proceed within these areas as part of Round 3.
- 1.43. NRW consider that the Marine Works (Environmental Impact Assessment) Regulations 2009 (as amended) should also be recognised (E.g. on p.27).
- 1.44. NRW advise that the statement 'Decisions made [on] NSIPS must also be taken with regard to the MPS and any relevant Marine Plan' (p.34), should also include other energy developments, not only NSIPs.
- 1.45. Please note that the Wales Coast Path opened in May 2012. Therefore, on p.41, the line 'planning their own equivalent trails' is inaccurate, and the term 'The Welsh route' should be replaced with 'The Wales Coast Path' for accuracy.
- 1.46. NRW request clarity on whether the visual impacts of oil and gas development will be included in the scope of the SEA, as they appear to be omitted on p.42.
- 1.47. Please note there is a minor error where the document refers to 'updates from UKCIP' as a data source (E.g. p.53) but UKCP09 and future projections are being developed by Met Office Hadley Centre with Environment Agency not UKCIP.
- 1.48. NRW consider that further discussion should be presented on 'recreation interests including sailing and surfing' under section '2.7 Other Users and Material Assets' (p.56).
- 1.49. NRW request clarity on the reference for the following statements regarding fisheries:
 - 'UK fisheries have reduced in recent years in part due to declining fish stocks and resulting management techniques including catch and effort management' (p.60).
 - 'Virtually all commercially fished species are heavily exploited' (p.66).
 - Additionally, a reduction in fish discards may have resulted in the decline of some scavenging species such as fulmar, though evidence is limited' (p.89).
 - 'In the southern North Sea, some waterbird populations have declined and this has been linked to reduced food availability possibly due to pressure from shellfisheries' (p.89).
 - 'Around the UK, coastal and offshore seabed sediment habitats such as sands and muds are impacted by a range of activities, however the spatial extent of damage generated by bottom trawling activity, which may damage ecosystem functioning, is considered to be the main source of pressure on benthic environments' (p.89).

- 'Within this region, dolphins, porpoises and grey seals are impacted through fisheries by-catch' (p.90).
- 1.50. NRW suggest the following line should be included in paragraph 3 on p.85, to recognise significant fishing effort in Welsh waters: 'There is a concentrated scallop fishery in Cardigan Bay from November to April each year.'
 - 1.51. Please note, Bottlenose dolphin are also a qualifying feature of Pen Llyn a'r Sarnau SAC as well as Cardigan Bay SAC (p. 83).
 - 1.52. Please note that the title of section 3.3.2 *Geology substrates and coastal geomorphology* is different to that in section 2.1 *Geology, substrates and coastal processes*.
 - 1.53. NRW consider that the final sentence on p.86 is contradictory and request further description to clarify the nature of accidental oil spills, including consideration of cumulative impacts of spills.
 - 1.54. With regards to the statement 'Some beam trawlers have switched to otter trawling or scallop dredging, a fishery without quotas' (p.88), whilst this is correct, NRW consider that further clarity should be provided to note that various sized vessels must satisfy relevant effort and gear restrictions (Welsh, Scottish or English Statutory Instruments or Byelaws) and have access to the required national Kilowatt days or Cod Recovery Zone days at sea.
 - 1.55. NRW note that sources of noise other than pile driving and seismic (for offshore oil & gas exploration) should be recognised as potential implications for the SEA for marine mammals (p.90).
 - 1.56. NRW note that grazing should also be recognised as a pressure on salt marshes on p.90.
 - 1.57. Possible disturbance to the seabed should also more overtly recognise marine aggregates extraction and cabling activities (E.g. under '*Possible disturbance of submerged cultural heritage*' on p. 92, under other users on p.102), and the potential for them to act in combination with the Plan/Programme.
 - 1.58. NRW consider that the Seascape Character Assessments in Wales (E.g. National Seascape Character Assessment for Wales⁵) should also be included in the table on p.95.
 - 1.59. NRW considers that further information (E.g. research) is required to adequately consider the potential for cumulative effects from the SEA. Many of the key research needs identified for wave and tidal stream in version 3 of the ORJIP Ocean Energy 'Forward Look'⁶ are relevant to cumulative effects and so the wider offshore energy sector.
 - 1.60. Please note, NRW have not comprehensively cross-referenced all legislative drivers identified in this plan.

⁵ Please contact NRW for further information..

⁶ ORJIP Ocean Energy. The Forward Look; an Ocean Energy Environmental Research Strategy for the UK. Version 3. July 2015.

Annex 2 – NRW’s Responses to the Consultation Questions

1. Consultees are invited to highlight additional initiatives which they consider are relevant to the draft plan/programme.

NRW consider the following initiatives should be considered for their relevance to the draft plan/programme:

- EU Regulation 1143/2014 on Invasive Alien Species⁷.
- NRW advise that Ramsar sites do not appear to have been considered in the scoping document. Please note that UK policy extends the same protection to listed Ramsar sites in respect of new development as that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the EU Natura 2000 network⁸.
- NRW consider that the SEA should be cross-checked for onshore/offshore consistency with the HRA for the onshore licensing rounds (published August 2015).
- Please note that Welsh Government and Natural Resources Wales are currently sharing information on a number of sea areas around Wales currently being considered for possible identification as new Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). According to scientific evidence, the areas concerned are considered to support internationally important populations of Harbour porpoise and species of seabirds. Decisions on whether to designate SACs and SPAs in Welsh waters are made by the Welsh Minister for Natural Resources and no such decisions have yet been made. If the minister decides to proceed with these proposals, they will be subject to full public consultation later in the year, before any decisions are made on whether to designate each area. Once the consultation on the areas opens, it is Government policy that the possible sites should be treated as designated in terms of assessments, until the Minister has decided whether or not to designate them. For example, from that point the new sites would therefore need to be taken into consideration within any HRA. Further information email marine.n2k@naturalresourceswales.gov.uk. NRW consider that reference should be made to the possible new SACs and SPAs in Wales under sections regarding ‘*Conservation of sites and species*’.
- NRW consider that the conclusions of the Silk Review should be recognised within the scoping document, as the results are likely to be effected within the lifetime of the Plan/Programme. For example, the responsibility for all energy planning development consents for projects up to 350MW onshore and in Welsh territorial waters are anticipated to be devolved to the Welsh Government via the Wales Bill 2016.
- The capture of greenhouse gases from installations covered by the EU Emissions Trading System (EU ETS), and the transport of greenhouse gases by pipelines for geological storage in a storage site permitted under Directive 2009/31/EC, are regulated activities within the EU ETS. NRW consider that, to maximise any net-GHG benefits from geological storage, DECC must ensure that EU ETS captures as many emissions as possible and that the cost of carbon emissions allowances properly reflects the environmental impact of burning fossil fuels.
- NRW understand that the UK Government has recently announced the termination/scaling-back of a number of UK wide policies aimed at promoting renewables (E.g. halting subsidies for onshore wind and loss of exemption from the Climate Change Levy for renewable electricity). NRW request clarity on how this may influence the level of development of renewables outlined in the OESEA3 and what policies are anticipated to support the installation of renewables in a transition to a low carbon economy.

⁷ Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1417443504720&uri=CELEX:32014R1143>

⁸ <http://incc.defra.gov.uk/page-1369>

- With regards to the policy context on p.8, NRW highlight that the Welsh Government has Wales-specific GHG reduction targets (E.g. 3% per year from 2011 in devolved areas and 2020 Target Net CO2e emissions reduced by at least 40% compared to 1990 levels). NRW consider that the SEA should better reflect the Wales specific targets.
- The reference to the Large Combustion Plant Directive on p.9, please note that this is revoked from 1 January 2016 with provisions replaced by Chapter III of the Industrial Emissions Directive. NRW also note that there are also provisions regarding carbon dioxide emissions from fossil fueled power stations embodied through the emissions performance standard (The Emissions Performance Standard Regulations 2015, SI No. 933), which emerges from the Energy Act 2013.
- Welsh Government Energy Policy Statements and Low Carbon Transition Plans should also be considered. For example, in April 2015, the Welsh First Minister Carwyn Jones highlighted, in a written statement⁹, how he intended to continue Wales' transition to a low carbon economy. In this statement, the role of marine energy including wave, tidal stream and tidal range was highlighted and prioritised. NRW understands that as part of this prioritisation, WG may be seeking to produce a Welsh Marine Energy Strategy over the coming months. Depending on the timescale for production, such a strategy would be of relevance to the OESEA3 and would need to be considered.
- NRW advise seeking further information from WG on their marine Fisheries Legislative Review and the forthcoming Assessing Welsh Fishing Activities programme of work.

2. Consultees are invited to draw attention to and provide (where relevant/possible) additional information and data sets which they consider of potential relevance to this SEA.

It is not clear from the consultation document what existing sources of information have been used to compile the baseline information, which does not make it easy to be clear about which additional information consultees should highlight. Although the following is not an exhaustive list, we have highlighted some information that we consider should be included that is currently available or will be shortly available:

General:

- The US-based 'Tethys' resource¹⁰ is a knowledge management system that gathers, organizes, and provides access to global information on the environmental effects of marine and hydrokinetic (MHK) and offshore wind energy development. NRW recommend that full use is made of this resource by OESEA3.
- Technical Advice Note 14 Coastal Planning, referred to under the Geology topic, should also be referred to under the landscape, biodiversity and other users topics.
- The need to consider environmental effects in inshore and coastal areas is of significance given the inshore nature of some of the energy generation activities within the draft plan/programme. In general, this has not been adequately reflected by the scoping document but will need to be considered by the Environmental Report. In particular, from a nature conservation perspective there should be greater consideration of the implications of the draft plan/programme for the following:
 - Sites of Special Scientific Interest (SSSI) and Nationally Protected Species that receive statutory protection under the Wildlife and Countryside Act 1981 (as amended).
 - Regulation 35 documents and management schemes for marine Natura 2000 sites and Management Plans for intertidal SSSIs.
 - Biodiversity protected by the Natural Environment & Rural Communities Act 2006 and in particular the list of species of principal importance designated under Section 42 of the Act.

⁹ <http://gov.wales/about/cabinet/cabinetstatements/2015/energy/?lang=en>

¹⁰ <http://tethys.pnnl.gov/>

- NRW also recommend that greater consideration needs to be made regarding the additional information required (i.e. R&D) to provide sufficient strategic consideration of tidal range developments as part of the OESEA3. In particular, we would advise careful consideration of the outputs of the Severn Tidal Power Feasibility Study¹¹.
- With regards to the table on p.94, NRW consider the outputs from the Marine Pathways Project should also be included¹².
- NRW recommend the inclusion of the Bangor University EFF study into sustainable fishing in Wales¹³.
- NRW recommend the EU Flood Directive should be acknowledged.

Mammals, Birds & Turtles:

- NRW recommend referencing the Marine Mammal Atlas v2¹⁴ for the distribution information for Welsh seas.
- It may also be appropriate to consider Heinnanen and Skov 2015¹⁵ for possible harbour porpoise SACs around UK.
- There are several journal papers available on leatherback turtle distribution/abundance in Irish Sea¹⁶.
- Use of Article 12 information has not been proposed for informing trends of bird populations in SPAs.
- NRW recommends the use of the ESAS European seabird at sea database, as well as combined data sets held by respective sister agencies, which often hold more up to date data.

Benthos:

- Reference to the JNCC-led MPA Stocktake and Combined Habitats Map should be included (E.g. on p.68).
- EUSeaMap¹⁷ should be listed alongside UKSeaMap as a reference source for UK benthic habitats (EUSeaMap will supercede UKSeaMap).
- The HABMAP project¹⁸ should be listed as a specific benthic habitat reference for the Irish Sea.
- Habitats Directive Article 17 reporting outputs could also be included for status of Annex 1 habitats at a UK level (mentioned elsewhere in the text of the report but not specifically included in *Section 2*).
- Other relevant datasets could include SNCB maps of important habitats and species (e.g. Section 42/OSPAR).
- With regards to '*Physical damage/change to features and habitats*' (p.93), there is a MSFD / OSPAR (BH3) workstream and R&D project (being led by JNCC) on measuring the extent of physical damage to benthic habitats which should also be included in the list of baseline information sources.

¹¹ <https://www.gov.uk/government/collections/severn-tidal-power-feasibility-study-conclusions>

¹² Hannah Tidbury, Nick Taylor, Gordon Copp, Eva Garanchio and Paul Stebbing, 2014

<http://www.nonnativespecies.org/index.cfm?pageid=545>) and the CEFAS report *Introduction of marine non-indigenous species into Great Britain and Ireland: hotspots of introduction and the merit of risk based monitoring*

¹³ <http://fisheries-conservation.bangor.ac.uk/>

¹⁴ <http://www.seawatchfoundation.org.uk/wp-content/uploads/2015/05/ATLAS-Marine-Mammals-of-Wales-FINAL.pdf>

¹⁵ <http://jncc.defra.gov.uk/page-6991>

¹⁶ For example, Jellyfish aggregations and leatherback turtle foraging patterns in a temperate coastal environment. JDR Houghton, TK Doyle, MW Wilson, J Davenport, GC Hays *Ecology* 87 (8), 1967-1972

¹⁷ <http://jncc.defra.gov.uk/page-5020>

¹⁸ Robinson et al., 2009

Climate and Meteorology:

- Mention of ocean acidification should be made in relation to climate change¹⁹.
- *Section 3.3.6* does not cover the historical climatic changes that occurred during the 20th Century and could be included by reference and summary information from the UKCP09 Historical climate report.
- Climate Change Strategy for Wales (2010), including the Adaptation Delivery Plan (2010).

Geology, Substrates and Coastal Processes:

- With regards to coastal processes, NRW recommend additional consideration, in particular, of the cumulative effect of coastal structures on coastal sediment transport, taking account of climate change commensurate with the anticipated lifetime of the potential structures. For example, current proposals for tidal range development in Welsh Waters could effectively re-engineer a significant proportion of the coastline of North and South Wales, with indirect effects in the near and far-field, especially when considered cumulatively. Impacts on coastal processes could affect substrate distribution, morphology of the coast and seabed, and release of contaminants, which has not been discussed.

(Under the 'Local' category NRW recommend the addition of the following)

- 'National Strategy for Flood and Coastal Erosion Risk Management in Wales' (2011)²⁰.
- National Habitat Creation Programme (Wales) – ongoing (NRW delivering on behalf of WG)
- For England and Wales, there are reports under Section 18 of the Flood and Water Management Act which report on progress of delivery of the National Strategy. England have published four annual reports to date²¹. In Wales, NRW reports biannually with the first one being 2014²².
- Climate Change Strategy for Wales (2010), including the Adaptation Delivery Plan (2010).

(Under the UK category NRW recommend addition of the following (which should also feature in the Climate Change sections))

- UK Climate Change Risk Assessment (2012) and adaptation Strategy (2013)
- Intergovernmental Panel on Climate Change 5th Assessment Report 2014
- MCIPP report cards

Landscape and Seascape:

(Under the list of existing 'local' references (p.40))

- Add 'An approach to seascape character assessment – Natural England Report NECR105 (2012)'
- 'Seascape Assessment for Wales (2009)' should read 'Regional Seascape Assessment (2009)'
- 'Landscape Character Map for Wales (2009) should be replaced by 'National Landscape Character Areas (2015) – Wales'
- Add 'National Marine Character Areas (2015) – Wales'
- Add 'Local Seascape Character Assessment (2013 onwards, various locations) – Wales'

With regards to '*key objectives and targets*' (p.40), NRW consider that the position set out on working with landscapes and seascapes is not representative and should be amended:

¹⁹ NRW suggest referencing work undertaken by the UK Ocean Acidification Programme <http://www.oceanacidification.org.uk/>

²⁰ <http://gov.wales/docs/desh/publications/111114floodingstrategyen.pdf>

²¹ Please note the first three reports were authored by the Environment Agency and cover England and Wales. In 2014, due to the formation of Natural Resources Wales, two separate reports were published, covering England and Wales separately.

²² <http://naturalresources.wales/media/1039/flood-and-coastal-erosion-risk-management-in-wales-2011-2014.pdf>

- NRW consider the wording of the first paragraph may mislead, particularly in Wales²³. To clarify, there is no “targeting a move away” from the recognition or protection of aesthetically ‘outstanding’ areas²⁴. NRW consider that a summation of the following information would be more representative: The European Landscape Convention considers that all landscapes are important, not just the outstanding but also the everyday landscapes where most people live, work and spend much of their time. Any landscape has the potential to provide multiple benefits for nature and people and the focus on optimising this, such as within the ecosystems approach, and through natural resource management, is the new focus. The Convention places on signatories such as the UK an obligation to identify, assess, set objectives for, plan, manage, and involve people in the management of all landscapes, including recognising them in law, and including for the whole territory, which includes marine areas.
- NRW considers the Environmental Report should make reference to the differences in scale in the way devolved administrations recognise landscape character. For example, in Wales there is some coverage of Local Seascape Character Areas.
- NRW consider that recognition should be made that character also includes historic features and activities that affect character, not just what can be seen.
- NRW advise that there is a need for distinction between visual and character issues and that references to ‘visual character’ should be avoided. For clarity, the distinction can be found in the Guidelines for Landscape and Visual Impact Assessment 3rd edition (2014).

(with regards to section 3.3.3 Landscape Seascape (p.70))

- Please note the National Seascape Character Assessment for Wales²⁵ is now complete and has been presented as national marine Character Areas and the Regional Seascape Assessment (Wales) 2009 should be included.
- National Landscape Character Areas (Wales) should be included (the equivalent to England’s National Character Areas).
- The reference to the 2011 Welsh tidal stream sensitivity study (which was a commissioned report to Countryside Council for Wales) should be replaced with “Natural Heritage Evidence to support planning for marine renewable energy – CCW Policy research Report 11/3”.

3. Do you agree with the choice of Regional Seas used to help describe the environmental baseline

NRW considers the Regional Sea characterisation useful but note the ongoing work to align regional sea boundaries at a UK level.

Marine spatial planning will provide an important framework within which the work of this SEA and future marine SEAs will need to be integrated. As marine plan areas have now been defined, NRW believe that consideration should be made as to how to integrate the Marine Planning boundaries into the spatial elements of the SEA.

With regards to the description of Regional Sea 4 (The western English Channel and Celtic Sea), the following developments/activities should also be described/recognised (for Welsh waters): ISLES II Project (cabling), consented/planned wave and tidal stream developments/demonstration projects, a consented commercial scale tidal range development (Tidal Lagoon Swansea Bay) and two further tidal range projects in planning (Tidal Lagoon Cardiff and Tidal Lagoon Newport).

²³ Wales’ national programme of landscape assessment, LANDMAP, includes evaluations, which include the word “outstanding”, and/or where we have the statutory designation “Area of Outstanding Natural Beauty”.

²⁴ The challenge to conserve and work with the character of our outstanding landscapes, whose aesthetic appeal is an important and enduring aspect of why they are valued so highly, remains as strong as it ever has been. The need to conserve them arguably increases with time as the remaining resource becomes ever scarcer due to the scale and nature of much modern development elsewhere.

²⁵ Please contact NRW for more information.

With regards to the description of Regional Sea 5 (The Irish Sea), the following developments/activities should also be described/recognised (for Welsh waters): ISLES II Project (cabling), Wylfa Newydd (new nuclear), consented/planned wave and tidal stream developments/demonstration projects.

4. Are there any additional environmental problems you consider to be relevant to the SEA?

NRW considers that the following should be considered for the potential to act in combination with any developments under the plan/programme: hydraulic fracturing (fracking), cabling (not associated with developments considered by the plan), and new nuclear (E.g. Wylfa Newydd). NRW also advises the SEA should consider mechanisms to better facilitate strategic coordination of transmission infrastructure (electric cables, pipelines) to minimise impacts and reduce consenting risk (E.g. ISLES, Ten-T).

NRW considers that the following should fall under the scope of this assessment due to emerging potential for use within the lifetime of the plan: wind kite technologies (which should be considered alongside offshore wind), and [tidal] barrage, lagoon and fence technologies should all be considered in the assessment of 'tidal range'. We also note that tidal range should be included in the introduction on p.1.

We note that, on p.14, the final sentence under 'Offshore Pipelines' scopes out development of pipelines above the 'low water mark'. NRW advise that the assessment of pipelines should consider impacts up to mean high water springs.

More widely, NRW consider that the impacts from associated terrestrial development or terrestrial development with the potential to act in combination with the plan/programme should be considered in order to provide robust and holistic strategic assessment of all the potential impacts of the plan/programme

With regards to '*Damage to seabed habitats*' (p90), the section implies that there will be a reduction in fishing pressure in and around development sites which is of benefit to seabed habitats. However, the potential impact of fisheries displacement is not included here (possibly leading to higher pressure on benthic habitats elsewhere). NRW note that displacement is mentioned in the Fisheries section but it should also be included in the seabed habitats section.

NRW consider the Environmental Report would benefit from a dedicated section on the potential environmental effects of displacement from marine developments on marine fisheries activities. More widely, the Environmental Report would also benefit from much clearer and focussed cross referencing with impacts of other activities and vice versa.

5. Are there any additional influences, and supporting data sources, on the likely evolution of the environmental baseline?

NRW consider the following should also be considered with regards to the likely evolution of the environmental baseline:

- With regards to *Geology, Substrates and Coastal Geomorphology*, whilst the statements about change in the absence of anthropogenic activities are reasonable, it should be recognised in the OESEA3 that the baseline can be expected to change in response to coastal management (in response to predicted sea-level rise) in particular, as SMP2 policies are implemented. This could include additional coastal protection in some areas; withdrawal of maintenance under no active intervention policies; or active realignment under managed realignment policies, and delivery of the National Habitat Creation Programme in Wales.
- The UKMMAS secretariat have drafted a paper on "Prevailing Conditions" which looks at shifting baselines. The ICES working group on biodiversity have also undertaken a review of how climate change scenarios may influence MSFD assessments and targets (i.e. assessment against changing baseline conditions). Both of these may be relevant information sources in this section of the SEA.

- Invasive Non-Native Species (INNS) should also be considered in the section on benthos (p.97). Supporting data sources can be found in the UK MSFD Initial Assessment for descriptor 2.
- NRW draw your attention to the recent publication of ‘Guidance to inform marine mammal site characterisation requirements at wave and tidal stream energy sites in Wales’²⁶. We consider this should be included in the table on p. 93, and suggest the following as a high level summary of the report: “Guidance to inform marine mammal site characterisation requirements at wave and tidal stream sites in Wales. Explores taking a risk-based, proportionate approach to identifying site characterisation surveys for marine mammals.”
- NRW consider that there is better systematic recording of Bottlenose dolphins in Cardigan Bay and would advise consideration of the annual capture-mark-recapture monitoring of the population and to note there is also monitoring of the Moray Firth bottlenose dolphin population (not as frequently monitored as in Wales).
- NRW consider that disease should also be considered for marine mammals with on p. 99.
- It should be recognised that, in relation to marine fisheries, there will be gradual environmental consequences from the new Common Fisheries Policy landings obligation being phased in from 2015 – 2019. More selective fishing types will have to be developed to target certain species in mixed fisheries. Without the ability to fish selectively there is a potential for certain choke species to restrict fishing for a number of other species and for fisheries to close early before quota is exhausted.

6. Are there any objectives that you feel should be included or removed?

Objectives and indicators for biodiversity and habitats should be set within the policy framework of UK Government’s vision for the UK marine area. Reference should be made to the UK High Level Marine Objectives set out for the achievement of Government’s vision for the marine environment that is clean, healthy, safe, productive and biologically diverse.

NRW note that the SEA objectives for biodiversity habitats, flora and fauna do not specifically include anything about connectivity. It is important to ensure that any activities do not have an adverse impact on connectivity of marine habitats and species.

Whilst the need to avoid significant impacts on sites and species protected under European legislation is broadly captured, the need to consider the wide range of sites, species and habitats protected under domestic legislation (E.g. SSSIs and species listed on Schedule 5 of the Wildlife & Countryside Act 1981 and habitats and species of principal importance for conservation identified under the requirements of Section 42 of the NERC Act) is not fully described.

NRW advise that the following are considered as additional objectives:

- To avoid adverse effects on valuable marine ecosystems/valued ecosystem components (these should be defined by reference to nature conservation and functional ecosystem importance)
- To conserve and enhance designated marine site features.
- Has no adverse effect on flood risk management infrastructure.

NRW considers that a review of the list of objectives identified for the strategic assessment of the Severn Tidal Power feasibility study would be beneficial to the OESEA3, to comprehensively address the range of effects that should be objectively assessed as part of a study of marine energy development.

²⁶ Sparling C, Smith K, Benjamins S, Wilson B, Gordon J, Stringell T, Morris C, Hastie G, Thompson D & Pomeroy P (2015). Guidance to inform marine mammal site characterisation requirements at wave and tidal stream energy sites in Wales. NRW Evidence Report Number

With regards to *table 4.1*, NRW advise the following:

- The use of 'Avoids significant impact' as an objective is inconsistent with the requirements of the Habitats Regulations, which states there should be 'no significant effect (alone or in combination)' to conclude the HRA²⁷. NRW advises that the wording be amended.
- NRW consider that promoting Good Environmental Status under the MSFD should be included in the 'Guide Phrases' where appropriate.

7. Are the indicators for each objective suitable? If not please suggest alternatives.

NRW consider the following indicators should be considered for inclusion:

- No deterioration in Good Ecological Status and Good Environmental Status as result of draft plan/programme activities
- No deterioration in Favourable Conservation Status of sites designated for the protection of biodiversity as result of draft plan/programme activities
- No disruption to the coherence of the marine protected area network as result of draft plan/programme activities

With regards to *table 4.1*, NRW advise the following:

- NRW request further quantification (or guidance on how the figure will be determined) of the 'number of oil and chemical spills and quantity of material spilled' which will be used as an indicator for the SEA.
- NRW request further quantification (or guidance on how the figure will be determined) of the indicators for balancing other UK resources and activities.
- NRW advise that further clarity is required on the objectives for landscape/seascape, including reference to the need for sensitivity criteria to inform the SEA indicators. We also note that the list of indicators is incomplete and a more comprehensive set of indicators should be provided. NRW advise that the SEA should follow good methodological practice as advocated in Guidelines for Landscape and Visual Impact Assessment (3rd edition) 2013, and note the sensitivity criteria table given in the Regional Seascape Assessment (Wales) 2009. We also consider that the recognition that all parts of the UK (not only England) have a similar scaled set of landscape character areas (for Wales we recommend using the National Landscape Character Areas) and that respective regional or National Marine or Seascape Character Areas would be relevant to include to represent marine areas.
- NRW consider that further indicators could be utilised for 'reduces waste' (under 'Population and human health') drawn from the MSFD Programme of Measures for Descriptor 10 (Marine Litter).

8. Do you have any comments on the sources of potentially significant effect for each of the activities covered by the draft plan/programme, including whether they should be scoped in or out of assessment in the Environmental Report?

NRW would advise that where there is uncertainty of 'potentially significant effect' (E.g. with tidal range developments), these effects are screened into the Environmental Report.

NRW advise that more overt reference to what is within scope for the OESEA3 would be beneficial, particularly within the introduction on p.1. For example, 'associated infrastructure' is included in *section 4.1* (p. 104), which is not previously mentioned in the document.

NRW consider, as well as physical damage, there is also the risk of loss and permanent alteration of seabed habitats.

²⁷ <http://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/09/Advice-note-10-HRA.pdf>

NRW also consider a wide range of hydrographic and geomorphological effects (E.g. changes to current) that may be caused (E.g. by wave and tidal devices) should also be included.

NRW note that paragraph 3 on p.104 may not include adequate clarity. It should be noted that for a European site (E.g. SAC), impacts are measured against the site's conservation objectives which may specify a site population rather than the wider population level. NRW would advise that, to provide further clarity, advice should be sought from the EPS licensing authority (NRW Marine Licensing Team in Wales).

With regards to *table 4.2*, NRW advise the following:

- Seismic impacts on mammals, birds and fish should be acknowledged for offshore wind (E.g. if seismic surveys are required for assessing sub-surface geology for piling).
- Changes/loss of habitats from major alterations of hydrography or sedimentation should be checked for offshore wind²⁸.
- Platforms and rigs associated with Oil & Gas developments have the potential to present collision risks to birds and so should be acknowledged.
- The '*nature and use of anti-fouling materials*' should be considered for all activities in the plan/programme. NRW would advise removing the words 'in ballast water discharges' from row 6 of the table (p.111). To clarify, Marine Invasive Non-Native Species (INNS) can be introduced and spread via several vectors, including hull fouling of slow moving vessels and rigs, rock armor/aggregate/dredge spoil transfer, and ballast water. In addition, NRW advise that the plan/programme should consider mitigation measures associated with the structural design and material types used in marine developments which would minimise the risk of ingress and onward spread of marine INNS.
- NRW recommend recognition of interactions between people (and their activities) and places (and the natural and cultural processes that shape them), in relation to landscapes/seascapes, under interactions with '*other users of the sea*' in the Environmental Report.
- NRW advise the consideration of 'other chemical and microbiological parameters' under '*Water environment*'.

9. Are there any additional information sources or existing monitoring arrangements which could be used to inform monitoring of the offshore energy draft plan/programme?

NRW consider the following information sources could be used to inform the draft plan/programme:

- OSPAR assessment and reporting should also be included alongside MSFD on *Table 4.3*.
- The Bangor University EFF study into sustainable fishing in Wales²⁹ also includes monitoring.

10. Do you have any comments on the proposed approach to consultation?

No.

²⁸ NRW's previous experience with offshore wind developments showed that in the case of large offshore turbine installations, (depending on the type of bases that were deployed) there could be a significant impact on sediments and benthic habitats across the licensed area. The amount of ground preparation required for the installation of some turbine foundation types is substantial, requiring large areas to be dredged and sediments disposed of.

²⁹ <http://fisheries-conservation.bangor.ac.uk/>