MORAY OFFSHORE RENEWABLES LTD
Modified Offshore Transmission Infrastructure – Moray Firth

Scoping Opinion

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THE MARINE (SCOTLAND) ACT 2010, PART 4 MARINE LICENSING

THE MARINE AND COASTAL ACCESS ACT 2009, PART 4 MARINE LICENSING

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2007 (AS AMENDED)

SCOPING OPINION FOR THE PROPOSED MARINE LICENCE APPLICATION FOR MORAY OFFSHORE RENEWABLES LIMITED MODIFIED OFFSHORE TRANSMISSION INFRASTRUCTURE, MORAY FIRTH

1. Introduction

Moray Offshore Renewables Limited ("MORL") is seeking an Environmental Impact Assessment ("EIA") scoping opinion for the Modified Offshore Transmission Infrastructure ("MOfTI") from Marine Scotland ("MS"), on behalf of the Scottish Ministers, under Section 13 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (the EIA Regulations").

The MOfTI proposal is to connect the recently consented MORL Telford, Stevenson and MacColl Wind farms, under section 36 of the Electricity Act 1989 (19th March 2014) to the National Electricity Transmission System ("NETS"), close to New Deer in Aberdeenshire. MORL no longer has the option to connect to the NETS at Peterhead Power Station, therefore, the supporting Environmental Statement ("ES") for the recently issued marine licence (6th June 2014) for the original MORL Offshore Transmission Infrastructure will require to be amended for this revised route.

I refer to your letter of 11th April 2014, enclosing a scoping report, requesting a scoping opinion under the EIA Regulations. The outcomes of the EIA will result in the preparation of an Environmental Statement ("ES") to support the application, submitted 4th April 2014, for a marine licence under part 4 of the Marine (Scotland) Act 2010, and Part 4 of the Marine and Coastal Access Act 2009.

Please note that the EIA process is vital in generating an understanding of the biological and physical processes that operate in the area and those that may be impacted by the proposed transmission infrastructure. MS would however, state that references made within the scoping document with regard to the significance of impacts, should not prejudice the outcome of the EIA process.

It is important that any transmission infrastructure, in connection with any renewable energy devices, should be accompanied by a robust assessment of its environmental impacts. The assessment should also consider how any negative environmental impacts could be avoided or minimised, through the use of mitigating technologies or regulatory safeguards, so that the quality and diversity of Scotland's wildlife and natural features are maintained or enhanced. The Scottish Ministers welcome the commitment given in the report that the EIA process will identify mitigation measures in order to avoid, minimise or reduce any adverse impacts. Marine Scotland Licensing Operations Team ("MS LOT") would suggest that the range of options considered should be informed by the EIA process in order that these

objectives can be achieved. Consultation with the relevant nature conservation agencies is essential and it is advised that this is undertaken as appropriate.

2. Aim of this Scoping Opinion

The Scottish Ministers are obliged under the EIA regulations to respond to requests from developers for a scoping opinion on outline design proposals.

The purpose of this document is to provide advice and guidance to developers collated from expert consultees selected by MS. It provides clear advice enabling developers to address issues identified with the proposed project. The advice steers the developer as to the content required in the EIA and the ES in accordance with the EIA Regulations.

3. Description of development

The MOfTI will comprise of:

- Up to two OSPs located within the Eastern Development Area ("EDA"). These will house substations which will form the interface between the inter-turbine cables and the offshore transmission system;

- Transmission cables (up to four triplecore cables, separated by approximately four times water depth), buried to a target depth of one metre. Where this burial depth cannot be achieved, cable armouring will be implemented (e.g. rock placement or concrete mattressing).

Landfall for the transmission cables with either be at or near Inverboyndie or Sandend on the North coast of Aberdeenshire.

4. Land Use Planning

The Scottish Government's planning policies are set out in the National Planning Framework, Scottish Planning Policy, Designing Places and Circulars.

The National Planning Framework is the Scottish Government's Strategy for Scotland's long term spatial development.

Scottish Planning Policy ("SPP") is a statement of Scottish Government policy on land use planning and contains:

- The Scottish Government's view of the purpose of planning,
- the core principles for the operation of the system and the objectives for key parts of the system,
- statutory guidance on sustainable development and planning under Section 3E of the Planning etc. (Scotland) Act 2006,
- concise subject planning policies, including the implications for development planning and development management, and
- The Scottish Government's expectations of the intended outcomes of the planning system.

Other land use planning documents which may be relevant to this proposal include:

- Planning Advice Note ("PAN") 2/2011: Archaeology–Planning Process and Scheduled Monument Procedures

- PAN 50: Controlling the Environmental Effects of Surface Mineral Workings
- PAN 51: Planning, Environmental Protection and Regulation
- PAN 1/2011: Planning and Noise
- PAN 1/2013: Environmental Impact Assessment
- PAN 60: Planning for Natural Heritage
- PAN 62: Radio Telecommunications
- PAN 68: Design Statements
- PAN 69: Planning and Building Standards Advice on Flooding
- PAN 75: Planning for Transport
- PAN 79: Water and Drainage
- Marine Guidance Note 371 (M)
- Aberdeen City and Shire Structure Plan
- Aberdeen City and Shire Strategic Development Plan
- Aberdeenshire Local Development Plan
- Moray Structure Plan
- Moray Local Plan
- Moray Economic Strategy

5. Natural Heritage

Scottish Natural Heritage ("SNH") has produced a Service Level Statement ("SLS") for renewable energy consultation. This statement provides information regarding the level of input that can be expected from SNH at various stages of the EIA process. Annex A of the SLS details a list of references, which should be fully considered as part of the EIA process. A copy of the SLS and other vital information can be found on the renewable energy section of their website – http://www.snh.gov.uk/docs/A1070243.pdf

6. General Issues

Economic Benefit

The concept of economic benefit as a material consideration is explicitly confirmed in the consolidated SPP. This fits with the priority of The Scottish Government to grow the Scottish economy and, more particularly, with our published policy statement "Securing a Renewable Future: Scotland's Renewable Energy", all of which highlight the manufacturing potential of the renewables sector. The application should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction operation and decommissioning of the development.

7. Contents of the Environmental Statement

Guidance can be found in the Marine Works (Environmental Impact Assessment) Regulations 2007, Schedule 3

Format

Developers should be aware that the ES should also be submitted in a user-friendly PDF format which can be placed on The Scottish Government website. A description of the methodology used in assessing all impacts should be included.

It is considered good practice to set out the qualifications and experience of all those involved in collating, assessing or presenting technical information within the ES.

Non Technical Summary

This should be written in simple non-technical terms to describe the various options for the proposed development and the mitigation measures against the potential adverse impacts which could result. Within an ES it is important that all mitigating measures should be:

- clearly stated;
- fully described with accuracy;
- assessed for their environmental effects;
- assessed for their effectiveness;
- their implementation should be fully described;
- how commitments will be monitored; and
- if necessary, how they relate to any consents or conditions

Given that the layout and design of the proposals are still developing and evolving, the exact nature of the work that is needed to inform the EIA may vary depending on the design choices. The EIA must address this uncertainty so that there is a clear explanation of the potential impact of each of the different scenarios. It should be noted that any changes produced after the ES is submitted may result in the requirement of further environmental assessment and public consultation if deemed to be significant by the licensing authority.

Baseline Assessment and Mitigation

Refer to Annex 1 for consultee comments on specific baseline assessment and mitigation.

8. Archaeology and Cultural Heritage

General Principles

The ES should address the predicted impacts on both the marine historic environment and the potential for the onshore impacts of terrestrial elements of the development. It should also describe the mitigation proposed to avoid or reduce impacts to a level where they are not significant. Historic environment issues should be taken into consideration from the start of the site selection process and as part of the alternatives considered.

Codes of practice relating to heritage and seabed development;

- JNAPC Code of Practice for seabed development http://www.jnapc.org.uk/jnapc_brochure_may_2006.pdf
- COWRIE guidelines for offshore renewables and the historic environment http://www.offshorewind.co.uk/Assets/archaeo_guidance.pdf
- COWRIE guidelines on cumulative assessment of offshore renewables and the historic environment http://www.offshorewind.co.uk/Assets/cowrie_ciarch%20web.pdf
- Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector, January 2011 http://www.offshorewindfarms.co.uk/Assets/Offshore%20Geotech%20Guidance%20web.pdf
- Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects http://www.wessexarch.co.uk/system/files/WSI%20Renewables_low%20res.pdf
- British Marine Aggregates Producers Association protocols for archaeological discoveries http://www.wessexarch.co.uk/files/projects/BMAPA-Protocol/BMAPA-EH-Guidance-Note-April-2003.pdf

- Protocol for Archaeological Discoveries: Offshore Renewables Projects http://www.wessexarch.co.uk/files/The%20Crown%20Estate_Offshore%20Renewables-PAD.pdf

National policy and advice for the historic environment is set out in:

- SPP http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/newSPP
- The Scottish Historic Environment Policy ("SHEP") http://www.historic-scotland.gov.uk/shep-dec2011.pdf
- Planning Advice Note 02/2011 Planning and Archaeology (PAN 02/2011) http://www.scotland.gov.uk/Resource/Doc/355385/0120020.pdf

The Scottish Minister's policies for the historic environment are set out in paragraphs 110 – 124 of SPP. Amongst other things, SPP stresses that scheduled monuments should be preserved in situ and within an appropriate setting and states that developments must be managed carefully to preserve listed buildings and their settings to retain and enhance any special architectural or historic features of interest. Further information on setting can be found in the following document: Managing Change in the Historic Environment http://www.historic-scotland.gov.uk/setting-2.pdf. Impacts on undesignated aspects of the historic environment should also be taken into account as part of any EIA.

Historic Scotland recommend that you engage a suitably qualified archaeological/historic environment consultants to advise on, and undertake, the detailed assessment of impacts on the historic environment and advise on appropriate mitigation strategies.

Baseline Information

Information on the location of all archaeological/historic sites held in the National Monuments Record of Scotland, including the locations and, where appropriate, the extent of scheduled monuments, listed buildings and gardens and designed landscapes can be obtained from www.PASTMAP.org.uk

Data on scheduled monuments, listed buildings, Inventory gardens and designed landscapes, historic battlefields and properties in the care of Scottish Ministers can also be downloaded from Historic Scotland's Data Services website http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2000:10:3234826639166657.

9. Navigation

The ES should include the following details on the possible impact on navigation for both commercial and recreational craft.

- Collision Risk
- Navigational Safety
- Visual intrusion and noise
- Risk Management and Emergency response
- Marking and lighting of Tidal Site and information to mariners
- Effect on small craft navigational and communication equipment
- Weather and risk to recreational craft which lose power and are drifting in adverse conditions
- Evaluation of likely squeeze of small craft into routes of larger commercial vessels.

10. Ecology, Biodiversity and Nature Conservation

Refer to Annex 1 for comments from advisors on ecology, biodiversity and nature conservation.

Species

The ES should show that the applicants have taken account of the relevant wildlife legislation and guidance, namely

- Marine (Scotland) Act 2010
- Marine and Coastal Access Act 2009 (as amended)
- Council Directives 92/43/EES on The Conservation of Natural Habitats and of Wild Flora and Fauna
- Conservation of Wild Birds (commonly known as the Habitats and Birds Directives)
- Wildlife & Countryside Act 1981
- Nature Conservation (Scotland) Act 2004
- Wildlife and Natural Environment (Scotland) Act 2011
- Protection of Badgers Act 1992
- Conservation (Natural Habitats, &c.) Regulations 1994
- Conservation of Habitats and Species Regulations 2010
- Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007
- Scottish Government Interim Guidance on European Protected Species
- Development Sites and the Planning System and the Scottish Biodiversity Strategy and associated Implementation Plans

In terms of The Scottish Government Interim Guidance, applicants must give serious consideration to/recognition of meeting the three fundamental tests set out in this Guidance. **It may be worthwhile for applicants to give consideration to this immediately after the completion of the scoping exercise.**

It needs to be categorically established which species are present on and near the site, and where, before the application is considered for consent. The presence of protected species such as Schedule 1 Birds or European Protected Species must be included and considered as part of the application process, not as an issue which can be considered at a later stage. Any consent given without due consideration to these species may breach European Directives with the possibility of consequential delays or the project being halted by the European Commission. Likewise the presence of species on Schedules 5 (animals) and 8 (plants) of the Wildlife & Countryside Act 1981 should be considered where there is a potential need for a licence under Section 16 of that Act.

11. Water Environment

The Scottish Environment Protection Agency ("SEPA") encourages pre-application engagement to help the development process and to minimise risk of modifications later in the application process and avoidable delays or objections.

Information on energy proposals and issues that should be addressed in the ES can be found on the energy section of SEPA's website at www.sepa.org.uk/planning/energy.aspx. The webpage also contains a link to the marine environment section of SEPA's website which provides more specific guidance.

If the proposal includes both onshore and offshore components the applicant should be aware that the development may be subject to a range of different consenting regimes. SEPA is the regulatory body responsible for the implementation of The Controlled Activities Regulations (CAR). Further information specifically in relation to the water environment and SEPA's water related regulations can be found at;

www.sepa.org.uk/water/water_publications.aspx

and

www.sepa.org.uk/water/water_regulation.aspx.

Developers are strongly advised at an early stage to consult with SEPA to identify 1) if a CAR licence is necessary and 2) clarify the extent of the information required by SEPA to assess fully any licence application.

Construction contractors may be unaware of the potential for impacts such as those listed below but, when proper consultation with the local fishery board is encouraged at an early stage, many of these issues can be averted or overcome.

- increases in silt and sediment loads resulting from construction works.
- point source pollution incidents during construction.
- obstruction to upstream and downstream migration both during and after construction.
- disturbance of spawning beds during construction - timing of works is critical.
- drainage issues.
- sea bed and land contamination

The ES should identify location of, and protective/mitigation measures in relation to, all private water supplies within the catchments impacted by the scheme, including modifications to site design and layout.

Developers should also be aware of available Construction Industry Research and Information ("CIRIA") guidance on the control of water pollution from construction sites and environmental good practice (www.ciria.org). Design guidance is also available on river crossings and migratory fish (The Scottish Executive consultation paper, 2000) at www.scotland.gov.uk/consultations/transport/rcmf-00.asp.

12. Other Material Issues

Traffic Management

The ES should provide information relating to the preferred route options for delivering equipment etc. via the trunk road network. The EIA should also address access issues, particularly those impacting upon the trunk road network; in particular, potential stress points at junctions, approach roads, borrow pits, bridges, site compound and batching areas etc.

Where potential environmental impacts have been fully investigated but found to be of little or no significance, it is sufficient to validate that part of the assessment by stating in the report:

- the work has been undertaken, e.g. transport assessment;
- what this has shown i.e. what impact if any has been identified, and
- why it is not significant?

13. General ES Issues

In the application for consent the applicant should confirm whether any proposals made within the ES, e.g. for construction methods, mitigation, or decommissioning, form part of the application for consent.

Consultation

Developers should be aware that the ES should also be submitted in a user-friendly PDF format which can be placed on The Scottish Government website. Developers are asked to issue ES directly to consultees. Consultee address lists can be obtained from MS.

Where the developer has provided the Scottish Ministers with an ES, the developer must publish their proposals in accordance with Part 3 of the Marine Works (Environmental Impact Assessment) Regulations 2007 and as amended by the Marine Works (Environmental Impact Assessment) (Amendment) Regulations 2011. Licensing information and guidance, including the specific details of the adverts to be placed in the press, can be obtained from MS.

New requirement for Public Pre-Application Consultation

From 6th April 2014, applications received for certain activities will be subject to a public pre-application consultation requirement. Activities affected will be large projects with the potential for significant impacts on the environment, local communities and other legitimate uses of the sea. The new requirement will allow those local communities, environmental groups and other interested parties to comment on a proposed development in its early stages – before an application for a marine licence is submitted.

Guidance on public pre-application consultation can be found at the following: http://www.scotland.gov.uk/Resource/0043/00439649.pdf

Gaelic Language

Where applications are located in areas where Gaelic is spoken, developers are encouraged to adopt best practice by publicising the project details in both English and Gaelic.

Ordinance Survey ("OS") Mapping Records

Developers are requested at application stage to submit a detailed OS plan showing the site boundary and all turbines, access tracks and onshore supporting infrastructure in a format compatible with The Scottish Governments Spatial Data Management Environment ("SDME"), along with appropriate metadata. The SDME is based around Oracle RDBMS and ESRI ArcSDE and all incoming data should be supplied in ESRI shape file format. The SDME also contains a metadata recording system based on the ISO template within ESRI ArcCatalog (agreed standard used by The Scottish Government); all metadata should be provided in this format.

Difficulties in Compiling Additional Information

Developers are encouraged to outline their experiences or practical difficulties encountered when collating / recording further information supporting the application. An explanation of any necessary information not included in the ES should be provided, complete with an indication of when an addendum will be submitted. It should be noted that submission of an

addendum will increase the time taken to determine an application. Any addendum will be subject to the same advertising and consultation as the original ES.

Application and ES

A developer checklist is enclosed with this opinion to assist developers in consideration and collation of the relevant ES information to support their application. In advance of publicising the application, developers should be aware this checklist will be used by the licensing authority in consideration of formal applications.

Consent Timescale and Application Quality

Developers are advised to consider all aspects of this scoping opinion when preparing a formal application to reduce the need to submit further information in support of your application. The developer, in accordance with section 13 (3) of the EIA Regulations, must ensure that the ES contains all of the information specified in the scoping opinion, unless agreed with MS. The consultee comments presented in this opinion are designed to offer an opportunity to consider all material issues relating to the development proposals.

Upon receipt, the licensing authority will use the enclosed checklist and scoping opinion in assessing the quality and suitability of the application in the gate check process. Developers are encouraged to seek advice on the contents of ES prior to applications being submitted, although this process does not involve a full analysis of the proposals. In the event of an application being void of essential information, the licensing authority reserves the right not to accept the application. Developers are advised not to publicise applications in the local or national press, until their application has been accepted by the licensing authority.

Under the Marine Licensing Appeals (Scotland) Regulations 2011, a person who has applied for a marine licence may by summary application, appeal to the sheriff of any sheriffdom against a decision taken by the licensing authority under section 29 (1) of the Marine (Scotland) Act 2010, or section 71 (1) of the Marine and Coastal Access Act 2009.

Signed

ROBERT MAIN

13th June 2014

Authorised by the Scottish Ministers to sign in that behalf

Enclosed - Developer Application Checklist

Annex 1

CONSULTEE COMMENTS RELATING TO THE MORL MODIFIED OFFSHORE TRANSMISSION INFRASTRUCTURE

The following organisations provided a response in relation to the consultation on the MOfTI scoping report:

Marine Scotland ("MS")
Marine Scotland Science ("MSS")

Statutory Consultees

Local Authorities:

1. Highland Council ("HC")
2. Aberdeenshire Council ("AC")

Scottish Natural Heritage and the Joint Nature Conservation Committee ("the SNCBs")

Non Statutory Consultees

British Telecom (Radio Network Protection Team) ("BT")
Health and Safety Executive ("HSE")
Highlands and Islands Airports Ltd. ("HIAL")
Historic Scotland ("HS")
Moray Firth and North Coast Inshore Fisheries Group ("IFG")
Moray Firth Partnership ("MFP")
NERL Safeguarding ("NATS")
Northern Lighthouse Board ("NLB")
Royal Society for the Protection of Birds Scotland ("RSPB Scotland")
Royal Yachting Association Scotland ("RYA Scotland")
Scottish Fisherman's Federation ("SFF")
Whale and Dolphin Conservation (WDC)

Marine Scotland

MS-LOT has reviewed the scoping report and has the following advice to offer along with comments which MORL should take note of:-

MS LOT would comment on the use of a Design Envelope for flexibility both in the EIA process and in the final ES. It is the developers responsibility to give due consideration to what changes might be necessary and to provide details as to what might be required. The developer must also be able to justify whether or not a change is material to the EIA process. Where flexibility is required the developer should define either the alternatives or ranges within which parameters might fall. In the EIA process the various effects should be quantified and consideration given to effects on potential receptors. The ES should clearly state the reasoning for requiring such flexibility, the criteria for selecting the "worst case scenario" and the impacts which would arise from such a scenario.

Failure to give such consideration or a major change to a parameter outside those considered may invalidate the ES submitted, requiring the marine licence consultation process to be repeated. Considering the tight timelines associated with the requirement for issue of a marine licence on this project, no cause for repetition can be afforded. It is expected that the EIA will reduce the degree of design flexibility required and that the ES provided for consent will be further refined as a condition of consent to be finalised in a construction statement, at least 6 months before construction commences. Information regarding the impacts from construction of the infrastructure and the types of vessels to be used will be required in the construction statement.

The ES will have to go through the gate check process as it has to be considered in proportion to other projects of a similar type. MS LOT offers a Gate Check prior to formal submission of applications and advises MORL to take full advantage of this service. The gate check is not designed as an in depth evaluation of the content of an ES. However it will allow MS LOT the confidence that minimum legislative requirements have been met prior to formal submission of the ES. To assist the gate check process, a thorough gap analysis of the issues listed here by MS LOT and the consultee comments that follow, should be drawn up by MORL for submission with the ES.

The ES must show a map of the cable route showing the exact positions where the cable is to be buried, unburied and what physical protection is proposed before MS LOT will issue any marine licence. MS LOT reiterates the need for early discussions and the need for the aforementioned information to be provided in support of the marine licence application. If MORL do not provide the detailed seabed information for the route in time for the consultation on the marine licence application, then objections will likely be raised and that the time taken to resolve any differences will delay any issue of any marine licence.

This project may require capital dredging, and if so an amendment to the application submitted on 4th April 2014 will be required. The dredged material will require to be chemically analysed to ensure that it is suitable for sea disposal. Guidance on pre-dredge sampling, along with the Action Levels MS use to determine suitability for sea disposal can be obtained upon request from MS LOT.

Please be aware that, dredging of harbours and disposal of spoils, and the removal of aggregates, are two separate activities entirely and should not be confused as on page 125 of the Scoping Report. Dredging in the quoted context and sea disposal are activities associated with the periodic removal of material from harbours. Aggregate dredging is a completely separate industry. Should dredging be required for the OSPs, MORL must identify suitable sites for dredge spoil (surplus and unsuitable material). MORL must provide

a list of all the existing sea disposal sites in the Moray Firth, on a single admiralty chart showing the quantities deposited at each site for each year for the last ten years.

Regardless of the method of installation used for the transmission cables from the OSPs to the landfall point, modelling of sediment release, as a result of the burial process, will be required.

The ES must include what measures are proposed to be in place to do a pre-sweep for Unexploded Ordnance ("UXO's"). If discovered, the time it takes to remove such an object may have detrimental effects on the project timelines. This is of particular importance as the cable route passes through a firing practice area. MS LOT recommend that MORL engage with the Ministry of Defence on this matter.

MORL must include in the ES a Reporting Protocol which sets out what the developer must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the proposed transmission infrastructure.

The cable landfall point methodologies must be detailed in the ES, i.e. cable trenching or horizontal directional drilling ("HDD"), to name a few. MS LOT recommend the developer hold discussions with the local council (Aberdeenshire), the SNCBs and MSS to establish best options and any major consenting issues that may arise. These can be hosted by MS-LOT if required.

It is critical that MORL set up a meeting post scoping to engage with statutory consultees including stakeholders such as the SFF to run through the various scenarios which would include, but not be restricted to: cable envelope surveys, trenching and non-trenching options, post lay mitigation measures to reduce snagging hazards, dredging activity, scour protection and impact protection, long-term cable envelope monitoring programme, appointing Ecological Clerk of Works ("ECoW's) and Fisheries Liaison Officers ("FLO's").

MORL must ensure the safety of navigation is not compromised by the works. The navigable depth must not be altered by more than 5% of stated chart datum unless otherwise agreed, in writing, with MS, the Maritime Coastguard Agency ("MCA") and NLB. A Navigational Risk Assessment ("NRA") will be required for any location likely to infringe on the 5% threshold.

MS LOT requires clarification on the additional Data Sources listed on page 115. Do MORL mean the Marine Scotland District Fisheries Inspectors to be Marine Scotland Compliance? MS LOT suggest additional data sources as Scottish Renewables and the Scottish Salmon Netting Association. Care should be given to include any local harbour authorities.

The applicant should be made aware of the definition of disturbance and the legal provisions on European Protected Species ("EPS") and that an EPS Licence may be required. Therefore MS LOT recommends that an EPS risk assessment is submitted to MS LOT well in advance of any planned surveys or construction activities. Basking sharks are now subject to similar considerations through the Wildlife and Natural Environment (Scotland) Act 2011, with licensing requirements now applicable. MS is responsible for issuing these if required.

MS LOT require the developer to be aware of proposed new Marine Protected Areas ("MPAs") located nearby the proposed development area and take account of possible impacts on these within the EIA process and ES itself. MORL should be aware of the nearest search locations.

Piling noise should be modelled for the OSPs and assessed in combination with all other developments in the Moray Firth, and perhaps further afield. Discussions with MS LOT, the SNCBs and MORL will take place as soon as possible to determine the relevant projects.

The proposed revised landfall points for the transmission cables at or near Inverboyndie or Sandend, increase the possible interaction of the works with diadromous fish, as the works are now closer to the River Spey SAC and the River Deveron. Timing of construction of the works, as it comes into the intertidal area, will be important so as to try and avoid unnecessary impacts on diadromous fish.

The ES must include some calculations to demonstrate the degree of alteration of natural electromagnetic fields ("EMF") that would be caused by the cables. MS-LOT require MORL to model EMF under operational and shutdown conditions and relate this to fauna. This may have an effect on marine species directly (impact on species itself) or indirectly (impact on prey). Modelling the EMF will involve knowing the current in the cables, the degree of shielding inherent in the cable, the depth of burial and/or armouring, and the consequential alteration to natural fields at the sediment surface and in the water column. The predicted changes to fields should then be compared with what is known about sensitivity of mammals and fish to EMF. A cumulative consideration of other cables in the Moray Firth should be completed.

On review of the Cumulative and In-combination Impacts assessment (page 34), consideration of the projects under the National Renewables Infrastructure Plan will be required. Please add the projects of Nigg, Invergordon and Ardersier to the list.

MS LOT recommend that the applicant checks for Annex 1 habitats and Priority Marine Features ("PMF") during survey work as well as any Biodiversity Action Plan ("BAP") habitats and species.

MS LOT recommends that the assessment of any impacts on Fisheries in the ES be as robust as it can be.

Marine Scotland Science

1. Fish Ecology and Commercial fisheries

(i) Fish and Shellfish Ecology

Sandeels
Sandeel populations tend to be patchy in nature due to the reliance on a specific range of sediment. There are patches of sandeels present in and around the site and there is a strong possibility that there may be patches of sandeels along the cable route. Providing a patch is not completely within the cable route, there should be the opportunity for re-colonisation post disturbance. There may be some localised disturbance and suspended sedimentation but this should be limited due to the sediments involved.

Herring
It would be preferable to avoid works during the herring spawning period if possible (Aug-Sep). This becomes more of an issue towards the land fall end of the route where sediments become more suitable for herring spawning and this area is known to be important North East spawning ground. Not only are herring sensitive to disturbance from noise but their eggs and larvae may also be sensitive to noise.

Cod

The Moray Firth has a genetically distinct population of Cod. Little is known of the precise location of spawning grounds within the Firth but it is known that cod vocalize in spawning aggregations (key period is between Feb-Mar). The frequency range of these vocalisations is between 30-250 Hz and can travel 200-500m from the source. Additional cod spawning surveys recently undertaken by the developers in the Moray Firth should be used to inform this process.

(ii) Commercial Fisheries

There are substantial locally important shellfish fisheries for brown crab and lobster. These predominantly consist of small vessels (<15m in length) that do not have VMS aboard. However, ScotMap project should be used as primary source of information on the potential overlap of the spatial distribution of smaller vessels with the proposed site. In general, these vessels work mainly between 0-6 nm from the shore. There is a very active small boat fleet working in the area mainly potting, but also an active summer Handline fishery for mackerel. Please visit for more information and access to spatial layers:
http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/ScotMap

VMS vessel fishery data indicates the key target species as Nephrops, (mainly in the eastern part of the Firth), scallops (both closer to the shore and within the development) and some demersal whitefish species (further offshore). There is an increasing importance of squid in the Moray Firth as there are fewer restrictions on vessels targeting this species. As a result more vessels have been moving to target squid seasonally to alleviate pressure on other stocks and save days at sea for other TAC species.

It would be worth ensuring good contact is made and consultation maintained with fisheries representatives in the area. This is especially important for the non-VMS vessels which are not represented by the VMS data plots. Points of contact other than the SFF, may include local fishery offices and the inshore fisheries group coordinator for the Moray Firth.

(iii) Liaising with the fishing industry

It is acknowledged that the developers have already seek to liaise with the fishing industry through Moray Firth Offshore Wind Developers Group (“MFOWDG”). Additionally, please consider appointing a Company Fishing Liaison Officer to act as the primary point of contact for the fishing industry. In addition, it is advised to establish Fishing Industry representative(s) to act as a single onshore trusted contact point within the fishing community. The developer may consider a dedicated International Maritime Mobile VHF working channel for the exchange of relevant information between contractors afloat and other vessels in the area during construction and maintenance.

All the above recommendation will facilitate efficient dissemination of information from the developer to the fishing community and vice versa, in a timely and all-inclusive manner. The developer may consider developing a Fisheries Liaison Plan which will include mitigation and coexistence plan. Please see more at the guidance produced by COWRIE on options for the mitigation of impacts of offshore wind farms on fishing activities. MSS would expect to see a specific chapter in the stakeholder section where potential concerns of the fishing community raised during consultation have been addressed.

(iv) Section specific comments

Section 2

Section 2.2.1, p. 20, §7: It is stated that 2 landfall location (Inverboyndie and Sandend) are considered the preferred options with minimal impact on the environment and the shortest overall cable route. This should change to "… relatively lower environmental impact when compared to the rest of the options".

Section 2.3.2, p. 28, §1: Proposed Transmission Cable Infrastructure comprise up to four submarine HVAC export cables in up to four separate trenches separated by four times the water depth apart. The overall footprint of the export cable might cause significant interactions with the fisheries in the area (see overall comments comments) especially during construction. Early engagement with the fishing industry is advised. Additional details (duration, installation methodology, local requirements of additional cable protection etc,) on the export cables installation plan should be made available and the plan should be consulted within MFOWDG – Commercial Fisheries Group to avoid cumulative impacts on fisheries from surrounding developments.

Section 2.3.3, p. 28, §1: The proposed target burial depth is 1 metre. In cases where this burial depth cannot be achieved, additional protection has been suggested. Potential options include rock placement or concrete mattressing. SFF has advised rock placement to be a favourable option in the past. However, this is less effective and increased gear interaction potential with the high intensity Scallop dredging in the Moray Firth.

Section 5

Section 5.2.3, p.81, Table 5-1: Green colour has been used for unknown intensity of spawning/ nursery grounds. You might want to consider replacing this colour as one might assume it suggests a positive interaction instead of spatial overlap.

Section 5.2.3, p.81, §2: Authors referred to sandeel surveys within the western development area and eastern development area. A map of the locations and sandeel counts of the sampling stations is advised.

Section 5.3.1, p.115, §1: Additional sources to provide information on the existing human environment may include local Inshore Fisheries Group.

Section 5.3.2, p.115, §1: Fisheries baseline assessment was based on relatively old data (2000-2009) on a course scale (ICES rectangle). MSS commercial fishing landings distribution maps relate to data from 2007-2011. MS may provide more up to date datasets in a greater scale for a more informed baseline assessment.

Section 5.3.2, p.115, §2: Although developers have identified ScotMap project as a potential data source in Section 5.3.1., baseline assessment of vessels under 15 m is very limited. Overlapping the development (including export cabling) with ScotMap layers is advised.

Section 5.3.2, p.115, §3: Sentence "As a result of vessels under 15 m not currently being required to be monitored, the activity of this fleet may not be represented" should be replaced with "… is not represented".

Section 5.3.2, p.115, §4: Please provide a table with landings breakdowns for both ICES rectangles.

Section 5.3.2, p.114, Effects Description Table: Displacement of fishing activities during construction should also be scoped in and discussed in the site-specific impact assessment methodology as part of the general effect of “Interference with fisheries activities”.

Section 5.3.2, p.118, §5: Proposed potential mitigation measures include cable burial where possible, additional cable protection measures where burial is not possible, consultation with the industry and ensuring integrity of the offshore export cable and fishing activities post-installation. You may consider co-existence options with the fishing sector e.g. fishing vessels could provide guard vessel services, or service boats for periodic overhauls (visual inspection and surveillance purposes)

(v) Additional guidance references and data sources

Section 5.3.2, p.118, §1: Check The Fishing Liaison with Offshore Wind and Wet Renewables Group (“FLOWW”) website for a copy of “FLOWW Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison” - http://www.thecrownestate.co.uk/energy-infrastructure/offshore-wind-energy/working-with-us/floww/

Subsea Cables UK guidance on overlaps with fishing - http://www.subseacablesuk.org.uk/guidelines/

Additional guidance Seafish’s Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments provides methods for calculating financial impacts as a result of areas closed or restricted for fishing: http://www.seafish.org/media/634910/ukfen%20ia%20best%20practice%20guidance.pdf

The KIS-ORCA interactive map of OREIs and subsea cables: http://www.kis-orca.eu/map

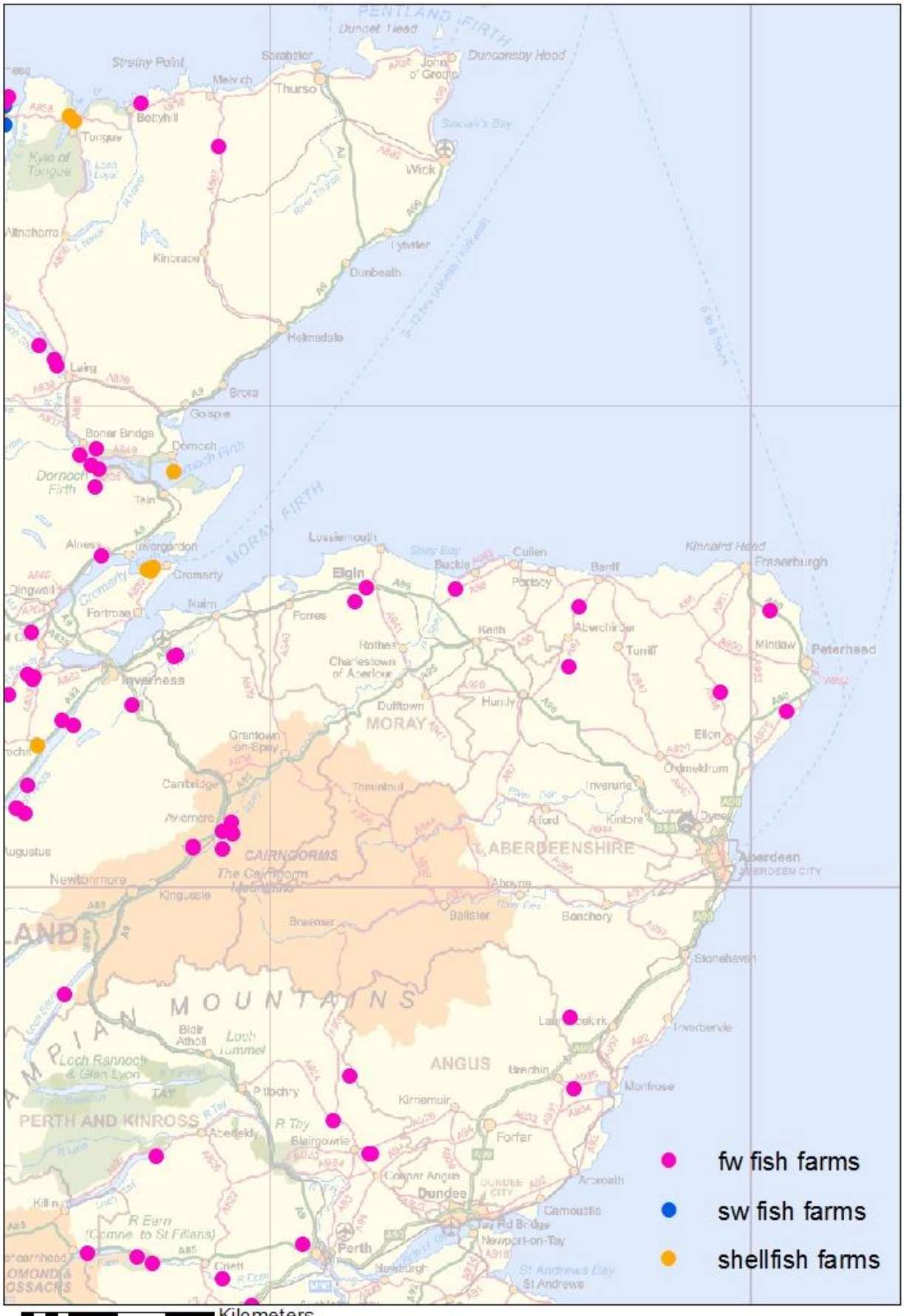
Visit MS Interactive website to get access to spatial data held by MS – http://www.scotland.gov.uk/Topics/marine/science/MSInteractive

2. Freshwater Fish Planning

There are currently no aquaculture sites registered with MSS located in the vicinity of the development proposed by Moray Offshore Renewables Ltd. (see map below).

The nearest aquaculture site is situated ~24 km west of the proposed development. It is a wild mussel site, currently active and operated by Highland Council.

Map of Fish Farms in the North East of Scotland



3. Diadromous Fish and Associated Fisheries

This is an application for a modified offshore transmission infrastructure for a wind farm which has been consented. The modification is to allow a different export cable route and landfall but the issues to consider and the general principles of risk assessment remain the same, as were considered in connection with the previous application. MSS would therefore hope that the new EIA can as far as possible use information that was submitted previously, updated where necessary.

The main change requiring consideration in relation to diadromous fish and associated fisheries is that the landfall is now likely to be in Boyndie Bay which lies immediately to the west of the mouth of the River Deveron, an important salmon and sea trout river, or Sandend Bay, further to the west, rather than at Fraserburgh beach. As at the previously proposed landfall site, large numbers of salmon and sea trout will be expected to be present at times at these new potential landfall locations too, and suitable precautions will need considered as previously. Any salmon and sea trout net fisheries close to the new proposed landfalls will also need identified and consulted with. Boyndie Bay is in the Deveron Salmon District and Sandend Bay in the Spey Salmon District so the Deveron and Spey District Salmon Fishery Boards will need to be consulted.

4. Benthos

Page 75, Impact Assessment Methodology

None of the proposed assessment methods along cable routes seem to include grab sampling. This should be undertaken to assess the populations of infaunal species such as *Arctica islandica* and *Maera loveni*. Given that the cable corridor might be up to 1.6 km wide MSS suggest that grab sampling should be considered.

Page 95, Intertidal Benthic Ecology

There is no mention of assessing the infaunal populations of soft sediments (beaches) – core or quadrat sampling perhaps. Also, it would be useful to monitor possible changes in beach dynamics caused by cable laying activities – beach profiles and PSA for example. Are there any algal or marine plant beds in the vicinity of the cable landfalls?

5. Marine Planning and Analysis

The socio-economic aspects of this scoping report are largely satisfactory. In summary, MSS would expect the EIA to include the gross and net employment impacts, and the gross and net GVA impacts. Both of these should be presented separately for the construction, Operation and Maintenance and Decommissioning phases. They should also be reported at a range of appropriate geographic scales. To assist with that, it would be helpful to see a clear definition of the labour market catchment area. Background info on the industry structure and employment structure would be useful. Clear consideration and use of the concepts of additionality, displacement and leakage should also be demonstrated. The same would be required regarding economic multipliers.

Local Authority

1. Highland Council

The HC made no comments on the scoping report for the Modified transmission Infrastructure.

2. Aberdeenshire Council

AC are generally content with the scope of the assessment, the environmental effects identified and the significant effects to be scoped in. Overall, it appears to cover the main environmental impacts and proposed accepted methodology.

The AC Natural heritage Team raised no issues in terms of their particular area of interest, considering that the scoping report is comprehensive and acceptable.

Scottish Natural Heritage and the Joint Nature Conservation Committee ("the SNCBs")

MORL ROUND 3 OFFSHORE WIND FARMS: REVISED TRANSMISSION WORKS.
THE SNCBs SCOPING ADVICE FOR OFFSHORE CABLE WORKS & SUBSTATIONS

Thank you for requesting comments from the SNCBs on the revised offshore transmission works for the MORL Round 3 wind farms – Telford, Stevenson and MacColl – proposed in the outer Moray Firth. SNH and the JNCC provide joint advice as the proposed export cables will cross both Scottish territorial and offshore waters. This letter supersedes the SNCBs previous scoping advice (14 December 2011) on the original proposals for the MORL grid connection.

An amended grid offer for the MORL wind farms (from Fraserburgh to a new location south of New Deer) has necessitated revisions to the offshore and onshore cable routes, and probable changes to the location(s) of the offshore substation(s). Further detail is provided in the introduction to the scoping report; the new grid connection point is shown on Figure 1-2 and the search area for the offshore cables is shown on Figure 2-2.

Appendix 1 of this letter provides the SNCBs scoping advice in relation to the offshore transmission works. The SNCBs has already been consulted on the geophysical and geotechnical surveys for the offshore cable and has provided advice to MS in this regard (letter dated 17 April 2014). SNH has also provided advice (14 May 2014) to Aberdeenshire Council on the onshore elements of the proposed transmission works.

APPENDIX 1

MORL TRANSMISSION WORKS: ADVICE IN RESPECT OF OFFSHORE CABLE WORKS
The SNCBs advice relates to the potential impacts from the offshore section of the revised MORL transmission works. The SNCBs provide advice on the following aspects:

1. Technical Information on Offshore Export Cable
2. Hydrodynamic Processes & Coastal Geomorphology
3. Benthic Ecology
4. Fish and Shellfish of Conservation Concern
5. Marine Mammals
6. Ornithology

7. Landscape, Seascape and Visual Impact Assessment.

There are a number of cables being proposed in the Moray Firth, including the Caithness / Moray subsea cable link, export cables for the Beatrice Offshore Wind Farm as well as these export cable(s) for the MORL Round 3 wind farms. The SNCBs continue to recommend liaison between the various parties involved, to try and take a more strategic approach to planning this work, including cable-laying and associated construction activity.

1. Technical Information on Offshore Export Cable

For the updated transmission works, the applicant confirms that an AC connection will be used (see section 2.3.2 of the scoping report). Four offshore export cables will be installed with a distance between them of four times the water depth (section 2.3.3). The SNCBs would welcome a detailed description of the route options (including proposed landfall) and construction phasing for these cables in order to reduce any potential impacts on sensitive habitats and species. This includes confirmed information on the following technical aspects, to be submitted in any ES supporting the marine licence application for the works:

- Method of cable-laying and burial (jetting or ploughing?).
- Installation method for cable landfall (trenching or directional drill?).
- Footprint of the area affected by the operations (i.e. cable laying and cable protection).
- Method and quantity of cable protection, if required (such as rock armouring or concrete mattresses).
- Duration, rate and timings of cable-laying.
- Direction of cable-laying (offshore in or inshore out?).
- Number and types of vessels (including propulsion systems) to be used in cable-laying operations.
- Estimation of electromagnetic fields ("EMF") potentially arising from cables both at exterior of cables and at surface of seabed above buried cables.
- Estimation of noise emissions from cable-laying works.
- Anticipated lifespan of the export cables in this location.

The SNCBs recommend that this technical information is included in any application for the offshore transmission works (in preference to use of a design envelope). The SNCBs would also welcome confirmed details on the location, design and installation methods for the offshore substation platform(s) – up to two are proposed.

2. Hydrodynamic Processes & Coastal Geomorphology

The SNCBs refer to sections 5.1.2 and 5.1.6 of the scoping report addressing 'Physical Environment (Offshore)' and 'Physical Environment (Onshore)' respectively. The SNCBs agree with the aspects 'scoped in' and 'scoped out' for the offshore assessment as set out on pages 45-47 of the scoping report.

The SNCBs consider it appropriate to focus attention on the two geological Sites of Special Scientific Interest ("SSSI") in the area – Cullen to Stake Ness Coast SSSI and Whitehills to Melrose Coast SSSI – adjacent to each of the potential landfall options at Sandend Bay and Boyndie Bay (p.55). the SNCBs advise that employing an experienced coastal geomorphologist will help in assessing the suitability of landfall options and in advising on detailed routing / micro-siting. The SNCBs would also welcome further discussion on these geological interests to help inform the development of cable routes and cable laying options.

3. Benthic Ecology

The SNCBs refer to section 5.2.2 in the scoping report on 'Benthic Ecology' and agree with the scope of impacts to be considered (pp.75 – 77):

- Smothering effects / suspended sediment: the applicant should consider the potential for benthic species to be smothered by sediment released from cable-laying, trench-digging and/or installation of the substation platforms. The potential for any buried contaminants to be released from such work should also be considered.
- Habitat loss: the applicant should consider loss of habitat once the technical aspects and proposed working methods have been confirmed (see section 1 above), and in the context of the biotopes recorded along the length of the cable route and at the proposed locations for offshore substation platforms.
- If a design envelope is being used for the application, then habitat loss will need to be estimated, using a worst case scenario, for each option being considered, so that comparisons can be made.
- Habitat change: the applicant needs to consider any reef effects or changes in benthic communities arising from any scour protection used for the export cable or the offshore substation foundation(s).
- Electromagnetic effects: the applicant will also need to consider the potential impacts on benthic communities from any thermal load or EMF arising from the cables during operation.

It is also important to consider the indirect effects on other receptors (marine mammals and seabirds) if their prey species could be impacted by the offshore cable works.

The scoping report provides a preliminary appraisal of available information on the baseline environment including consideration of Annex 1 habitats and Priority Marine Features[1]. BAP habitats and species[2], and the OSPAR list of threatened species and habitats[3], should also be considered in the assessment.

The SNCBs advise that benthic survey work will be required for the offshore cable as the majority of the new cable search area has not previously been surveyed. The SNCBs welcome the initial proposals for this work – including Drop Down Video ("DDV") and 0.1 m^2 stainless steel Day or Hamon grab samples (pp.78 & 79) – and the SNCBs look forward to being consulted on the detailed methods. There is the potential for Annex I habitat rocky reef to occur within the cable search area as it approaches shore. Early analysis of benthic survey data may help to refine proposals or indicate if further detailed surveys are required.

The SNCBs presume that location of the substation(s) can be informed by the geophysical, geotechnical and benthic survey work already completed, or planned, for the MORL Eastern Development Area.

4. Fish & Shellfish

The SNCBs refer to section 5.2.3 in the scoping report on 'Fish & Shellfish Ecology'. MS can advise whether the proposed benthic survey work and studies are sufficient to provide supplementary data on fish and shellfish, particularly herring and sandeels, and whether any targeted surveys are required for these interests.

The SNCBs note that table 5.2 (p.84) includes the Special Area of Conservation ("SAC") rivers that may need consideration, of which the closest – the River Spey SAC – is probably the most relevant. The SNCBs note that the following impacts will need consideration in respect of the qualifying interests of the listed SACs, as well as in relation to marine fish and shellfish:

- Smothering effects / suspended sediment: the applicant should consider potential smothering from sediment release in respect of less mobile fish and shellfish species as well as for the eggs of species which spawn in the area. Clarification on the

location and footprint of the export cables route and the timing / seasonality of operations can help in the assessment of these potential effects.

- The potential for any buried contaminants to be released from suspended sediment should also be considered.
- Habitat loss: benthic interests are discussed above, however, the applicant should also consider the extent of habitat loss in respect of marine fish and shellfish.
- Habitat change: the applicant needs to consider any reef effects or creation of habitat arising from any scour protection used for the export cable or Offshore Substation Platforms ("OSP(s)).
- Electromagnetic effects: the response of fish and shellfish to EMF is poorly understood and will need consideration. It would be helpful if the applicant could estimate EMF for the chosen AC cable type and make a comparison between:
  (i) EMF emitted without any mitigation; and
  (ii) any residual EMF emitted after adoption of mitigation methods.

In particular, the SNCBs seek to understand whether cable burial limits the strength, or reach, of EMF effects and whether more advanced cable casing might limit such effects.

5. Marine Mammals

The SNCBs refer to section 5.2.4 in the scoping report on 'Marine Mammals' and section 5.1.5 on 'Underwater noise'. The SNCBs agree that there is extensive information available on marine mammals in the Moray Firth. The SNCBs highlight that the south coast of the Moray Firth is particularly important for bottlenose dolphin (most are recorded within 3 km of the coast), and it is also an area of search for a potential Marine Protected Area ("MPA")[4] in respect of minke whale. In addition to the data sources listed in the scoping report, the SNCBs recommend contacting the Cetacean Research and Rescue Unit[5] who have done a lot of work on minke whale in the area as well as Whale & Dolphin Conservation[6] who collate sightings for Spey Bay.

Table 5-3 (p.90) sets out the range of marine mammals recorded in the Moray Firth. As correctly identified in the scoping report, bottlenose dolphin are a qualifying interest of the Moray Firth SAC and harbour seal are a qualifying interest of the Dornoch Firth and Morrich More SAC. Further advice in respect of the legislative process and Habitats Regulations Appraisal ("HRA") applying to these SAC interests can be found in the SNCBs scoping advice on the MORL Round 3 wind farms (letter dated 28 October 2010 – Annex E).

Each of the cetaceans listed in Table 5-3 is a European Protected Species ("EPS") and the SNCBs scoping advice on the MORL wind farms also provides advice in this regard (see Annex C).

The SNCBs agree with the scope of impacts to be considered for marine mammals as discussed in the tables on page 92 and 93:

- Disturbance / displacement as a result of construction / operational noise: particularly relevant for the installation of the OSP(s), depending on foundation type, and the placement of scour protection if needed for the OSP(s) or along the cable route. As discussed above, the southern Moray coast is important for marine mammals, so particular care will be needed for working in these coastal waters. The SNCBs recommend that directional drilling ("HDD") is considered for the cable landfall and connection to the offshore export cables.
- Collision risk, including potential corkscrew injury from ducted propellers: this issue is under current investigation by SMRU, in a research programme funded by MS. The SNCBs would welcome further discussion of this matter at an appropriate point, and

probably best co-ordinated by MS via the proposed regional advisory group for wind farm development in the Moray Firth (condition 27 on the MORL S36 consents).

- Indirect effects resulting from impacts on prey species: this issue can be informed by the results from benthic survey work. The SNCBs are satisfied that this aspect can be considered via desk-based appraisal as proposed in the scoping report.

The SNCBs also highlight the likelihood that cumulative impacts on marine mammals will need to be addressed for these proposed transmission works. There is a range of development consented, or proposed, that may impact on marine mammals in the Moray Firth including the MORL and BOWL offshore wind farms, their associated transmission works, the Caithness / Moray subsea cable link and a range of harbour developments including the three National Renewables Infrastructure Projects ("NRIPs") in the Moray Firth – Ardersier, Invergordon and Nigg – as well as other development proposals further afield.

The SNCBs would welcome further discussion of possible cumulative impacts at the appropriate time, probably best co-ordinated by MS via the proposed regional advisory group.

6. Ornithology

The SNCBs refer to section 5.2.7 in the scoping report on 'Ornithology (Offshore)'. The SNCBs note the potential for significant waterbird and wader interest along this coastline and in proximity to the cable landfall options. The JNCC have undertaken survey work as part of the process to identify new marine Special Protection Areas ("SPAs"), and the coastal waters of the Moray Firth are an area of search for a possible inshore SPA for non-breeding aggregations of marine waterbirds (ducks, grebes and divers). The SNCBs recommend further discussion with the JNCC's Seabirds at Sea team[7] to check for available survey data.

The SNCBs also recommend contacting the British Trust for Ornithology ("BTO") to obtain the WeBS[8] count data for this stretch of coastline. Depending on review of all available information, this may be sufficient to inform assessment and mitigation methods for waterbirds and waders in respect of the cable works. However, it is possible that further inter-tidal survey may be required or helpful for impact assessment.

The SNCBs advise that potential disturbance to waterbirds and waders is the key ornithological impact to address. The SNCBs do not identify any requirement for boat-based or aerial survey work in respect of seabird species along the cable route, although review of the data that MORL have already collected for the wind farms may be informative.

The SNCBs consider that desk-based appraisal is sufficient to consider potential disturbance or indirect impacts on seabird species arising from the export cable works. Consideration of any indirect impacts on seabirds from potential impacts to their prey species can be informed by the results from benthic survey work.

The SNCBs would also welcome further discussion of offshore substation lighting requirements in respect of seabirds. This could be undertaken as part of the discussions to discharge conditions on the Section 36 / marine licence for each wind farm (in particular condition 19 relating to lighting and marking plans).

7. Landscape, Seascape and Visual Impact Assessment

The SNCBs refer to section 5.3.8 of the scoping report: 'Seascape, Landscape and Visual Receptors'. As indicated, there was a comprehensive seascape, landscape and visual impact assessment ("SLVIA") provided in the ES supporting the Section 36 and marine licence applications for the MORL Round 3 wind farms.

The SNCBs would however, welcome some further consideration of the offshore substations as part of the assessment for the revised transmission works. This work can use the baseline character assessment and other information in the submitted wind farm ES to consider any additional, or different, SLVIA impacts from those previously assessed in respect of the proposed offshore substations in combination with the (consented) wind turbines.

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1. JNCC & SNH recommendations on Priority Marine Features are available from: http://jncc.defra.gov.uk/page-6052 http://www.snh.gov.uk/protecting-scotlands-nature/priority-marine-features/priority-marine-features/
2. UK BAP priority species and habitats: http://jncc.defra.gov.uk/page-5705
3. OSPAR list of threatened species and habitats: http://www.ospar.org/content/content.asp?menu=00180302000014_000000_000000
4. Further information on MPAs available from: http://jncc.defra.gov.uk/page-5269 and www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protected-areas-(mpa)/
5. Cetacean Research and Rescue Unit: www.crru.org.uk/
6. Whale & Dolphin Conservation: http://uk.whales.org/
7. JNCC's Seabirds at Sea Team at: http://jncc.defra.gov.uk/page-4469
8. Further information on the Wetland Bird Survey (WeBS) available from: http://www.bto.org/volunteer-surveys/webs

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British Telecom (Radio Network Protection Team)

BT Radio Network Protection do not have any comments to make "Nil Return"

Health and Safety Executive

HSE is the national independent watchdog for work-related health, safety and illness. They have a dedicated team that regulates occupational health and safety standards for the offshore renewable energies industry. You are advised to contact this team to discuss how you will manage health and safety during the planning, construction and operation of your offshore renewable project.

They are contactable at:

Health and Safety Executive
Belford House
59 Belford Road
Edinburgh
EH4 3UE
trevor.johnson@hse.gsi.gov.uk
offshore.renewables@hse.gsi.gov.uk

Highlands and Islands Airports Ltd.

This development falls outside the safeguarded areas for Inverness Airport, therefore HIAL do not object to Transmission Infrastructure.

Historic Scotland

HS comments concentrate on our statutory remit for scheduled monuments and their setting, category A listed buildings and their setting and gardens and designed landscapes and battlefields appearing in their respective Inventories. This response covers the scoping for both the offshore and onshore elements of the proposal.

General Comments

HS welcome the preparatory work carried out in relation to identifying the scope of the assessment as it relates to the historic environment. HS is also content to agree with the proposed assessment methodology outlined within the report. HS therefore only have a small number of comments to offer at this stage. Given the relatively wide corridor, HS would be happy to discuss any issues arising for the historic environment as the proposals become more detailed and the assessment progresses. However, at this stage HS would ask that the historic environment baseline informs decision making relating to the preferred route and seeks to avoid these assets.

Offshore Environment

HS welcome the consideration given to the potential effects for the historic environment as a result of the offshore cable laying. The acknowledgment of the need to avoid features of historic interest is welcomed and in light of this HS particularly welcome the reference to best practice guidance relating to works taking place in the marine historic environment. In relation to Historic Marine Protected Areas (HMPA) HS can confirm that on 1 November 2013, section 1 of the Protection of Wrecks Act 1973 was repealed in Scotland. Historic shipwreck sites previously designated under this legislation have now been designated as Historic MPAs under the Marine (Scotland) Act 2010.

Onshore Environment

HS can confirm the findings of the initial baseline survey regarding designated sites within the onshore cable corridor and substation search areas. When considering options and working towards a detailed route for the transmission cable every effort should be made to avoid direct impacts on these sites. The consideration of any impacts on the setting of such sites is also to be welcomed, particularly in reference to the proposed substation.

Figure 5.20 Scheduled Monument Records

To note that SMR refers to Sites and Monuments Record as opposed to the reported Scheduled Monuments Record. It should therefore be noted that the majority of the sites identified in this figure are not scheduled monuments.

Site Specific Survey Methodology

HS welcome the guidance and legislation that will be referred to when carrying out the assessment or bringing forward mitigation. As a point of detail Scottish Planning Policy 23: Planning and the Historic Environment has been superseded by the consolidated Scottish Planning Policy.

HS are happy to discuss any issue raised in their response.

Moray Firth and North Coast Inshore Fisheries Group

IFG would wish to make an observation in regard to EIA. The EIA on fishing is basically non-existent. MORL have collated no evidence on the majority of fish and especially shellfish to make any reasonable assumption on the impacts from the development.

Moray Firth Partnership

MFP advised they will not be submitting a detailed response to this preliminary consultation. MFP copied the details to the East Coast, Moray Firth and North Coast Inshore Fisheries Groups, and have encouraged the IFG members to respond directly as appropriate.

NERL Safeguarding ("NATS")

NATS anticipates no impact from the Modified Transmission Infrastructure for the Moray Firth wind farms. As such NATS has no comments to make on the Scoping Report.

Northern Lighthouse Board

With regard to the proposed consultation and the scope of assessment, NLB would only comment on that part relating to Shipping and Navigational Safety.

NLB would advise that the following should be considered as an initial response to the scoping document regarding input to the EIA which will accompany any necessary marine licence application for the modified transmission infrastructure, and that any formal recommendations for any lighting and marking will be given through the Marine Licensing process.

NLB would anticipate that a 'Method Statement' would form part of the application, and that this would include details of any offshore sub-station structures, cable laying and landfall works. A NRA will also be required as part of the application, to ensure that hazards posed to the marine user are minimised.

NLB are happy to offer any further assistance, or if any of the above may require clarification.

Royal Society for the Protection of Birds Scotland

The focus of the RSPB Scotland response is that of potential ornithological impacts arising from the proposed development, both on and offshore. RSPB Scotland support the assessment of potential cumulative effects, particularly given the extent of activities that could occur across similar timescales within the Moray Firth over the next few years. RSPB Scotland also highlight below a number of issues that RSPB Scotland recommend require further consideration and reporting as part of the environmental impact assessment.

Onshore: Any potential impacts on breeding/ wintering birds can be avoided by carrying out cable-laying works out with these periods. A more detailed bird survey of particular sections may be required once the route has been selected, if any protected species are found.

In Section 5.2.6 Terrestrial Ecology the map in Figure 5-14 or the text in paragraph 5.2.6 does not include any reference to Aberdeenshire Council's Local Nature Conservation Sites (former SINS sites). Inclusion of these designations is recommended.

Offshore: In Section 5.2.7 Ornithology (Offshore) the offshore search area and the landfall points transect a favoured area for White-billed diver (*Gavia adamsii*), a globally Near Threatened species under IUCN and seaduck (particularly long-tailed duck which are Vulnerable under IUCN).

The White-billed diver spring range is concentrated in the area just offshore (from shore to 2km out) from Portsoy, but they can be scattered between Portsoy and Sandend. They appear regularly, arriving around early March and remain through to May. Local interest in recent years has led to the collection of records, including GPS information, although it remains unclear why the birds favour this area. White-billed diver are not included in the species list of the scoping report, however consideration should be made of any potential implications of the proposal on this species, which may include a requirement for further data collection and / or survey work.

RSPB Scotland are happy to offer assistance should you require any further information, or if any of the above issues may require clarification.

Royal Yachting Association Scotland

RYA Scotland do not envisage any adverse impact of the modified transmission scheme on recreational boating. During the construction phase, recreational sailors will best be alerted by notices at neighboring harbours and marinas, particularly the Caledonian Canal, Whitehills and Peterhead. Cable landfalls rarely pose a problem for anchoring by recreational craft and RYA Scotland will be happy to advise further if required once the exact landfall site has been chosen. Information on harbours in the this area can, in any case, be found in The Clyde Cruising Club Sailing Directions and Anchorages – Part 5, North East Scotland and Orkney Islands.

For completeness, RYA Scotland should note that the recreational sailing routes marked on Fig. 5-17 have been taken from The UK Coastal Atlas of Recreational Boating, 2nd edition, published by the RYA in 2008, to which reference should be made. The routes marked were based on expert opinion and are typical routes effectively marking the mid-point of a corridor. There have been no updates in this area since the date of publication although there has been an increase in traffic. The Pentland Firth and Orkney Waters Shipping Study commissioned by MS showed that although only a minority of recreational craft transmit an AIS signal, their courses were representative of recreational craft in general, except perhaps in areas close inshore. The same study showed the seasonal pattern of movements of recreational craft. In the present case, RYA Scotland see no need for the collection of additional data on the movement of recreational craft.

Scottish Fishermans Federation

The SFF responds on behalf of its nine constituent member associations: Anglo Scottish Fisherman's Association, Clyde Fisherman's Association, Fishing Vessel Agents & Owners Association (Scotland), Mallaig & North West fisherman's Association, Orkney Fisheries Association, Scallop Association, Shetland Fisherman's Association, Scottish Pelagic Fisherman's Association and the Scottish Whitefish Producers Association.

The SFF note that the proposal allows for up to 4 transmission cables. The SFF would expect these to be buried as far as possible at a depth to ensure minimum risk from snagging or changes in seabed as a result of tidal movement. Where this is not technically possible, consultation on the alternatives and mitigation proposals must be decided and agreed through the Moray Firth Commercial Fisheries Working Group which must include those potentially affected by the cable route.

The SFF are content with the definition given in Chapter 3, page 35 on the cumulative and in combination impacts, and expect to see these clearly illustrated along with any necessary mitigation.

The SFF are content with the baseline fisheries given in Chapter 5.3.2 and vessel activity in 5.3.3. If that knowledge is properly applied to the cable route as far as scallop activity to the North and South, Nephrops & demersal en route, squid and static gear to the South, the SFF are confident that any negative impacts on fishing will become clear and that appropriate mitigation measures will be developed.

Whale and Dolphin Conservation ("WDC")

Overall WDC were happy with what had been 'scoped in' for marine mammals.

For the 'cumulative impacts', developments outside of the Moray Firth should also be considered. For example, Aberdeen Harbour Extension and the three offshore wind farm developments in the Firth of Forth (Neart na Gaoithe, Inch Cape and Seagreen) should all be included because they are all within the Management Unit and known range of the Moray Firth SAC bottlenose dolphin population.

The risk of corkscrew injuries ("CSI") should be included in the EIA. It is not clear from the Scoping Report if CSI will be included in the section 'increased collision risk' or not.

WDC are happy to discuss any questions regarding these comments and look forward to receiving the EIA in the near future.

The following organisations did not provided a response in relation to the consultation on the MOfTI scoping report ("Nil Return"):

Moray Council ("MC")
Scottish Environmental Protection Agency ("SEPA")
Association of Salmon Fishery Boards ("ASFB")
Beatrice Offshore Windfarm Limited ("BOWL")
Bond Offshore Helicopters ("BOH")
Bristows Helicopters ("BH")
Chamber of Shipping ("COS")
CHC Helicopters ("CHCH")
Civil Aviation Authority ("CAA")
Cromarty Forth Port Authority ("CFPA")
Crown Estate ("CE")
Defence Infrastructure Organisation ("DIO". The Ministry of Defence)
Ithaca Energy ("IE")
Joint Radio Company ("JRC")
Marine Safety Forum ("MSF")
Marine Scotland Compliance ("MSC")
Maritime & Coastguard Agency ("MCA")
Moray Firth Sea Trout Project ("MFSTP")
Ports and Harbours ("PH")
Scottish Canoe Association ("SCA")
Scottish Fisherman's Organisation ("SFO")
Scottish Wildlife Trust ("SWT")
Surfers Against Sewage ("SAS")
Transport Scotland ("TS")
University of Aberdeen ("UoA")

Annex 2 – RYA SCOTLAND POSITION STATEMENT

THE RYA'S POSITION ON OFFSHORE ENERGY DEVELOPMENTS

DECEMBER 2009

The RYA has taken an active role in policy making that affects boat users and has been the voice of recreational boating for over a century. We represent our 100, 000 personal members and over 1500 affiliated clubs representing approximately 400, 000 boating enthusiasts and administer training standards at over 2000 recognised teaching establishments. Research conducted by the RYA, BMF, MCA, RNLI and Sunsail in 2006 showed there were approximately 3.5 million participants in boating-related watersports in the UK. The BMF estimates the total turnover of the UK leisure and small commercial marine industry in 2005/6 was £2.8 billion. Of this, the 'value added contribution' which is the principal measure of national economic benefit was £1.04 billion (37.6% turnover). The industry employs 35,000 people across 4300 different businesses.
RYA represents users of inland and coastal:

- Cruising and racing sailing and motor boats
- Sailing dinghies and day boats
- Windsurfers
- Personal watercraft

The RYA supports the UK Government's and evolved administrations' efforts to promote renewable energy[1]. We note that it is Government policy that wind farms should not be consented where they would pose unacceptable risks to navigational safety after mitigation measures have been adopted[2]. Our primary purpose in engaging in the consultation regarding the development of offshore energy developments is to secure navigational safety and to ensure that recreational boating interests are not adversely affected. The RYA has made objections to some of the proposed developments on grounds explained in this document. As more issues have come to light, we have reviewed our position on offshore energy development. We recognise that some marine renewable schemes may provide opportunities to benefit recreational sailors, e.g. active breakwater types of power generation can provide areas of sheltered water.

This position paper sets out our concerns from a general perspective and should enable developers to more accurately take account of recreational boating concerns in their environmental impact assessments.

In summary the concerns of recreational boating and offshore energy developments relate to:

1. Navigational safety
    a. Collision risk
    b. Risk management and emergency response
    c. Marking and lighting
    d. Effect on small craft navigational and communication equipment
    e. Weather

[1] The UK Renewable Energy Strategy 2009. HM Government
[2] Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) DECC. November 2009. Note that this NPS will be a relevant planning consideration even though marine planning is a devolved issue in Scotland and Northern Ireland and in some cases Wales.

2. Location
    a. Loss of cruising routes
    b. Squeeze into commercial routes
    c. Effect on sailing and racing areas
    d. Cumulative effects
    e. Visual intrusion and noise
3. End of life
    a. Dereliction
    b. Decommissioning
4. Consultation

The MCA has developed guidance for assessing the navigational impact of offshore renewable energy installations, this should be utilised in addition to the information contained here[3].

1. Navigational Safety

Prior to leaving the shore, mariners make a passage plan and make assessments based on weather, tides and the environmental conditions. Offshore developments become an additional navigational hazard to the mariner. However, if sited sensitively, well designed and managed effectively these developments can satisfy the safety issues of concern to recreational boating.

Construction of the first offshore wind farm, North Hoyle, was completed in 2004. Since that time, Scroby Sands was completed in 2004, Kentish Flats in 2005, Barrow in 2006, Burbo Bank in 2007, Lynn in 2008 and Inner Dowsing in 2008. A further seven are currently under construction and seven more are consented and awaiting a start date. There have been no reported incidents involving recreational craft and offshore wind farms in these five years of operation around the UK coast.

Collision risk

The RYA believes that poorly designed wind farm developments could pose a risk of rotor blade collision with recreational craft. Wave and tidal developments and the sub-surface structures and scour protection associated with wind turbines could similarly pose a threat of underwater collision. The danger that moving rotor blades or other parts of the mechanisms pose is the reason for concern. Navigating around static hazards is part of sailing and only in rare situations, such as in narrow channels with strong tidal flows, do static installations pose a threat.

The RYA believes that the threat to recreational yachts can be minimised by specifying
1. a minimum rotor height clearance above mean high water springs of 22 metres
2. a minimum underwater clearance of 3.5 m below mean low water springs

The RYA has developed its position on clearance height and depth on the available data. Firstly an estimation of the air draught of the national fleet of yachts around the UK was established in the knowledge that these types of yachts may be found in all UK waters, these data are taken from the Royal Ocean Racing Club (RORC) Rating Office's database. For more detail see the final section on *Developing RYA policy on minimum clearance height and depth*.

[3] (MGN 371 ***"Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response Issues.",*** MGN 372 ***"Offshore Renewable Energy Installations (OREIs): Guidance to Mariners Operating in the Vicinity of UK OREIs".***

Risk management and emergency response

Risk management provisions should be formulated from the results of a site specific risk assessment that accounts for recreational craft. Recreational craft can be generalised as 'small craft' which are defined by the MCA as those craft under 24m in length. This distinction is important when it comes to equipment and other requirements for small and large craft. Guidance was developed in 2005 to outline the requirements for assessing the navigation impacts of offshore wind farms[4] .

For recreational craft, such an assessment should take into account the following parameters:

- The number, size and type of local vessels
- The number, size and type of national vessels
- Annual events that are not covered in a short term monitoring
- Wave height and sea state conditions
- Monitoring should be carried out during the high season
- A range of possible incidences

Any risk assessment should recognise that it is a theoretical process and that utilising historical data on the number of incidents reported to HM Coastguard from the area with no hazards in place may not adequately represent the situation with 30-300 installations in situ. It should also be recognised that not all incidents are reported to the Coastguard; generally only those that represent life threatening situations are reported. However, since commercial offshore wind farms have now been deployed in UK waters for five years, this experience should be fed into any risk assessment to provide an accurate and realistic predicted level of risk and enable a proportionate and practical set of measures to be put in place to address any unacceptable risk.

In order to effectively manage the risk of a vessel in distress drifting towards an installation, there needs to be an effective *Emergency Response System* in place. This will require the ability to shut down the moving parts, such as the turbines, when an emergency call is reported. In some cases, where traffic is high, a stand-by safety vessel may be required.

Safety Zones

The RYA's opinion remains that the creation of safety zones around wind turbines or other installations that exclude small craft on a wholesale basis are likely to be unnecessary, impracticable and disproportionate. In our view, such a restriction on the small craft's right of navigation is not justifiable in terms of safety and there is little possibility of enforcing such zones. In some locations, it may actually increase risk of collision as small craft may be pushed into the lanes of larger vessels or may have to make extended voyages.

European standards are now being established where small craft, under 24m, are exempt from any operational safety zones. The German Government was the first to recognise the negative implications of imposing safety zones on small craft and has exempted small craft from such zones. In principle the RYA has no objection to the creation of *advisory or precautionary zones* but such zones must be designed and implemented on a case-by-case basis and with due respect to the right of navigation. The RYA believes that the purpose of any *advisory or precautionary zones* should be to warn vessels to navigate with particular caution but they should not permanently restrict navigation or exclude recreational vessels. Wave and tidal technology is varied and is now the unknown factor when considering navigational safety impact. Nevertheless when these do not have moving parts within keel depth, their status as a hazard is in principle no different from that of a reef or other natural obstruction.

[4] Guidance on the Assessment of the Impact of Offshore Wind Farms: Methodology for Assessing the Marine Navigational Safety Risks of Offshore Wind Farms. 2005. DTI.

The RYA does, however, foresee occasions when it may be prudent to impose short-term temporary restrictions, for example during engineering, maintenance or construction works. Such temporary restrictions should be promulgated through Notices to Mariners. Many vessels visit the UK from continental Europe and this should be taken account of in any communication.

Cables and anchoring

A further issue relating to risk management is that of cables and anchoring. In most cases, small craft will not anchor within an offshore energy 'farm'. However, in emergency situations this may be the only way of securing a drifting vessel to ensure no damage is done. To secure the safety of navigation, cables should be buried to a sufficient depth to avoid being uncovered. This should take into account shifting sediments on the seabed.

Marking and lighting

As offshore renewable energy installations become more common in UK waters, the requirements for marking and lighting the sites should be consistent. This has been achieved for offshore wind and should be replicated for wave and tidal devices. Much work has been done in this field and guidance supported by RYA is available from Trinity House or the Northern Lighthouse Board as appropriate. For wind farms, as a minimum each turbine should be clearly marked in high visibility yellow paint to a height of 12 m, low level lighting should allow the turbine number to be read from a 'safe' distance, corners of the wind farms should be marked and any other points or routes through the wind farm marked accordingly. Wave and tidal developments vary dramatically in their design and the marking and lighting of these installations will need to be developed carefully. Wave power units that lie low in the water and that may move within an area of water, such as Pelamis, will be particularly hazardous to small boats and effective marking and lighting will be essential.

The RYA supports the guidance issued by the relevant light house boards on these issues and works with them to identify site specific issues that may occur.

Effect on small craft navigational and communication equipment

All craft larger than a dinghy will have some form of navigational equipment on board. The most common will be a magnetic compass. Large quantities of steel, cabling and the transmission of electrical power may produce interference with the magnetic compass. Studies have shown that the effect on systems such as GPS, VHF and mobile phones from wind farms is negligible. However, there is a demonstrated effect on radar systems which reduces the visibility of small craft to search and rescue vessels as well as to each other and larger commercial vessels. This causes concern when large wind farm developments are sited close to commercial shipping lanes and obstruct small craft routes avoiding these commercial routes or at the confluence of routes.

Problems may be found with small craft navigational equipment, which is not as powerful as commercial varieties, when we start consider installations further offshore. Antennae are likely to be lower and less powerful than many larger commercial vessels.

Any proposed development should account for the effect on small craft navigation and communication equipment in detail

Weather

Local weather conditions should also be examined in the risk assessment and measures taken to reduce the effects of poor weather conditions, low visibility and fog should be included in the risk management plan. Installations may need to have fog horns attached for low visibility conditions.

2. Location

The location of offshore energy installations is going to be crucial to navigational safety as well as potential loss of amenity for recreational craft. It should also be noted that commercial routes and shipping lanes do not represent those routes taken by small recreational craft. Whilst these routes will vary, the RYA, has collated these routes into the *UK Coastal Atlas of Recreational Boating* which is available from the RYA and which details cruising routes, sailing areas and racing areas as well as the location of marinas, RYA affiliated clubs and recognised training centres. This document should be consulted when considering the location of offshore energy developments and when writing an environmental statement.

Recreational routes, general sailing and racing areas must be accounted for when examining the impacts of wind farm developments.

Loss of cruising routes

When examining the routes and location of turbines it is important to recognise that sailing boats behave differently to power driven craft in that their actual line of travel may zigzag across the ultimate direction of travel as they are dependant on the wind direction. The coastal atlas should be consulted as well as any other available information to inform the siting of the developments and individual installations and the potential provision of navigation routes through the larger sites.

Along many stretches of coast, recreational craft may need to seek shelter in poor weather. Sheltered harbours and anchorages and routes to these harbours of refuge should be protected. These are identified as essential routes in the Coastal Atlas.

The loss of routes will also lead to an increased distance of travel. This has environmental implications for powered craft and safety implications for all craft. Some routes, typically narrow channels or strong tidal flows, may already be hazardous at times to navigate through and adding hazards in these areas may seriously compromise navigational safety. There are also safety issues with the creation of turbulence and wind shadowing in confined areas where craft may be moving slowly and gusty turbulent conditions may create problems.

Squeeze into commercial routes

Recreational routes differ from commercial routes as recreational craft essentially aim to keep out of the major commercial navigation routes by travelling in the shallower adjacent waters or taking other routes entirely. As a result, examining commercial routes alone will not enable the safe positioning of OREIs, recreational boating must also be accounted for. This may require routes through large developments to be identified or inshore routes for smaller craft to be safeguarded. The cumulative impact of all marine developments is becoming increasingly important when assessing these issues of squeeze.

Effect on sailing and racing areas

Most of the general day sailing and racing areas are close to the shore and in the more sheltered waters. The Strategic Environmental Assessment for Round 3 offshore wind development[5] recognises the busy inshore areas and states that the majority of offshore wind development should be beyond 12nm. European standards are again being set by Netherlands and Germany who have excluded any development within 12nm from the shore in order to retain 'open space' for its amenity and recreational value. Recreational activity is important to the health and wellbeing of the community as well as economic support for the local coastal economies. Retaining the undisturbed remoteness of some waters will be important in terms of its wilderness and amenity value.

In certain confined areas and areas heavily used for sail racing, the effects of wind turbines in terms of turbulence and shadowing on craft should be taken into account.

[5] Offshore Energy Strategic Environmental Assessment: Post consultation report. June 2009. DECC.

Any interference in wind speed and/ or turbulence created by a wind farm in a racing area would create a significant negative impact on the event site and diminish its value.

Cumulative effects
Of increasing concern with the planned number of developments is the need to assess each development in its wider surroundings. The *cumulative effects* of offshore energy installations on navigation routes will be increasingly significant. Existing navigation routes affected by other proposed development sites will need to be accounted for, rather than only current routes.

3. End of Life

Dereliction
Whilst we would hope that these installations remain economically viable for the lifetime of the structures, the RYA would support measures taken by Government to secure the financial implications of removing the structures, prior to consents been given. This will ensure that after the installation ceases electricity production for whatever reason, derelict structures that are not marked or lit and remain a hazard to navigation and anchoring are not found in UK waters.

Decommissioning
Equally, any decommissioning plan needs to ensure that the structures are completely removed. Any parts of the structure remaining after the commercial operation of the installation may pose a hazard to navigation and should be avoided. However, we recognise that secondary uses may be identified for these structures once energy generation ceases. If structures are to remain in the water, navigational safety must be taken into account and structures should be appropriately marked and lit.

4. Consultation

Consultation with the RYA should be through the Headquarters in Hamble and the Scottish, Welsh and Northern Irish offices who can coordinate wider consultation with their regional environmental coordinators, the clubs and individual membership and if needed, help to coordinate stakeholder meetings.

RYA Head Office
Caroline Price
Planning and Environmental Advisor
RYA House,
Ensign Way,
Hamble,
Southampton, SO31 4YA.
Tel: 02380 604222
Email: Caroline.Price@rya.org.uk

RYA Northern Ireland
Hon Secretary
RYA Northern Ireland Council
House of Sport
Upper Malone Road
Belfast, BT9 5LA

RYA Scotland
Hon. Secretary
RYA Scotland, Caledonia House
South Gyle
Edinburgh, EH12 9DQ

Welsh Yachting Association
Hon. Secretary
WYA Office
8 Llys Y Mor,
Plas Menai
Caernarfon,
Gwynedd, LL55 1UE

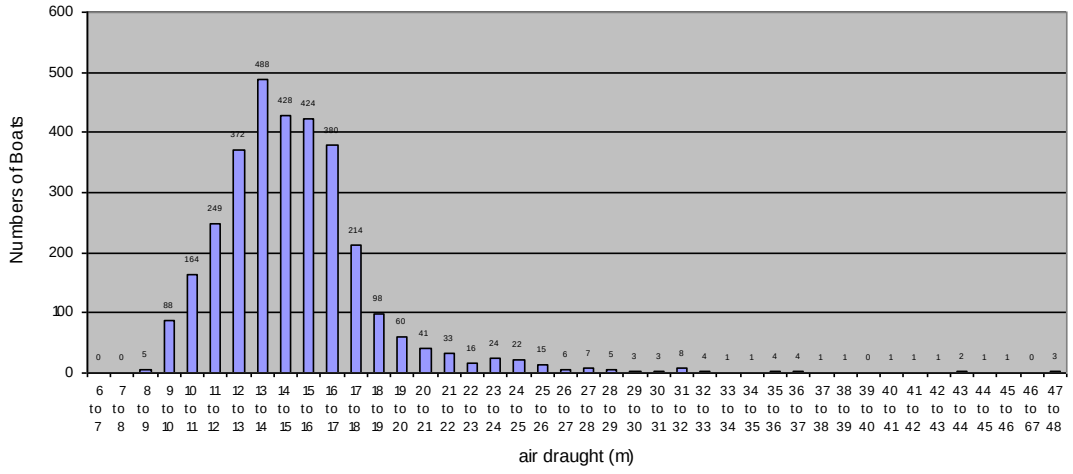
Original document December 2005, revised December 2009

Development of the RYA policy on minimum clearance height and depth

The RYA has developed its position on clearance height and depth on the available data. Firstly an estimation of the air draught of the national fleet of yachts around the UK was established with the knowledge that these types of yachts may be found in all UK waters, this data is taken from the Royal Ocean Racing Club (RORC) Rating Office's database. Although there are other rating systems in use, the RORC system is widely accepted and applied worldwide. Rating is a technical handicapping process that enables adjustments to be made to yacht racing results so as to allow a wide range of different boats to be raced on equal terms. The boats contained in the database are mainly cruisers and yachts. Many yachts taking place in club races are registered with the RORC Rating Office. The RYA believes this data, containing 3179 records, is a good representation of the type of yacht to be found sailing around the shores of the UK. Although the total number of yachts around the UK has not been quantified, this database represents 6% of the total number of boats owned in the UK, estimated at 564,000 (BMF, 2003).

'Air draught' as presented here is the distance from the waterline to the top of the mast structure. This is based on the 'p' measurement, boom to top of mast, in the rating system (RORC, 2003). Two metres have been added for the distance from the boom to the water surface, which is a conservative estimate for the larger vessels. It should be noted that masthead equipment and instrumentation has not been included in the calculation of air draught, although it will also add a further half to one metre to the air draught of a yacht. Loss of this equipment may produce failure in communication from the yacht although not structural failure to the yacht.

Figure 1: Graph showing the air draught in metres of the boats within the IRC fleet (sample size=3179)



Looking at the above data in the form of percentage of the UK boating fleet, we can see the percentage of recreational yachts at risk from different rotor clearance heights. Figure 2, shows that a clearance height of 14 metres above sea level will put 57% of the national fleet at risk from rotor height collision. Reducing this to 18 metres above sea level, substantially reduces this percentage, however it still leaves 12% of the national fleet at risk from rotor height collision. This is still an unacceptable level of risk to the yachts found in UK waters. A clearance of 22 metres has been shown to be possible in engineering terms, which would put 4 % of the national fleet at risk, a more acceptable level of risk in the view of the RYA. As a matter of common observation, larger yachts over 18 metres in length (see Figure 3), representative of this 4% group are more likely to be run by highly experienced crews and skippers. The datum of mean high water springs (MHWS) is taken as the clearance datum rather than mean sea level and then factoring in a site specific wave height parameter. However, wave height should be examined in the risk assessment at each site. It should be noted that 22 m above MHWS has already been specified as a minimum clearance height in

several of the wind farms consented in the first round of consents and is therefore a feasible, cost-effective option for developers.

It should also be noted that while this is currently an acceptable level of clearance, yachts are increasing in size and future developments may require a greater clearance height.

Figure 2: Graph showing the percentage of boats in the IRC fleet with different air draught shown in metres (sample size = 3179**)**

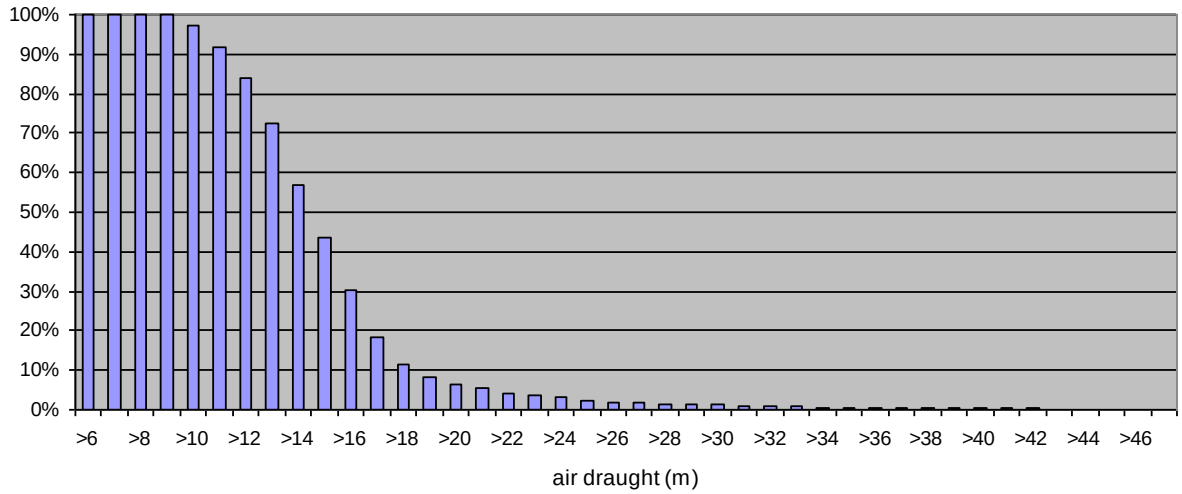
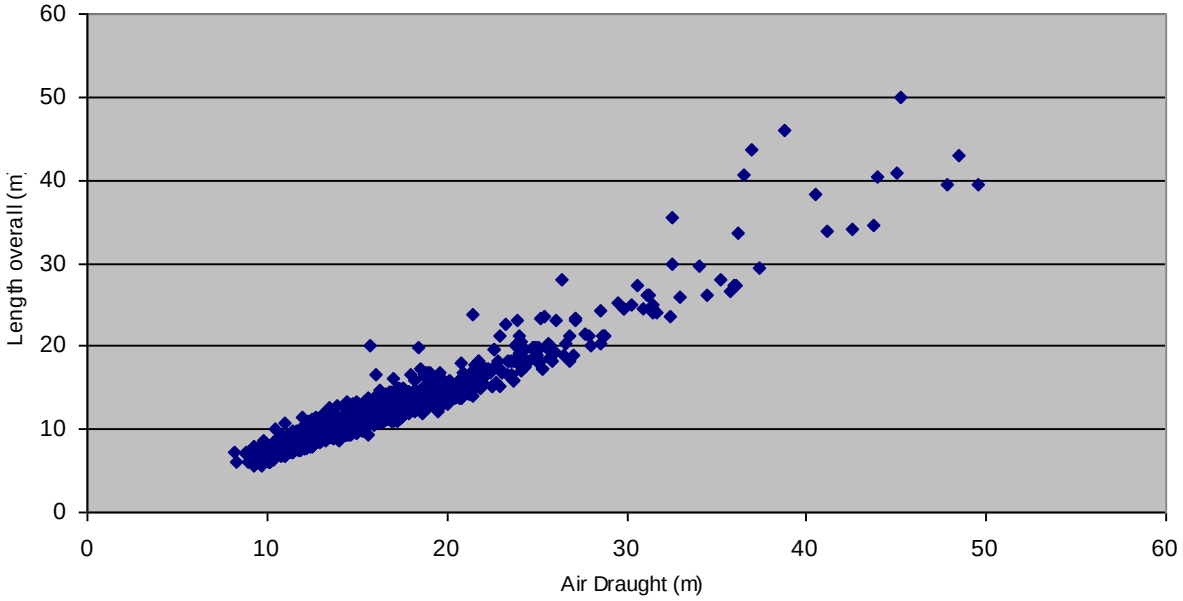
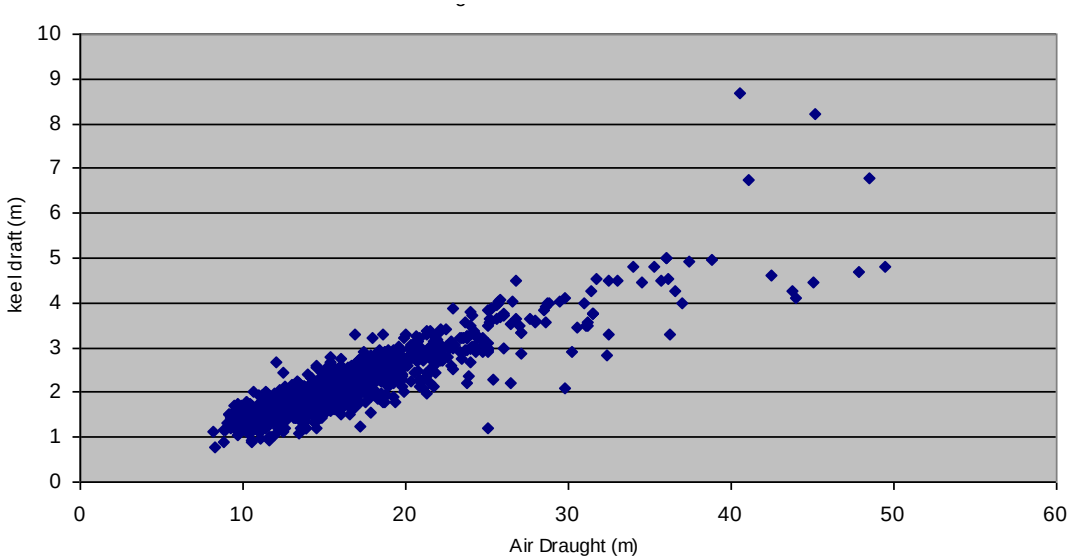


Figure 3: Graph showing the relationship of Length Over All (LOA) in metres and air draught in metres of the IRC fleet.



Additional data is provided showing the relationship between air draught and the depth of water required for clearance below the vessel's keel (Figure 4). Figure 4 shows that a depth of 3.5 metres corresponds to an air clearance of 22m above MHWS which is relevant for subsurface wave and tidal developments.

Figure 4: Graph showing the relationship of water draft in metres and air draught in metres of the IRC fleet.



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Annex 3 – SCA RENEWABLE ENERGY POLICY

Introduction

In passing the Land Reform (Scotland) Act 2003 the Scottish Parliament has provided a statutory right of access to inland water and confirmed the customary freedoms of access that paddlers have always enjoyed in Scotland.

However, the quality of the resource that we take access to, Scotland's rivers, lochs and coastal areas, is coming under increasing threat from various types of development, most notably at the current time from renewable energy proposals. Whilst the Scottish Canoe Association (SCA) welcomes the passing of a statutory right of access, we are concerned that the canoeing resource in Scotland does not suffer from damage by inconsiderate or poorly planned renewable energy schemes.

With this in mind the SCA has developed a Renewable Energy Policy in order to express our concerns about the value of the places where canoeing takes place and to explain to developers, planners, government agencies, councillors and politicians the views that the SCA holds and the kind of sites that we would wish to see protected from development.

Throughout this document we will use the generic term canoeing to refer to the use of both canoes and kayaks.

Policy Context

The SCA believes that government should make the promotion of energy efficiency a much higher priority. There is a fundamental issue with causing damage to our natural heritage in order to generate energy that is then wasted on inefficient appliances, under insulated buildings and overly relaxed public attitudes to use of energy.

The SCA recognises the global problems associated with carbon emissions and climate change, and accepts there is a need to alter our sources of energy and societal attitudes towards use of energy.

The appendices to this policy statement describe the historical context to the SCA's involvement in the energy debate as well as the current relevance of national energy policy. The appendices then go on to review the trends in hydro and marine energy development.

The SCA's policy for dealing with Renewable Energy issues is set out below.

SCA Policy

1. The SCA wishes to be involved in the debate on the future of the nation's energy policy in order to play a proactive role in determining the impact on water that canoeists make recreational use of.

2. The SCA seeks to work with developers, agencies, consultants and planning authorities to help identify potential conflicts between canoeing and proposed renewable energy projects. The SCA believes that early consultation should lead to the avoidance of damaging conflicts between recreational interests and energy companies.

3. The SCA will form a view on each new renewable energy proposal taking into account a number of factors. These include: the likely impact on paddling interests; the importance of the water body involved in paddling terms; the protection of scenery and a judgment on any cumulative effect of a range of different renewable projects.

4. We are concerned that good rivers are being threatened for a very small power output in return. Therefore, in assessing any proposed energy scheme the SCA will perform a

power output to canoeing interest comparison. We believe this will enable us to consider and compare two important factors: what is being lost and what is being gained.

5. Where the canoeing value of a river is not so great that we would wish to see the proposed development stopped we will work with the developer to comment on the safety aspects of the inlet and outlet features, negotiate shut down days for the river to be paddled and in most cases request an online river level gauge.

6. The SCA will oppose renewable energy proposals when we consider the watercourse or coastal area that is under threat to be of national or international value to our sport.

7. The SCA is concerned that building barrages in estuaries could hinder navigation and introduce safety issues for paddlers. Any barrage should have continuously navigable channels near the coast to ensure safe passage for canoes, kayaks and other small craft. The possible ecological and silting problems caused by tidal barrages are also of concern.

8. The SCA seeks to protect our finest coastal scenery. Scotland's coastline is the most scenically attractive in Europe and should be offered special protection to recognise this. Major developments on our remoter and most scenically attractive stretches of coastline should be resisted and will be opposed by the SCA. The SCA would prefer to see offshore wind turbines located well out to sea; and tidal and wave power stations either out to sea or located entirely below the surface of the water.

9. The SCA is concerned about the safety implications of certain marine renewables and the consequences for sea navigation. For this reason we are opposed to developments on stretches of coast that would require small craft to go further out to sea to navigate around or stop paddlers from landing on the coast in an emergency.

10. The SCA is concerned about the access implications of marine renewables on the water close to the coast and in the coastal zone. We are opposed to developments on the sea and coastline that limit where small craft can navigate. Where it is necessary to have renewable energy installations or their shore facilities near the coast, existing launch sites should be preserved. Where it is necessary to use part of the coast for the installation, provision of car parking and access to the water for recreational users should be maintained or improved as part of the installation. The principle of multiple uses for coastal sites should apply.

11. Tidal energy represents the only form of renewable energy that could produce large amounts of new base load energy. For that reason we believe it is inevitable that tidal energy will eventually become widely utilised and will contribute to our nation's security of supply. We would like to see a locational strategy drawn up well in advance of Scotland's tidal energy being harnessed.

12. The SCA is concerned that starting up and shutting down turbines can cause rapid and artificial fluctuations in river levels. This could cause problems for canoeists, as well as anglers and other recreational visitors, especially in gorge sections of white water rivers. The artificial altering of water levels by hydro schemes switching on and off could lead to accidents or contribute to existing incidents turning into accidents. The SCA will assess the safety implications of any proposed scheme on paddlers. This will require information on the anticipated normal running regime for the turbine and the implications of an emergency shutdown. The anticipated number of controlled start ups and shut downs on a daily basis and the speed at which the water levels change will be required to carry out this assessment.

13. The SCA believes that water release information from existing hydro power stations should be more freely available to canoeists so that more recreational use can be made of the water.

14. The SCA seeks to work with developers and energy companies to secure good quality access facilities that will assist canoeing, such as passes navigable by canoe and footpaths round new obstructions on the river as well as car parks close to the access and egress points on controlled rivers.

15. The SCA believes the practice of cutting the capacity of existing hydro schemes in order to qualify for subsidies is indefensible and should be stopped.

16. The SCA believes in the principle of early consultation being used to identify problems with proposed plans at an early stage and as a way of avoiding protracted conflicts between developers and opponents of a proposed scheme as well as generally improving the public perception of renewable energy.

17. The SCA believes that government should provide a lead by developing a locational strategy for all forms of renewable energy.

18. The SCA would like to see renewable energy developed in such ways that the need for unsightly transmission systems is reduced and any environmental impact is minimised. As renewable energy projects eventually move offshore we would like to see more use of sub-sea cabling, albeit with due care taken to consider the natural heritage value of our underwater ecosystems.

Appendix A

Historical Context

A great deal of hydro development took place in the Scottish glens in the post-war years. These schemes had a major impact on our upland landscapes, but they did provide energy to remote parts of Scotland for the first time. These schemes are still operational and providing electricity to the national grid some 50 years after they were built. The dammed storage schemes that were built in those days still provide electricity as well as predictable water for canoeing via releases in the form of freshets, which are primarily aimed at helping fisheries management but are sometimes specifically for canoeing events.

With the exception of the massive Glendoe hydro scheme, the modern day renewable energy industry appears not to be looking to build anymore dammed storage schemes. Whilst storage schemes do provide opportunities for good canoeable water during releases, the landscape impacts caused by their highly visible draw-down scars can be significant, and are considered unacceptable to a wide range of recreationalists, and this is one reason why they are not currently being seen as a viable proposition in Scotland.

The building of nuclear power stations in Scotland during the 1950s and 1960s led to the need for pump storage hydro schemes and the Cruachan and Foyers power stations were constructed for this purpose. Should government commit to replacing our ageing nuclear power stations there could be a renewed interest in pump storage. Should this happen there could be implications for high mountain lochs and the burns and rivers that drain them. The decision about our future commitment to nuclear power will be based on the political direction Scotland chooses to follow, but it could also depend on future developments in the international quest for power from waste free nuclear fusion as opposed to nuclear fission with its associated problem of how to dispose of the waste nuclear material. A return to nuclear power in combination with pump storage hydro would be likely to impact on a small number of mountain burns and the main concern to canoeing would be whether these were canoeable.

Appendix B

National Energy Policy

The UK and Scotland are undergoing a change in energy policy, partly brought about by ageing power stations and partly because of our Kyoto and other commitments to reducing carbon emissions. As well as reviewing our energy mix in terms of power sources, we also have to review our network for electricity transmission. The Beauly to Denny powerline upgrade proposals are highlighting the problems of landscape impact, health concerns and affect on property prices associated with overland pylons. With renewable energy production set to move increasingly offshore the arguments for sub-sea transmission lines becomes a more viable option. Also, the greater the amount of power produced the more economically viable the higher investment in sub-sea cabling becomes. Onshore transmission lines have a scenic impact for a number of recreational activities, including canoe touring on open water, especially lochs. Sub-sea cabling, on the other hand, would usually be buried well out to sea and should not have any impact on kayakers who generally keep close in to shore. We would have concerns that the places where cabling leaves the land or comes back onto land should be well protected, but the high voltages concerned would require that in any case. Our other concern in this area is that access to the foreshore is not affected by the building of shore based structures for new developments.

The comment is often made that if energy efficiency were taken more seriously we would not have to destroy valuable parts of our countryside in order to power inefficient electrical appliances and allow householders to leave their appliances on standby overnight or workplaces their lights and computers on overnight. The threat to our countryside in general, and canoeing resource in particular, would be lowered if more effort were put into the promotion of energy efficiency.

We believe the public perception of renewable energy is being harmed by contentious planning applications that create critical opposition. Anti wind farm campaigns, protests against the proposed Beauly to Denny powerline and objections to hydro proposals are all on the increase and the combined effect is of a growing opposition to renewable energy. This may also be having a related impact of increasing support for nuclear power. Public opposition to renewable energy proposals may eventually influence government policy, and developers may begin to take this opposition more seriously. A way in which developers can react positively is to seek early consultation with interested communities and to work to avoid key recreational and landscape sites with the intention of trying to achieve greater public support for renewable energy.

The SCA is concerned that the drive to increase the proportion of our energy derived from renewable sources is leading to a loss of support for renewable energy. Much of this opposition to renewable energy is coming from previous supporters of such energy. The terms renewable energy and environment-friendly have become inter-changeable, but in many cases renewable energy proposals carry a massive cost to the environment and this leads to the levels of opposition that such proposals are encountering. We believe the quality of our environment and quality of our recreational enjoyment of our environment should be given higher priority.

The economic value of tourism, and of segments of tourism such as adventure sports tourism, should be given greater recognition for the revenue it creates for the national economy. The scenic quality of the countryside is the foundation for the majority of that tourism spending.

Appendix C

Hydro Power

The current trend in hydro development is for run-of-river schemes. With no facility for storing water, only for running the water down a pipe parallel to the river, a run-of-river scheme means that the water in the river is either at its natural level if the hydro is not operating, or at a lower than natural level if the hydro is operating. In this respect a run-of-river scheme can only be to the detriment of canoeing. Furthermore, run-of-river schemes can create dangers, especially on constricted gorge sections of rivers, when the hydro system is being switched on or off and the water level is being artificially altered. Recent trends in hydro power generation and canoe design have led to power companies and canoeists being interested in the same types of rivers.

Run-of-river hydro developers are looking for relatively small rivers with a steep gradient, usually with a waterfall to increase the overall gradient. The development of shorter playboats, made possible by the advances in roto-moulded plastic construction over the past 20 years, has opened up for canoeing the narrower and steeper creek-type rivers with steep drops. This interest in the same type of river by the two different groups is causing a significant problem, and with the lack of storage facility in a run-of-river scheme there is little space for compromise. Where the potential impact is too great we would wish to see the proposed scheme being dropped, but where the value of the river to canoeing is not that great we would wish to comment on the safety aspects of the intake and outlet features, as well as agreeing some kind of system of shut down days when the river can be paddled and requesting that an online river level gauge be made available.

The changing trends within canoeing, mainly brought about by the radical transformation in the size, strength and manoeuvrability of white water canoes, means that rivers that were considered impossible then are now increasing in popularity. This trend towards paddling narrow creek style rivers is certain to continue into the future and is likely to increase the potential for energy production and canoeing to come into conflict.

Canoeing guidebooks cannot keep up with this trend towards exploring steep narrow rivers, so energy companies referring to such guidebooks is not going to be sufficient to gather an accurate assessment of a river's interest for canoeing. Furthermore, whilst some rivers are going to be paddled by a few but never become popular, others are going to become increasingly popular and are likely to be amongst Scotland's most paddled rivers in a few years time. The SCA is going to be far more concerned about protecting the latter category of rivers than the former.

With the increase in leisure time and disposable income in modern society, canoeing has become increasingly popular and as some enthusiasts have moved on to creek rivers so the availability of conventional kayaks, sit-on-tops and open boats has also led to increased paddling on the less extreme rivers, some of which may be of interest to hydro developers.

The avoidance of conflict between canoeing and energy companies can be avoided through the use of early consultation. The SCA responds to a number of scoping study requests for initial reaction to hydro proposals on behalf of various developers. This provides the opportunity to flag up at a very early stage the SCA's interest in a particular river.

The SCA is willing to work with the Scottish Environment Protection Agency, Scottish Natural Heritage and hydro developers in order to devise ways of avoiding conflicts of interest on strategically important Scottish rivers. We would hope that this willingness to work proactively and discuss ways of helping the industry identify key paddling rivers would be recognised and respected by all the relevant companies in the hydro power sector and that we can find ways to achieve protection for our finest rivers and burns so that they can be kept in their current state. We would enter into any discussions on the basis that the SCA retains the right to oppose proposals on any river or burn, and that we would still have the right to take part in any consultation exercise.

The SCA would like to see more commitment to micro renewable energy schemes. Micro scale hydro power has the potential to harness power from burns that are too small for canoeing, but which could produce power for single houses or small communities without causing damage to scenically attractive and recreationally important watercourses.

Appendix D

Marine Energy

The greatest source of renewable energy is undoubtedly from the marine environment. The potential for harnessing power from sources such as tides, waves and wind at sea are enormous and we believe the power generating industry will eventually make much greater use of these marine based energy sources. One of the huge advantages of harnessing tidal energy is that it is entirely predictable and when several geographically spread stations are used in combination it is capable of generating large amounts of base load power. This element of predictability gives tidal power an advantage over all other forms of renewable energy.

As marine renewable energy schemes become more commercially viable and the civil engineering capability develops further, it is likely the government subsidy system will adapt to encourage a wider range of technologies. As this happens it is inevitable that developers' interests will turn increasingly to our estuaries, coastlines and the open sea.

The greatest resource enjoyed by sea kayakers in Scotland is our stunning coastal scenery. Our concern with marine renewables is therefore the impact on the scenery, especially close to the coastline. Man made developments close to shore also represent a significant safety concern as they can force small craft such as kayaks and dinghies to go out to sea in order to travel around them, which in times of bad weather or poor visibility can make them serious hazards to navigation. For these reasons it is preferable from a kayaking point of view if marine energy developments are located further out to sea or contained below the surface of the water.

The potential amount of renewable energy available in our estuaries is massive. However, renewable energy in estuaries can be harnessed with or without the need for tidal barrages. Barrages mean that greater amounts of energy can be produced, but experience from overseas suggests that they lead to enormous ecological problems with the silting up of the estuary and a gradual reduction in the amount of power produced. We believe the tidal flow can be harnessed in estuaries without the need for barrages, and with a predictable flow of water we see this as a form of renewable energy worth harnessing as long as it is developed with recreation and nature conservation firmly in mind. Scotland's estuaries are valuable areas for recreation and canoeists make great use of these vast expanses of water. Whereas a barrage would affect the ecological balance of an entire estuary, a non-barrage power plant would have a more localised ecological impact and could be designed so that it would not have a significant impact on recreational water craft.

There are certain locations around the Scottish coast that hold the potential for truly massive amounts of tidal power to be generated. The Pentland Firth is perhaps the most obvious example of a natural power source that could one-day produce sufficient power to replace a major fossil fuel power station, but there are several other locations around the Scottish coast that could be of interest to energy companies searching for tidal energy projects. The civil engineering capability entailed in such a proposal could be a significant hurdle to such schemes, but as that barrier is overcome we are likely to see a move towards more tidal power generation facilities being proposed. From a kayaking point of view the massive tidal races around Scotland are all of great interest to our activity and we would have concerns with any plans to develop within them any structures that would break the surface of the water. We are particularly concerned in this respect for the protection of Corryvreckan, which is one of a handful of tidal whirlpools in the world. Due to our concerns regarding safety and seascape already discussed in this policy document the SCA would wish to be consulted on any such planning proposals.

Structures on the surface of the water such as the Polaris wave machine and structures that break the surface of the water such as turbines mounted on vertical posts could present small boat users such as kayakers with serious safety issues. The risk of collision combined

with the navigational challenge of going around such structures could be quite significant, so we would always welcome the opportunity to comment on proposals for such developments.

Our final concern with marine renewable energy projects is the impact of any landfall facilities. Shore based infrastructure such as servicing facilities for sea based plant, wave machines and interface equipment between renewable energy generators and the grid have the potential to impact on the coastal landscape and restrict access to and along the foreshore. From a safety point of view, as well as aesthetic and access, we would wish to be consulted on proposals for such shore based facilities. The SCA's policy is that any shoreside infrastructure associated with renewable developments should be designed to minimise encroachment on the foreshore and that access to the foreshore from the land and water is preserved for kayakers and other recreational users. Any downside caused by the developer's shoreside infrastructure should be balanced by creating better pathways, car parking and access to the foreshore and water for recreational purposes.

17 December 2008

Annex 4.

DEVELOPER APPLICATION AND ENVIRONMENTAL STATEMENT CHECKLIST

	Enclosed
1. Developer cover letter and fee cheque	□
2. Copies of ES and associated OS maps	□
3. Copies of Non Technical Summary	□
4. Confidential Bird Annexes	□
5. Draft Adverts	□
6. E Data – CDs, PDFs and SHAPE files	□

Environmental Statement	Enclosed	ES Reference (Section & Page No.)
7. Development Description	□	
8. Planning Policies, Guidance and Agreements	□	
9. Economic Benefits	□	
10. Site Selection and Alternatives	□	
11. Baseline Assessment data – air emissions	□	
12. Design, Landscape and Visual Amenity	□	
13. Construction and Operations (outline methods)	□	
14. Archaeology	□	
15. Designated Sites	□	
16. Habitat Management	□	
17. Species, Plants and Animals	□	
18. Water Environment	□	
19. Sub-tidal benthic ecology	□	
20. Hydrology	□	
21. Waste	□	
22. Noise	□	
23. Traffic Management	□	
24. Navigation	□	
25. Cumulative Impacts	□	
26. Other Issues	□	

N.B. Developers are encouraged to use this checklist when progressing towards application stage and formulating their environmental statements. The checklist will also be used by officials when considering acceptance of formal applications. Developers should not publicise applications in the local or national press, until their application has been checked and accepted by officials.