

Our Ref: 12/00793/S36  
Your Ref: 018/OW/MAINS - 10



6 November 2012

2 NOV 2012

Adrian Tait  
Marine Scotland  
Scottish Government  
Marine Laboratory  
375 Victoria Street  
ABERDEEN  
AB11 9DB

**INFRASTRUCTURE SERVICES**

Director: Eric S Lowson

Planning & Transport  
County Buildings  
Market Street  
Forfar  
Angus DD8 3LG

T: (01307) 461460  
F: (01307) 461895  
E: [planning@angus.gov.uk](mailto:planning@angus.gov.uk)

Ask for: **Jamie Scott**  
Direct Line: [REDACTED]

Dear Mr Tait

**The Electricity Act 1989  
Marine (Scotland) Act 2010  
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000**

**Formation Of Offshore Windfarm Comprising Of 125 Turbines With Maximum Blade Tip Height Of 197 Metres Above Lowest Astronomical Tide, Neart na Gaoithe, Firth of Forth**

I write in response to your letter dated 25 July 2012, and the accompanying Environmental Statement (ES), requesting comments on the above noted application.

This matter was reported to Angus Council's Development Standards Committee of 6 November 2012. I can confirm that the Committee resolved to agree the contents of the report (enclosed). As such, Appendix 1 of the report forms Angus Council's formal response to the consultation.

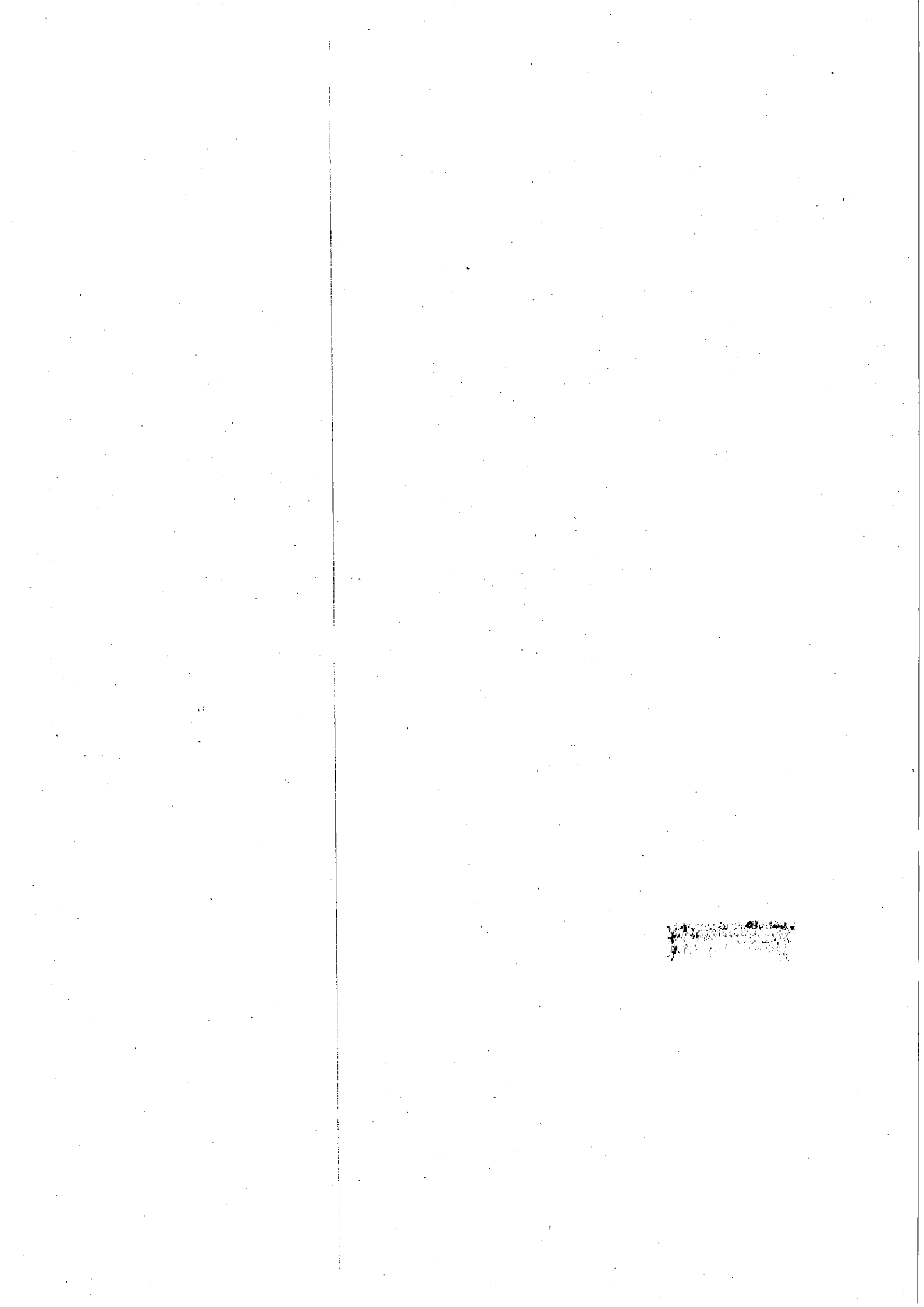
I trust that the above/enclosed are in order. Should you have any queries however, please do not hesitate to contact me. I look forward to hearing of progress with the application/consent in due course.

Yours sincerely

[REDACTED]

**JAMIE SCOTT  
SENIOR PLANNING OFFICER (DEVELOPMENT STANDARDS)**

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**ANGUS COUNCIL**

**DEVELOPMENT STANDARDS COMMITTEE - 6 NOVEMBER 2012**

**CONSULTATION – NEART NA GAOITHE OFFSHORE WINDFARM**

**REPORT BY HEAD OF PLANNING AND TRANSPORT**

**Abstract: The Scottish Government (Marine Scotland) has received an application for consent under the Electricity Act 1989 and an application for licenses under the Marine (Scotland) Licensing Act 2010 from Neart na Gaoithe Wind Limited to construct and operate 64 to 125 turbines in the Firth of Forth, each of 171.25 metres to 197 metres in height to tip (above Lowest Astronomical Tide (LAT), with a maximum generating capacity of 450MW. Angus Council is a Statutory Consultee on this proposal and this report seeks agreement from Committee as to the content of the consultation response. The assessment of the proposal in planning terms and the recommendation for the consultation response is set out in Appendix 1.**

**1 RECOMMENDATION**

1.1 It is recommended that:-

- the Development Standards Committee note the content of this report and agree that the suggested response, set out in Appendix 1, be submitted to the Scottish Government (Marine Scotland) in response to their consultation request.

**2 INTRODUCTION**

2.1 Committee was previously informed of the application to the Scottish Ministers (Marine Scotland). Report No 510/12 set out the nature of the proposal and the requirements for Angus Council to respond as a Statutory Consultee, which must be sent to Marine Scotland by 19 November 2012.

2.2 The application for consent to Marine Scotland is made under Section 36 of the Electricity Act 1989, as well as an application for associated licensing under the Marine (Scotland) Act 2010. The proposed installed capacity of the proposal would be a maximum of 450MW. The exact specifications of the turbines have not been finalised, however, it would be a between 64 and 125 turbines, of 171.5 to 197 metres in height to tip height above Lowest Astronomical Tide (LAT).

2.3 At its nearest point to the coast it is approximately 15.5 kilometres due east of Fife Ness, in the outer Firth of Forth, covering an area of 105 km<sup>2</sup>. The area is approximately 30 km southeast of Buddon Ness, Barry Links which is the nearest point to the Angus coast.

**3 CONSIDERATION**

3.1 Angus Council have been formally consulted on the proposal and need to come to a view on the application. The Regulations allow for representations from Statutory Consultees, such as Angus Council, up to 4 months from the date of the application. If additional time is required beyond the 19 November 2012 date, the Council must formally request an extension of time from Marine Scotland and also obtain the agreement from the applicant.

- 3.2 Should the Council object to this proposal, the Scottish Ministers are not obliged to hold a Public Local Inquiry. This is because there is no "relevant planning authority". They would nevertheless consider whether this would be appropriate, taking account of all consultation responses and material considerations.
- 3.3 Both applications for the offshore elements of the proposal are handled and determined by Marine Scotland, on behalf of the Scottish Ministers. In reaching their decision, Marine Scotland will be advised by statutory advisers, such as Scottish Natural Heritage, as well as other consultees.
- 3.4 In order to facilitate Angus Council's consideration of the proposal as a consultee, the consultation request is being handled as if it were a planning application in its own right. Accordingly the proposal was registered by the Council as a 'Section 36' application, under the application reference '12/00793/S36'.
- 3.5 As part of the Council's consideration several consultations were undertaken with stakeholders considered to be relevant to the planning assessment being undertaken. This type of application does not require Angus Council to undertake any formal publication of the proposal. It has, however, been published on the Council's PublicAccess website for review purposes and the submission of comments.
- 3.6 Appendix 1 of this report sets out the assessment of this proposal in planning terms, which includes the views submitted by consultees and third parties.

#### **4 RISKS**

- 4.1 There are no risks arising directly as a consequence of the recommendations contained in this report.

#### **5 FINANCIAL IMPLICATIONS**

- 5.1 There are no financial implications arising directly from the recommendations contained in this report.

#### **6 HUMAN RIGHTS IMPLICATIONS**

- 6.1 There are no human rights implications arising directly as a consequence of this report.

#### **7 EQUALITIES IMPLICATIONS**

- 7.1 The issues dealt with in this report have been the subject of consideration from an equalities perspective, as required by legislation. An equalities impact assessment is not required.

#### **8 CONSULTATION**

- 8.1 The Chief Executive, Director of Corporate Services, Head of Law and Administration and Head of Finance have been consulted in the preparation of this report.

**9 CONCLUSION**

- 9.1 The views of Angus Council are sought as a Statutory Consultee in relation to a notable proposal for an offshore wind farm in the Firth of Forth. Members are asked to consider the assessment and agree recommendations contained in Appendix 1 to form the basis of Angus Council's response to the Scottish Ministers (Marine Scotland) consultation on the proposed Neart na Gaoithe offshore wind farm.

**ERIC S LOWSON  
DIRECTOR OF INFRASTRUCTURE SERVICES**

**NOTE**

No background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973, (other than any containing confidential or exempt information) were relied on to any material extent in preparing the above Report.

P&T/GWC/JS/IAL  
25 October 2012

ANGUS COUNCIL  
DEVELOPMENT STANDARDS COMMITTEE

6 NOVEMBER 2012

1 INTRODUCTION

- 1.1 Neart na Gaoithe is one of ten sites identified by The Crown Estates (TCE) in Scottish Territorial Waters (STW) (0 to 12 nautical miles) as potential offshore wind farm sites. Cumulatively these sites amount to a total potential source of 6 Gigawatts (GW) of installed capacity. The policy document '*Blue Seas – Green Energy* - the Sectoral Marine Plan for Offshore Wind Energy in Scottish Territorial Waters' is Scottish Government is the relevant Marine Plan for the delivery of offshore wind resources up to 2020. Neart na Gaoithe is identified as a short-term option.
- 1.2 The exclusivity agreement for Neart na Gaoithe was awarded to Mainstream Renewable Power, who wholly own the developing company – Neart na Gaoithe Offshore Wind Limited. At its nearest point to the coast it is approximately 15.5 kilometres (km) due east of Fife Ness, in the outer Firth of Forth. It covers an area of some 105 km<sup>2</sup> and is approximately 30 km southeast of Buddon Ness, Barry Links, Angus.
- 1.3 The application for consent to Marine Scotland is made under Section 36 of the Electricity Act 1989. Simultaneously an application for licensing under Section 20 of the Marine (Scotland) Act 2010 has also been submitted. The following regulations would also apply:
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000;
  - The Electricity (Applications for Consent) Regulations 1990
  - The Electricity (Applications for Consent) Amendment Regulations 2006; and
  - The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).
- 1.4 The maximum installed capacity of the windfarm would be 450MW, as permitted by the exclusivity agreement with TCE. At this stage the design of the wind farm, in terms of turbine height, turbine numbers and layout has not been finalised. The application is therefore being progressed using a 'Rochdale Envelope' approach, which allows flexibility for the project to evolve during the consenting process. This process establishes parameters for assessment for the purposes of Environmental Impact Assessment (EIA). The Environmental Statement (ES) considers a 'maximum effects' or worst case scenario in terms of turbine numbers and heights.
- 1.5 The specifications of the candidate turbines being considered by the developer range in output from 3.6MW to 7MW, with a variance in height between 171.25 metres and 197 metres to tip (above Lowest Astronomical Tide (LAT), set out in Table 1 as follows:

**Table 1: Turbine Specifications**

Candidate turbine output	Number of turbines	Tip height above Lowest Astronomical Tide (LAT)	Hub height above LAT	Rotor diameter
7 MW	64	197 m	115 m	164 m
6 MW	75	175.5 m	115 m	121 m
4.135 MW	109	171.25 m	115 m	112.5 m
3.6 MW	125	175 m	115 m	120 m

- 1.6 Both applications for the offshore elements of the proposal are handled and determined by Marine Scotland, on behalf of the Scottish Ministers.
- 1.7 The onshore works associated with the project (the installation of the onshore cable and substation) are subject to separate regulatory and consenting processes, through the Town and Country Planning (Scotland) Act 1997 and the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. The proposal is to route the cable to landfall at Thorntonloch, near Torness power station. As such, Angus will not be affected by the onshore elements of the proposal and East Lothian Council will, as the Planning Authority, determine the necessary applications for the onshore component of the proposal.

## 2 RELEVANT PLANNING HISTORY

- 2.1 Beyond the exclusivity agreement and the current applications there is no marine or terrestrial planning history specific to the site.
- 2.2 As part of this application process the applicant has also submitted detailed information under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 and the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).
- 2.3 In the wider context other offshore wind farm sites have been identified in the Forth and Tay area. One other site identified is 'Inch Cape'; which is located within STW, approximately 10 km to the north of this proposal, with a proposed installed capacity of up to 1 GW covering an area of 150 km<sup>2</sup>.
- 2.4 A further offshore site has also been identified close by, which lies in Scottish Offshore Waters (12 – 200 nautical miles) and is known as 'Firth of Forth'. These sites were identified as a result of TCE third leasing round (Round 3) for offshore wind development as was considered as part of the UK Government Department for Energy and Climate Change Offshore Wind Strategic Environmental Impact Assessment (SEA). This site has proposed installed capacity of 3.5 GW (to be separated in three phases) covering an area of 2,852 km<sup>2</sup>. The Firth of Forth site lies some 1-2 km from the eastern boundaries of Inch Cape and Neart na Gaoithe.
- 2.5 An application for Phase one of this site, known as Seagreen Alpha and Bravo Offshore Windfarms, was submitted to Marine Scotland on 16 October 2012. Angus Council are a Statutory Consultee on this application and this matter will be reported to Committee at a later date.

### 3 APPLICANT'S CASE

- 3.1 An Environmental Statement (ES) has been submitted in support of the application and contains the written text of the EIA including site selection and project description, the planning context, and various technical studies and environmental assessments. The ES is broken down into the following chapters:

**Table 2: ES Chapters**

1. Introduction	2. Climate Change and the Need for the Project
3. Regulatory and Policy Context	4. Site Selection, Project Alternatives and Design Evolution
5. Project Description	6. The Approach to Environmental Impact Assessment
7. Engagement and Commitments	8. Geology and Water Quality
9. Physical Processes	10. Air Quality
11. Nature Conservation	12. Ornithology
13. Marine Mammals	14. Benthic Ecology
15. Fish and Shellfish Ecology	16. Commercial Fisheries
17. Shipping and Navigation	18. Military and Aviation
19. Maritime Archaeology and Cultural Heritage	20. Ordnance
21. Seascape, Landscape and Visuals	22. Other Users
23. Socioeconomics	24. Summary of Environmental Impact Assessment
25. Summary of Mitigation	

- 3.2 The ES is supported by an extensive set of appendices of figures and technical reports, which includes indicative layouts, Zones of Theoretical Visibility (ZTV) and seascape and landscape assessment (including cumulative assessments).
- 3.3 A Non-Technical Summary (NTS) of the ES is provided which summarises the main issues and findings of the ES.
- 3.4 A copy of the NTS is available to view in the Members' Lounge and on the Council's Public Access portal. The whole ES is also available on the Public Access site.

### 4 CONSULTATIONS

- 4.1 **Historic Scotland** has advised that the comments provided directly to Marine Scotland would equally apply to the considerations of Angus Council. Their response addresses their role as consultees through the Scottish Ministers under the terms of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 and relate to their statutory remit for scheduled monuments and their settings, category A listed buildings and their settings, gardens and designed landscapes appearing in the Inventory, Inventory Battlefields and designated wreck sites (Protection of Wrecks Act 1973). In respect of terrestrial assets, Historic Scotland are content that there will be no direct impact as a result of the offshore works. In terms of indirect impacts consideration has been given to the setting of the following assets in or associated with Angus:

Category A Listed Buildings:

- Bell Rock Lighthouse, and;
- Ladyloan, Bell Rock Lighthouse Signal Tower and Entrance Lodges.



Having reviewed the submitted information, Historic Scotland are content that there shall be no significant adverse indirect or cumulative impact as a result of the proposed development on terrestrial assets within their statutory remit. As such, no objection to the proposal is offered.

- 4.2 The **Scottish Environment Protection Agency (SEPA)** has advised that the comments provided directly to Marine Scotland would also apply to the considerations of Angus Council. This response relates to the marine environment, which is beyond the scope of terrestrial planning, and for intertidal construction and terrestrial infrastructure in East Lothian. As such no comments relate to Angus. SEPA do advise however that they have no objection to the proposal.
- 4.3 **Scottish Natural Heritage (SNH)** have not, as yet, provided a response.
- 4.4 **Hillside Community Council** has no objection to the proposal.
- 4.5 **Carnoustie Community Council, Ferryden Community Council, Monifieth Community Council, Montrose Community Council** and the **Royal Burgh of Arbroath Community Council** have not provided a response.
- 4.6 In addition to the consultations undertaken by Angus Council, it is highlighted that Marine Scotland is engaging in consultation with the following organisations:

**Table 3: Marine Scotland Consultations**

Historic Scotland	Marine Scotland Licensing Operations Team
Scottish Natural Heritage (SNH)	Marine Scotland Compliance – Aberdeen
Scottish Environment Protection Agency (SEPA)	Marine Scotland Compliance – Anstruther
Angus Council	Marine Scotland Compliance – Eyemouth
Dundee City Council	Marine Scotland Science – Pitlochry
East Lothian Council	National Trust for Scotland
Fife Council	NATS
Scottish Borders Council	Northern Lighthouse Board (NLB)
Fisheries Committee	North Sea Regional Advisory Council (NSRAC)
Arbroath Sailing & Boating Club	Planning Aid Scotland
Association of Salmon Fishery Boards	Royal Yachting Association
British Telecom (Radio Network Protection Team)	Royal Society for the Protection of Birds (RSPB)
Dunbar Harbour Trust	Salmon Net Fishing Association of Scotland
Dunbar Fishermans' Association	Scallop Association
Esk District Salmon Fishing Board	Scottish Canoe Association
Eyemouth Harbour Trust	Scottish Enterprise
Tay District Salmon Fishing Board	Scottish Federation of Sea Anglers
Forth District Salmon Fishing Board	Scottish Fishermans' Organisation
Tweed District Salmon Fishing Board	Scottish Government Library
Chamber of Shipping	Scottish Seabird Centre
Crown Estate (Wave and Tidal)	Scottish Surfing Association
Civil Aviation Authority	Scottish Whitefish Producers Association
Defence Infrastructure Organisation	Scottish Wildlife Trust
Fishermans Mutual Association (Pittenweem) Limited	Surfers Against Sewage

Firth of Forth Lobster Hatchery	Transport Scotland
Forth Estuary Forum	Transport Scotland (Ports & Harbours)
Forth Ports	Whale & Dolphin Conservation Society
Health and Safety Executive (HSE)	Scottish Environment LINK
IFG	Bond Offshore Helicopters
Maritime and Coastguard Agency	Bristow Group Inc.
Marine Safety Forum	CHC Helicopter

## 5 LETTERS OF REPRESENTATION

- 5.1 No letters of representation have been received by Angus Council.
- 5.2 Formal letters of representation submitted to Marine Scotland will be considered by them as a material consideration in the determination process.

## 6 PLANNING CONSIDERATIONS

- 6.1 For the purposes of this consultation, the relevant planning considerations are deemed to comprise of:
- 6.2 Section 59 of the Planning (Listed Buildings and Conservation Areas)(Scotland) Act 1997, which requires that in considering whether to grant planning permission for development which affects a listed building or its setting special regard shall be paid to the desirability of preserving the building or its setting.
- 6.3 The Development Plan, which comprises of TAYplan and the Angus Local Plan Review (Adopted 2009), is not a relevant consideration as the proposed development is outwith the area covered by the development plan.
- 6.4 A number of other publications are also particularly relevant to the consideration of the application. These include: -
- National Planning Framework for Scotland 2 (NPF2);
  - Scottish Planning Policy (SPP);
  - The Environmental Statement (ES) and environmental information submitted in respect of this application by the applicant, consultees and third parties;
  - Tayside Landscape Character Assessment (1998);
- 6.5 **NPF2** states that "the Government is committed to establishing Scotland as a leading location for the development of renewable energy technology and an energy exporter over the long term. It is encouraging a mix of renewable energy technologies, with growing contributions from offshore wind, wave, and tidal energy, along with greater use of biomass. The aim of national planning policy is to develop Scotland's renewable energy potential whilst safeguarding the environment and communities".
- 6.6 The **Scottish Planning Policy** (SPP, February 2010) represents a statement of government policy on land use planning. In relation to wind farms, the SPP states 'planning authorities should support the development of wind farms in locations where the technology can operate efficiently and environmental and cumulative impacts can be satisfactorily addressed. Development plans should provide a clear indication of the potential for development of wind farms of all scales, and should set out the criteria that will be considered in deciding applications for all wind farm developments including extensions. The criteria will vary depending on the scale of

development and its relationship to the characteristics of the surrounding area, but are likely to include:

- landscape and visual impact;
- effects on the natural heritage and historic environment;
- contribution of the development to renewable energy generation targets;
- effect on the local and national economy and tourism and recreation interests;
- benefits and disbenefits for communities;
- aviation and telecommunications;
- noise and shadow flicker; and,
- cumulative impact.

The design and location of any wind farm development should reflect the scale and character of the landscape. The location of turbines should be considered carefully to ensure that the landscape and visual impact is minimised.

6.7 Bringing the above together, the key policy and material considerations in relation to Angus Council's consideration of the consultation are: -

1. Seascape & Landscape impact;
2. Visual impact;
3. Cumulative landscape and visual impact;
4. Impact on cultural heritage;
5. Other development plan considerations;
6. Other material considerations;

#### **Seascape & Landscape impacts**

6.8 Chapter 21 of the ES addresses the issue of landscape assessment. The ES assessed all landscape character types (LCTs), including identified 'Regional Seascape Units' (RSU) (which are based on the Coast with sand and Coast with Cliffs LCTs) and landscape designations, including those in Angus. LCTs with no or very limited visibility of the development were excluded from the baseline assessment.

6.9 In terms of the landscape assessment for Angus, Dipslope Farmland LCT and six Seascape Units were identified and remained within the scope of the assessment. The impacts on landscape character determined by the ES can be summarised as follows:

**Table 4: Angus Landscape Assessment**

<b>LCT/RSU</b>	<b>Sensitivity</b>	<b>Magnitude of Effect</b>	<b>Indirect Impact</b>
Dipslope Farmland (LCT)	Medium	Negligible	None
Montrose (RSU)	High	Low to Negligible	Minor to None
Long Craig (RSU)	Medium	Negligible	None
Lunan Bay (RSU)	High	Negligible	None
Long Craig to Deil's Head (RSU)	High	Low to Negligible	Minor to None
Arbroath to Monifieth (RSU)	Medium	Low to Negligible	Minor to None
Dundee (RSU)	Low	Negligible	None

- 6.10 It is acknowledged that development will have a degree of impact on these LCTs and RSUs. However, given the separation distances, of over 30 kilometres from Angus at the closest point, and resultant interrelationship with the proposed development, it is held that the proposed development will not have an adverse or significant impact on Angus in landscape terms – with only a minor indirect impact on the quality and character of these landscape resources.
- 6.11 Members will be aware that the Easthaven to Elliott path was recently completed, providing a continuous coastal path between Monifieth and Arbroath. I therefore consider that the sensitivity attributed to the Arbroath to Monifieth RSU would more appropriately be High rather than the Medium rating presented in the ES. It is noted that the magnitude of landscape/seascape impacts is typically considered to be Low to Negligible. It is stated in the ES that due to atmospheric conditions, the windfarm would be noticeable around 50% days in the year. Furthermore, it is clear the development would introduce a new element into the seascape character. Consequently, I consider that a magnitude rating of Medium is more appropriate (defined as follows in Table 21.4 Of the ES):
- 6.12 *“Perceptible changes in key characteristics, but which result in only relatively subtle changes in character; for example introduction of new large scale features into intermittent views from a character area, or where these are not out of character”.*
- 6.13 On the above basis, I consider that there would be significant impacts upon landscape and seascape character. These are not however considered to be unacceptable.
- 6.14 In terms of local and national landscape designations, no sites were identified in Angus within the 50 km study area. In terms of specific sites with landscape value, two sites in Angus were identified as potentially subject to significant effects arising from the development – Dunninald and The Guynd. These were both excluded from further assessment in the ES however, as the effects were not found to be significant. This assessment and conclusion are accepted.
- 6.15 It is understood that the proposed windfarm would require both lighting for both shipping navigation and aviation around the perimeter of the windfarm. As indicated within the ES, the proposed turbines would appear around twice as tall as the Bell Rock lighthouse. Aviation lighting would be on top of the hub at 115m above chart datum. Whilst the ES does not clarify matters, I reason that these lights would therefore be viewed (from Arbroath) at a similar height to the light on the Bell Rock lighthouse. A fundamental weakness in the ES is that there is very little assessment of these impacts and the night setting of the lighthouse. No comparative information is provided of the relative brightness of the intended light compared to the lighthouse lamp. It is therefore considered that the night seascape impacts could be significant. The use of infra-red aviation lights which are not visible to the naked eye would successfully mitigate this impact but it is unclear whether these would represent appropriate mitigation for shipping.
- 6.16 Notwithstanding the above, and assuming that a technical solution to the night lighting issue is forthcoming, I would not anticipate that these effects are unacceptable.

### Visual impact

- 6.17 Again in relation to visual impact the separation distances from Angus and the proposed development plays a significant role. An assessment of the impacts of visual amenity was undertaken extensively within the ES. As part of this, several viewpoint locations were chosen in Angus to determine the significance of impact that the proposed development would have. The locations chosen are prominent or significant in terms of their use by visitors and residents, within or near to settlements. The visual impacts on amenity can be summarised from information in the ES as follows:

**Table 5: Angus Viewpoint/Visual Assessment**

No.	Viewpoint	Distance (km)	Sensitivity	Magnitude of Effect	Significance of Impact
5	Dodd Hill	43.9	Medium	Negligible	None
6	Braehead of Lunan	39.0	High	Low	Moderate-minor
7	Arbroath	30.8	High	Medium-low	Moderate
8	Carnoustie	31.7	High	Medium-low	Moderate

- 6.18 In locations where the significance of impact is 'Moderate', which is the case for both Arbroath and Carnoustie, it is accepted that turbines will be seen and be visible by residents and visitors, in the middle distance in the open sea. It is noted that under the methodology applied, a significance of Moderate is applied to circumstances where other methodologies may use the term Moderate/Major. Moderate/Major is standard in other environmental statements, therefore I consider that a Moderate assessment to be significant. Notwithstanding this, the findings of the ES are considered to be accurate; the visual impact on Angus is not considered to be unacceptable.

### Cumulative landscape and visual impacts

- 6.19 An assessment of cumulative landscape and cumulative visual effects is also required. The ES undertook an assessment with regard to cumulative impacts in terms of impact on seascape and landscape resources within an established 65 km radius study area. This included operational and consented developments as well as those at application and EIA scoping stage. Of these, those with significant cumulative impacts were selected for detailed assessment.
- 6.20 For the purposes of this assessment, as a consultee, the impacts on Angus in respect of seascape impacts are limited. Nevertheless, the ES has accounted for cumulative/in-combination impact significance for the Arbroath and Carnoustie viewpoint locations – which were identified as being the most sensitive and most significantly impacted upon in visual terms and possessing a medium to high landscape value – as well as for the 6 RSUs. This assessment includes consideration of Neart na Gaoithe alongside the Inch Cape (which is at the scoping stage at the time submission) and Round 3 Firth of Forth (Phase 1) offshore proposals (the Seagreen Phase 1 sites, which are now at the application stage which are both). The applicants suggest that there will not be a significant or adverse cumulative effect on Angus. These findings are contended however, as together the three offshore developments would collectively clearly extend the horizontal extent of the seaward horizon which is windfarm. Importantly, the presence of future development closer to Angus (Inchcape) would inevitably draw increased attention to

the existence of all three windfarms. This will be significant a significant cumulative effect on Angus but are not considered to be unacceptable at this stage.

- 6.21 The ES also undertook an assessment in landward terms. In terms of cumulative impacts on landscape resources it is considered that, due to its offshore and distant location, there is limited potential for the development to give rise to cumulative effects on the landward character of the LCTs identified in Angus. Similarly, it is agreed that there will be no impact on landscape designations or sites.
- 6.22 In terms of visual significance, the ES indicates that there is no theoretical cumulative visibility of Neart na Gaoithe with onshore wind farms within 30 km in Angus, and only very limited areas of Angus up to 50 km. The assessment did account for the Corse Hill (Nether Kelly) proposal, which was an application at the time of this proposal being submitted to Marine Scotland. It was concluded that cumulative visibility is concentrated to within 10 km of this site. It is not considered that this would have a significant or unacceptable cumulative effect. In any case Members will note that this application was refused at the Development Standards Committee on 7 August 2012. An appeal of this refusal was submitted to the Scottish Ministers (Directorate for Planning and Environmental Appeals (DPEA)) on 22 October 2012.
- 6.23 In terms of views of offshore turbines, combined with the additional impact of all other cumulative wind farms identified, the ES states that the cumulative effect from viewpoints in Angus would be moderate-minor at Braehead of Lunan, Arbroath and Carnoustie. These findings are agreed, and it is subsequently considered that the proposed development would not result in an unacceptable adverse cumulative visual impact, from all visual receptor types.
- 6.24 A key cumulative consideration is the relative height and design of the three different off-shore windfarm developments. A level of consistency is important to prevent the collective view becoming visually inconsistent or distorting seascape perspective by for example having turbines of noticeably different sizes within the same view. The proposal for Neart na Gaoithe proposes the use of 197m high turbines (blade tip). As has been detailed above, despite their distance from Angus, their size gives rise to significant visual impacts. Although this proposal is not unacceptable, the replicating of turbines of this size much closer to Angus and the Bell Rock lighthouse as part of future applications may not be considered acceptable and design options available may become limited if this application is approved at 197m.

#### **Impact on cultural heritage**

- 6.25 In relation to Angus, two cultural assets – the Bell Rock Lighthouse and Ladyloan Signal Tower, both Category A listed structures – have been identified for consideration. These are both structures whose purpose, location and setting are significant within the seascape, particularly the Bell Rock Lighthouse; being a solitary object, which at some 35.3 metres in height is visible from land and sea (weather permitting). The lighthouse is located some 12 km from the proposed development. The Tower has a clear, strong historical relationship to the Lighthouse and its functions.
- 6.26 It is noted and welcomed that the ES sets out assessments and definitions of magnitude of effect, vulnerability of receptor and significance of impact and defines the varying degrees to which one may affect another in considering impact on cultural heritage assets.

- 6.27 Historic Scotland have confirmed that they are content that there shall be no significant adverse indirect or cumulative impact on Bell Rock Lighthouse or the Ladyloan Signal Tower as a result of the proposed development. As such, Historic Scotland offers no objection to the proposal.
- 6.28 It is however contended that the ES underplays the significance of the effect the proposed development would have on the Bell Rock Lighthouse. The magnitude of effect is stated in the ES as "none"; however it is highlighted that within the parameters set by the ES, "none" is not an option. Having considered the proposal, it is held that there would be some limited, direct, effect on the setting of the listed building. Similar conflicts exist within the assessment of the 'vulnerability of receptor'. Consequently it is considered that the magnitude of effect would range from negligible to low negative, which would have a greater significance of impact, than the "no impact" stated in the ES. This would result in a "moderate significance" on the listed building, which is not considered to be unacceptable or require mitigation. In reaching this view, the high importance of the lighthouse, the proximity of the structures to each other and their differing physical scales has been taken in to account.
- 6.29 In reference to the Ladyloan Signal Tower similar conflicts in the rated vulnerability and significance of impact are noted from the ES. However, given the significant increase in distance and the judgement that this structure has a smaller setting, it is considered that there will be less of an effect on the significance of impact. This would result in a "moderate significance" on the listed building, which is not considered to be unacceptable.
- 6.30 It is considered that the ES has shortcomings in rationale in the assessment and that there is an absence of assessment in relation to the impact that shipping and aviation lighting may have on the setting of the Bell Rock Lighthouse. It is held that this matter requires further consideration to minimise the impacts on the listed building. On the basis that this occurs, it is considered that the resultant moderate significance on both listed buildings would not be unacceptably adverse to cause concern or for an objection to be raised.

#### **Other material considerations**

- 6.31 Scottish Government policy supports the provision of renewable energy development including offshore wind farms. This matter is not, however, relevant for the purposes of the assessment required of Angus Council.

### **7 HUMAN RIGHTS IMPLICATIONS**

- 7.1 There are no human rights implications arising directly from this report.

### **8 EQUALITIES IMPLICATIONS**

- 8.1 The issues contained in this report fall within an approved category that has been confirmed as exempt from an equalities perspective.

### **9 CONCLUSION**

- 9.1 It is concluded that the impacts of the proposed Neart na Gaoithe offshore wind farm, in terms of material planning considerations relevant to the Angus Council administrative area, are considered to be significant in some respects. Notably, the

presence of lighting for shipping and aviation purposes raises concern. Although not addressed in the ES, these lights would appear to be visible from Angus at a similar height to the light of the Bell Rock. It is considered that, unless these effects are mitigated against, the impacts on the night seascape and the Bell Rock Lighthouse, could be significant and unacceptable. Further, concern is held in respect of potential cumulative effects arising from the relative height and design of Nearth na Gaoithe and other offshore wind farm developments. The approval of the turbine heights proposed here may set precedence and, if replicated closer to Angus and the Bell Rock Lighthouse, may not be acceptable. However, on the basis that the comments herein are taken in to account, these concerns are not considered to be so direct or unacceptably adverse for Angus Council to object to the proposal,

**NOTE**

No background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973, (other than any containing confidential or exempt information) were relied on to any material extent in preparing the above Report.

P&T/GWC/JS/IAL  
25 October 2012

Eric S Lowson  
Director of Infrastructure Services





# Association of Salmon Fishery Boards

## Response to the marine licence application for the Neart na Gaoithe Offshore Wind Farm project September 2012

### Introduction

The Association of Salmon Fishery Boards is the representative body for Scotland's 41 District Salmon Fishery Boards (DSFBs) including the River Tweed Commission (RTC), which have a statutory responsibility to protect and improve salmon and sea trout fisheries. The Association and Boards work to create the environment in which sustainable fisheries for salmon and sea trout can be enjoyed. Conservation of fish stocks, and the habitats on which they depend, is essential and many DSFB's operate riparian habitat enhancement schemes and have voluntarily adopted 'catch and release' practices, which in some cases are made mandatory by the introduction of Salmon Conservation Regulations. ASFB creates policies that seek where possible to protect wider biodiversity and our environment as well as enhancing the economic benefits for our rural economy that result from angling. An analysis completed in 2004 demonstrated that freshwater angling in Scotland results in the Scottish economy producing over £100 million worth of annual output, which supports around 2,800 jobs and generates nearly £50million in wages and self-employment into Scottish households, most of which are in rural areas.

We have significant concerns relating to the proposed development, particularly with regard to the uncertainty surrounding the potential negative effects on Atlantic salmon and sea trout and the integrity of a number of Special Areas of Conservation for Atlantic salmon.

As stated above, DSFBs have a statutory duty to protect and improve salmon and sea trout *fisheries*. All salmon fishing rights in Scotland (freshwater and marine) are private heritable titles. As the environmental effects of offshore technologies are uncertain, we would expect that developers should be required to remedy any negative consequences of such developments on the heritable assets and the value of those assets (including employment within the fishery) of all fishery proprietors. We therefore believe that, as a condition of consent (should such consent be granted), there should be a requirement for a formal mitigation agreement between the developer and relevant DSFBs.

### Overarching Comments

#### 1. Designated Species

As highlighted in the Environmental Statement a number of rivers in the area are designated as Special Areas of Conservation (SAC), part of the Natura 2000 network – a series of internationally important wildlife sites throughout the European Union. The conservation objectives for these sites are set out below<sup>1</sup>.

*To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and*

*To ensure for the qualifying species that the following are maintained in the long term:*

- *Population of the species, including range of genetic types for salmon, as a viable component of the site*
- *Distribution of the species within site*
- *Distribution and extent of habitats supporting the species*
- *Structure, function and supporting processes of habitats supporting the species*
- *No significant disturbance of the species*

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<sup>1</sup> <http://gateway.snh.gov.uk/sitelink/index.jsp>

- *Distribution and viability of freshwater pearl mussel host species*
- *Structure, function and supporting processes of habitats*

The Habitats Directive (article 6) requires that *Member States shall take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this Directive.*

It also states: *In the light of the conclusions of the [appropriate] assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

If this is not the case and there are no alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest.

The conservation status of the Atlantic salmon qualifying interest for the various SACs (First Assessment Cycle) are set out in Table 1 below. In addition, a number of these SACs are also designated for FW pearl mussel.

SAC	Qualifying Interest	Conservation Status
River Dee	Atlantic salmon	favourable maintained
River South Esk	Atlantic salmon	unfavourable recovering
River Tay	Atlantic salmon	favourable maintained
River Teith	Atlantic salmon	unfavourable recovering
River Tweed	Atlantic salmon	unfavourable recovering

**Table 1:** Conservation status of SACs for Atlantic salmon in the area of the development.

In all cases, the Salmon rod catch trends in these SACs as analysed by Marine Scotland Science, show that the spring stock component is in decline. The second assessment cycle is nearing completion, and the results of this assessment must be taken into account in the licensing decision. We believe that the assessment is likely to show that the early running spring component of many of these Atlantic salmon populations continues to deteriorate.

In addition, District Salmon Fishery Boards have a statutory obligation to protect sea trout. The marine phases of both Atlantic salmon and sea trout have also been included on the draft list of Priority Marine Features drawn together by SNH - the habitats and species of *greatest conservation importance* in inshore waters.

## **2. Climate Change Mitigation and Adaptation**

As for many other species, climate change has been identified as a threat to Atlantic salmon. The species' developmental rate is directly related to water temperature, and increasing temperature in freshwater may result in smolts developing more rapidly and entering the ocean at a suboptimal time in relation to their planktonic food sources.

In addition, as air temperatures warm, much of the snow that feeds the river systems is expected to melt earlier. This will lead to a reduction in the flow of many rivers in the spring and summer, which will increase water temperatures further and may reduce the overall optimal habitat available to the Atlantic salmon. It is also clear that survival of salmon and sea trout during their marine migration phase has fallen over the last 40 years. Some of this reduced survival can be explained by changes in sea surface temperature and subsequent contraction of feeding grounds.

The first priority in mitigating these effects is to control atmospheric concentrations of greenhouse gases and we note that the Scottish Government has committed to meeting a stated target of 50% of Scotland's electricity demand from renewable sources by 2020. However, with further climate change inevitable in the short to medium term, attention is now focusing on the development of accommodation and adaptation strategies, through which adverse effects on species or ecosystems can be minimized. Some of the key needs with respect to

developing adaptation strategies for rivers and their biodiversity were summarised by Ormerod (2009 – *Aquatic Conserv: Mar. Freshw. Ecosyst.* 19: 609–613). We would highlight the following key point in particular: *to minimize the adverse effects on river biodiversity of actions taken to mitigate climate change.*

### **3. Potential Negative Effects of Offshore Renewable Devices**

Offshore renewable developments have the potential to directly and indirectly impact anadromous fish such as Atlantic salmon and sea trout. We would therefore expect developers to assess the potential impacts of deployed devices on such fish during the deployment, operation and decommissioning phases. Such potential impacts have been highlighted by Marine Scotland Science and could include:

- Avoidance (including exclusion from particular rivers and subsequent impacts on local populations);
- Disorientation effects that could potentially affect behaviour, susceptibility to predation or by-catch; and
- Impaired ability to locate normal feeding grounds or river of origin; and delayed migration

ASFB therefore recommend to our members that careful consideration should be given to the following activities:

*i. Subsea noise during construction*

A recent review commissioned by SNH<sup>2</sup> states that ‘Marine renewable energy devices that require pile driving during construction appear to be the most relevant to consider, in addition to the time scale over which pile driving is carried out, for the species under investigation’.

*ii. Subsea noise during operation*

*iii. Electromagnetic fields (EMFs) arising from cabling*

The SNH-commissioned review (cited above) has shown that EMFs from subsea cables have the potential to interact with European eels and possibly salmonids if their migration or movement routes take them over the cables, particularly in shallow waters (<20m). Marine Scotland Science are currently undertaking a research programme which aims to investigate electro-magnetic force impacts on salmonids. We would hope to have some results from this work later in 2012. It is vital that all cables are appropriately shielded to ensure that EMF effects are below any threshold of effect for salmonids.

*iv. EMFs arising from operation of devices*

It is important to ensure that such effects are quantified and assessed in the Environmental Statement.

*v. Disturbance or degradation of the benthic environment (including secondary effects on prey species)*

It is important to ensure that such effects are quantified and assessed in the Environmental Statement.

*vi. Aggregation effects*

Whilst the aggregation of prey items around physical structures might be seen as a positive effect, possible negative effects might include the associated aggregation of predators.

### **4. General Comments on the Application**

Guidance issued by Marine Scotland Science relating to information requirements on diadromous fish of freshwater fisheries interest states that an Environmental Statement should provide information on the use of the development area by such fish and that if such information was lacking then a suitable monitoring strategy should be devised. Indeed, Marine Scotland Science regard the monitoring undertaken at existing offshore developments such as Robin Rigg as being inadequate. No monitoring strategy specific to migratory salmonids is set out in the application and we believe that the lack of meaningful monitoring in the present proposal is extremely disappointing and completely inadequate. We would emphasise that any monitoring strategies must

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<sup>2</sup> Literature review on the potential effects of electromagnetic fields and subsea noise from marine renewable energy developments on Atlantic salmon, sea trout and European eel. Available at: <http://www.asfb.org.uk/wp-content/uploads/2011/06/SNH-EMF-Report1.pdf>

include pre-construction monitoring in order that baseline information on salmon and sea trout movement, abundance, swimming depth, feeding behaviour etc. can be collected.

As with other applications for offshore renewable energy, the Rochdale Envelope approach is set out in the application. It must be emphasised that this approach makes it extremely difficult for stakeholders to assess the potential environmental risk as there is little detailed information on: the likely size of the scheme; the type of devices to be deployed; and the degree of confidence attached to the assessment of impacts. Our comments must therefore be viewed on that basis.

### Specific comments

Our specific comments relate to the potential effects highlighted in Section 3 above.

### Habitats Risk Assessment

We note from Box 1.7 and Table 11.3 in Chapter 11 that neither the River Dee nor the River Tweed appear to have been considered as part of the HRA. We do not believe that this is acceptable, nor indeed is it compatible with the information on salmonid migration routes provided by Marine Scotland Science<sup>3</sup>. Representatives from both of these rivers attended pre-application events organised by the developers.

#### 15.6.3.7 Diadromous Fish

Table 15.10 states purports to set out to time of migration **to** and **from** natal rivers. However, only the migration of Atlantic salmon and sea trout smolts **from** natal rivers is actually set out. It is important to note that Atlantic salmon return to Scottish rivers in all 12 months of the year. Equally sea trout would be expected to return to natal rivers during the autumn.

#### 15.7.1 Impact Assessment – Construction Phase

##### Noise

As detailed in the Environmental Statement, the assessment of noise impacts carries high uncertainty. The ES also recognises that the significance of behavioural avoidance is dependent on the behaviour disrupted. For example, avoidance may be significant if it causes a migratory species to be held up or prevented from reaching areas of biological importance, e.g., spawning and feeding areas. The potential zone of effect, at the lower threshold level of 75 dB<sub>ht</sub> (representing significant avoidance) the predicted area which salmon would avoid is significant. The ES states that 85% of fish were found to react to this level of noise, and we believe it is possible that noise at this threshold level has the potential to at least delay smolt migration. As no information is available on smolt migration routes, we must assume that such a delay could, for example, make smolts more susceptible to predation. It must also be noted that salmonid smolts are physiologically stressed in adapting to the environmental challenge of movement between freshwater and seawater. Simultaneous challenge from noise, EMFs etc. during this transition will constitute a significant additional stressor. Stress leads to increased plasma levels of the stress hormone cortisol. Corticosteroids cause a range of secondary effects, including hydromineral imbalance and changes in intermediary metabolism (Wendelaar Bonga, 1997)<sup>4</sup>. In addition, tertiary responses extend to a reduction in the immune response and reduced capacity to tolerate subsequent or additional stressors (Wendelaar Bonga, 1997).

The ES operates under the assumption that Atlantic salmon and sea trout are present in the development area. However, the zones of avoidance set out do not appear to be related to the swimming speeds of fish (at different life stages), in order to assess the possibility of such fish swimming out of the zone of effect. We welcome the fact that piling operations will be intermittent, with each pile driving event predicted to occur for no longer than three hours and 20 minutes with noise breaks for up to 26.5 hours estimated between piling events. We also welcome reference to soft start piling which we believe will be necessary to ensure that Atlantic salmon and sea trout, of all life stages, can safely avoid traumatic hearing damage. However, no detail is given as to the duration of such soft

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<sup>3</sup> Malcolm, I.A., Godfrey, J. & Youngson, A.F. Review of migratory routes and behaviour of Atlantic salmon, sea trout and European eel in Scotland's coastal environment: implications for the development of marine renewables. Scottish Marine and Freshwater Science Volume 1 No 14.

<sup>4</sup> Wendelaar Bonga, S. E. (1997). The stress response in fish. *Physiol. Rev.* 77, 591-625.

start piling, and such duration must be appropriate to the swimming speeds of the species in question, to allow that species time to move out of the zone of effect. Should the development be granted consent, we believe that an appropriate duration of soft start piling, related to the swimming speed of juvenile salmon and sea trout, should be a condition of consent.

However, given the paucity of information on noise effects, we do not believe that soft piling alone is an appropriate mitigation. The ES sets out a number of options for turbine design (including gravity bases) of which the worst case scenario for noise is impact piling of pin piles. We believe that, given the sensitivity of early running returning spring salmon, and the uncertainty of effects on juvenile fish, that it is appropriate, should consent be granted for the development, that a condition of consent is that no impact piling occurs during the period from March to June (inclusive). Such a condition is consistent with the precautionary principle and would still allow other forms of construction to continue during this period.

During pre-application discussions with the developers we have continually stressed the need for information on migratory routes and habitat usage for migratory salmonids. In the absence of such data (and the ES simply assumes that they are present), ASFB and DSFBs, in assessing the risks of the development to migratory fish, have no alternative but to assume that the entire run of each river will use the area under development. We note that Marine Scotland Science have previously commented that *'it needs to be categorically established which species are present on the site, and where, before the application is considered for consent'*.

Given the above concerns and the high uncertainty surrounding the assessment of noise impacts we do not agree with the assessment in paragraph 174, 175 and Table 15.15 that 'the magnitude of the effect on salmon and trout is considered to be negligible' and 'the vulnerability of salmon and trout is considered to be low and the overall impact on salmon and trout populations predicted to be of *minor significance*'.

#### **15.7.2 Impact Assessment – Operation and Maintenance**

##### *Electromagnetic Fields (EMF) generated by subsea cables*

We are aware that Marine Scotland Science are currently undertaking a research programme which aims to investigate electro-magnetic force impacts on salmonids. Until this work is completed, we are unable to assess the relative magnitude of this impact or the likely behavioural response in salmonids. We therefore do not agree with the assessment that the overall effect of EMF is assessed to be of minor significance based on the relatively small footprint of the cables within the Neart na Gaoithe offshore works area.

We are particularly concerned about the possible effects of EMFs arising from the export cable to shore, given that it crosses a known salmonid migration route, which is likely to be of major significance to all East Coast rivers. Paragraph 235 states that DECC recommends cables to be buried to a depth of at least 1.5 m so as to keep cable below the most active biological layer. However, Chapter 5 (Table 5.16) states that the burial depth is likely to vary across site **up to** 1.5 m. We believe that all cables should be buried to a minimum depth of 1.5m and where this is not possible, all cables should be covered by placing a suitable shielding material above the cable to an equivalent depth.

##### *Introduction of New Substrates*

We are concerned that the potential for the structures to act as fish aggregation devices (FADs) could potentially be negative in the case of wild salmonids. However, if the structures do act as FADs we would be concerned that such areas may in fact represent new 'pinch points' for predation of migrating smolts and returning adults. This possibility does not appear to be considered in the application.

#### **Monitoring and mitigation measures**

As stated above, we are disappointed at the lack of salmonid-specific monitoring. We are keen to work with the developers and Marine Scotland to identify appropriate monitoring programmes. We would emphasise that any monitoring strategies must include pre-construction monitoring in order that baseline information on salmon and sea trout movement, abundance, swimming depth, feeding behaviour etc. can be collected.

We are very disappointed to see that no mitigation measures are proposed other than inter-array cable burial/protection, to reduce the effects associated with the construction/decommissioning and operation phase of the development. We believe that **all** inter-array cabling should be buried to a minimum depth of 1.5m or have

a suitable shielding material placed over them. We do not believe that there should be any exceptions to this, irrespective of the technical difficulties involved. In addition, we would highlight our comments regarding mitigation with regard to impact driving during the spring. We note that reference is made to mitigation measures to minimise and mitigate noise produced during potential piling operations (such as large or small bubble curtains or sound-absorbing sleeves) in Chapter 25, but no attempt is made to quantify the effect of such mitigation measures.

### **Conclusion**

As stated above, ASFB recognises the importance of offshore renewable energy. However, the environmental statement has failed to demonstrate that the development will not adversely affect the integrity of the SAC rivers on the East coast of Scotland. Where a Natura site is involved, the onus is on the developer to demonstrate no impact and in the absence of that the precautionary principle will apply. Under these circumstances, we do not consider that the proposed development is compatible with the requirements of the Habitats Directive or Scotland's Marine Nature Conservation Strategy. On that basis, we have no alternative but to formally object to the proposed development, until adequate monitoring and mitigation strategies have been put in place.

It should be emphasised that we have no wish to prevent or delay the proposed development unnecessarily and we remain keen to work constructively with the developers and Marine Scotland to identify appropriate monitoring programmes which will allow us to be able to assess the acknowledged risks of this development, and other proposed developments more appropriately. We stated in our introduction that we believe that a formal mitigation agreement should be a condition of consent. In addition, there is a clear and urgent need to fund, plan and start strategic research on the movement, abundance, swimming depth, feeding behaviour etc. of salmon and sea trout. Such research would clearly feed into the potential mitigation measures that might be deemed appropriate, and the conditions under which such mitigation should be enacted. One aspect that should be considered immediately is the installation of fish counters, particularly in SAC rivers, to allow the real time understanding of adult salmon abundance (and depending on local conditions, new technology might even allow information on smolt escapement to be collected). We believe that the installation of such counters, in close liaison with the DSFBs in question and MSS, could potentially be considered as a condition of consent, where appropriate to local conditions, should such consent ultimately be granted. Developers should be encouraged to work together to fund such strategic monitoring, including the on-going costs of operating such counters, in order to allow more certainty for all involved.

The scale of proposed offshore wind developments and other technical approaches to marine renewables development represents a step-change in the exposure of marine animals of high cultural and economic significance to attendant risks. In many cases, understanding of the risks is insufficient to support proposals for mitigation even at this late stage when substantial developments are being submitted for licensing. The cumulative impact of the Neart na Gaoithe proposal alongside those developments that are likely to follow in the near future is potentially even greater. We would therefore recommend that an expert group is set up to rapidly consider the best way forward to plug the considerable knowledge gaps that remain. It is important that the best scientific and biological talent is made available to find practicable ways to address the unresolved issues. ASFB would be very keen to constructively engage with such a group.

### **For further information please contact:**

██  
Tel: ██████████ | Email: ██████████

**From:** [REDACTED]  
**To:** [Tait A \(Adrian\) \(MARLAB\)](#)  
**Cc:** [REDACTED]  
**Subject:** RE: 008/OW/MainS - 10: MS-LOT to Consultees: One Week Reminder: 03 September 2012  
**Date:** 10 September 2012 10:16:48

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Good morning Adrian,

Sorry for the last minute reply.

I have had a brief look at the application that has been submitted and see no areas of concern regarding our helicopter operations.

Kind Regards

[REDACTED]

[REDACTED]  
Chief Pilot Aberdeen

**Bristow Group Inc.**

Forties Road, Aberdeen Airport, Dyce  
Aberdeen, AB21 0NT, UK

[REDACTED]

[@bristowgroup.com](#)  
[chiefpilots.abz@bristowgroup.com](mailto:chiefpilots.abz@bristowgroup.com)

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**From:** Adrian.Tait@scotland.gsi.gov.uk [mailto:Adrian.Tait@scotland.gsi.gov.uk]  
**Sent:** 04 September 2012 17:29  
**To:** Adrian.Tait@scotland.gsi.gov.uk  
**Subject:** 008/OW/MainS - 10: MS-LOT to Consultees: One Week Reminder: 03 September 2012

Dear Sirs / Madam

**ELECTRICITY ACT 1989**

*The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000*  
*The Electricity (Applications for Consent) Regulations 1990*

**MARINE (SCOTLAND) ACT 2010**

*The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)*

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 AND MARINE LICENCES UNDER PART 4, SECTION 20 OF THE MARINE (SCOTLAND) ACT 2010, TO CONSTRUCT AND OPERATE AN OFFSHORE WINDFARM, FIRTH OF FORTH.**

With regards to the request for comment on the Neart na Gaoithe proposal, I would be grateful for any comments you have by **10<sup>th</sup> September 2012**. If you are unable to meet this deadline, please contact us to arrange an extension to the consultation period. If you have no comments to make please submit a "nil return" response.

Apologies if you have received this in error.

Best regards,  
Adrian

-----  
Adrian Tait

Marine Renewables Licensing Casework Manager  
Marine Scotland – Marine Planning & Policy Division

Scottish Government | Marine Laboratory, PO Box 101 | 375 Victoria Road | Aberdeen AB11 9DB

T: + 44 (0) 1224 295668  
S: + 44 (0) 1224 876544  
M: + 44 (0) 7557 848720  
F: + 44 (0) 1224 295524

Email: [adrian.tait@scotland.gsi.gov.uk](mailto:adrian.tait@scotland.gsi.gov.uk)  
[ms.marinelicensing@scotland.gsi.gov.uk](mailto:ms.marinelicensing@scotland.gsi.gov.uk)

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Dh'fhaodadh gum bi teachdaireachd sam bith bho Riaghaltas na h-Alba air a chlàradh neo air a sgrùdadh airson dearbhadh gu bheil an siostam ag obair gu h-èifeachdach neo airson adhbhar laghail eile. Dh'fhaodadh nach eil beachdan anns a' phost-d seo co-ionann ri beachdan Riaghaltas na h-Alba.

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**From:** [REDACTED]@bt.com on behalf of radionetworkprotection@bt.com  
**To:** Tait A (Adrian) (MARLAB)  
**Subject:** RE: 008/OW/MainS - 10: MS-LOT to Consultees: One Week Reminder: 03 September 2012  
**Date:** 04 September 2012 09:20:04

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Dear Sir/Madam

Thank you for your letter dated 03/09/2012.

We have studied this wind farm proposal with respect to EMC and related problems to BT point-to-point microwave radio links.

The conclusion is that, the Wind turbine Project indicated should not cause interference to BT's current and presently planned radio networks.

Regards

[REDACTED]  
**BTO Service Delivery -Operations Control TM, Radio Frequency Allocation & Network Protection**

[REDACTED]  
Web: <http://operate.intra.bt.com/operate>

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**External Customers.....** <http://formwize.intra.bt.com/run/survey3.cfm?ID=80046>

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**From:** Adrian.Tait@scotland.gsi.gov.uk [mailto:Adrian.Tait@scotland.gsi.gov.uk]  
**Sent:** 03 September 2012 17:42  
**To:** Adrian.Tait@scotland.gsi.gov.uk  
**Subject:** 008/OW/MainS - 10: MS-LOT to Consultees: One Week Reminder: 03 September 2012

Dear Sirs / Madam

**ELECTRICITY ACT 1989**

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Apologies if you have received this in error.

Best regards,  
Adrian

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Adrian Tait

Marine Renewables Licensing Casework Manager  
Marine Scotland – Marine Planning & Policy Division

Scottish Government | Marine Laboratory, PO Box 101 | 375 Victoria Road | Aberdeen AB11 9DB

T: + 44 (0) 1224 295668  
S: + 44 (0) 1224 876544  
M: + 44 (0) 7557 848720  
F: + 44 (0) 1224 295524

Email: [adrian.tait@scotland.gsi.gov.uk](mailto:adrian.tait@scotland.gsi.gov.uk)  
[ms.marinelicensing@scotland.gsi.gov.uk](mailto:ms.marinelicensing@scotland.gsi.gov.uk)

Web: <http://www.scotland.gov.uk/marinescotland>  
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Dh'fhaodadh gum bi teachdaireachd sam bith bho Riaghaltas na h-Alba air a chlàradh neo air a sgrùdadh airson dearbhadh gu bheil an siostam ag obair gu h-èifeachdach neo airson adhbhar laghail eile. Dh'fhaodadh nach eil beachdan anns a' phost-d seo co-ionann ri beachdan Riaghaltas na h-Alba.

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**From:** [Windfarms](#)  
**To:** [MS Marine Licensing](#)  
**Subject:** RE: Neart na Gaoithe Offshore Wind Farm Environmental Statement  
**Date:** 31 July 2012 11:48:15

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Having reviewed the Environmental Statement provided, the appropriate aviation consultees (NATS/NERL, MOD and Edinburgh Airport) have been identified. More specifically for this project the following points should be taken into account:

There is a requirement to mark tall objects on aeronautical charts and this will be achieved by notifying the UK Hydrographic Office of the latitude, longitude, height and lighting status of the turbine or mast. This should be done in advance of construction to enable the charts and databases to be updated in sufficient time to make aviators aware of the presence of a new obstacle.

The mandated obstruction lighting requirement is set out at Article 220 of the UK Air Navigation Order (ANO) 2009<sup>[1]</sup> and reflected in a related CAA Policy Statement<sup>[2]</sup>. This requirement applies to any wind turbine generator that is situated in waters within or adjacent to the United Kingdom up to the seaward limits of the territorial sea and the height of which is 60 metres or more above the level of the sea at the highest astronomical tide. The Article requires medium intensity (2000 candela) steady red lighting mounted on the top of each nacelle and requires for some downward spillage of light. The Article allows for the CAA to permit that not all turbines are so lit, routinely, for the purposes of Article 220, the CAA will require that all of those turbines on the periphery of any windfarm need to be equipped with aviation warning lighting. The CAA will additionally provide planning advice related to the lighting of wind turbines beyond the limits of UK Territorial Waters along exactly the same lines as that for inshore turbines.

Meteorological masts are extremely slender rendering them potentially inconspicuous to aviators flying over the sea, particularly when there are no other structures nearby. This is potentially hazardous, particularly during helicopter operations when it may be necessary to descend in order to avoid icing conditions. Consequently the CAA recommends that all offshore obstacles (regardless of their location within or outside of territorial waters) that are over 60 m above sea level should be fitted with one medium intensity steady red light positioned as close as possible to the top of the obstacle<sup>[3]</sup>.

Notwithstanding the specification defined at Article 220, the lighting that is displayed below the horizontal plane of the light fitment itself is proving to cause difficulties to the maritime community. Work has been undertaken to develop an aviation warning lighting standard where, from the nature of the lighting, it will be apparent to mariners that the aviation lighting is clearly distinguishable from maritime lighting. Where it is evident that the default aviation warning lighting standard (Article 220) may generate issues for the maritime community a developer can make a case, that is likely to receive CAA approval, for the use of a flashing red Morse Code Letter 'W' to resolve potential issues for the maritime community.

Please be aware that the CAA prefers to receive consultations such as this electronically, using the [windfarms@caa.co.uk](mailto:windfarms@caa.co.uk) address.

Should you have any further questions please feel free to contact me, details below.

  
Squadron Leader (RAF)  
Surveillance and Spectrum Management  
Directorate of Airspace Policy  
Civil Aviation Authority  
45-59 Kingsway London WC2B 6TE  
Tel: 020 7453 6534 Fax: 020 7453 6565  
[windfarms@caa.co.uk](mailto:windfarms@caa.co.uk)

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[1] <http://www.caa.co.uk/docs/33/CAP393.pdf>

[2] <http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=4495>

[3] CAP 764 CAA Policy and Guidelines on Wind Turbines - Chapter 3 paragraph 5.10  
(<http://www.caa.co.uk/docs/33/CAP764.pdf>)

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## Delivering for Britain

### The Chamber of Shipping

Carthusian Court  
12 Carthusian Street  
London EC1M 6EZ  
Direct dial: +44 (0)20 [REDACTED]  
Fax: +44 (0)20 7600 1534  
Email: [REDACTED]@british-  
shipping.org  
Internet: [www.british-shipping.org](http://www.british-shipping.org)

Licensing Operations Team  
Marine Scotland  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB

By email: [ms.marinelicensing@scotland.gsi.gov.uk](mailto:ms.marinelicensing@scotland.gsi.gov.uk)

17 September 2012

Dear Sir/Madam,

### **RE: APPLICATION TO CONSTRUCT AND OPERATE AN OFFSHORE WIND FARM, FIRTH OF FORTH (NEART NA GAOITHE)**

The Chamber of Shipping welcomes the opportunity to comment on the application to construct and operate the Neart na Gaoithe (NnG) Offshore Wind Farm in the Firth of Forth. In our assessment of the application, we have paid particular attention to Environmental Statement Chapter 17 "Shipping and navigation", Appendix 17.1 "NRA report", and Appendix 17.6 "FTOWDG regional shipping review".

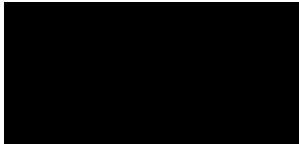
We welcome the detailed analysis of impacted commercial shipping routes in the Navigational Risk Assessment (NRA). In isolation, based on this analysis, the formal safety assessment and proposed mitigation, we have no objections to the proposals for NnG, which appear to have taken every effort to accommodate existing shipping patterns and minimise diversions. However, there are clear issues with the cumulative impacts of the proposed Inch Cape wind farm and the Firth of Fourth Round 3 Zone. While these cumulative impacts are assessed in Appendix 17.6, we remain unconvinced that that the current project boundaries, in combination, present a tolerable level of navigational safety risk, particularly as a formal safety assessment of cumulative impacts is absent.

Approval for NnG is likely to significantly reduce the likelihood of Chamber approval for the current Inch Cape site layout and any proposed projects in the west of the Firth of Forth zone. Our concerns have been increased by the possibility of the entire Firth of Forth zone

being developed<sup>1</sup>. In particular we have serious concerns regarding the proposed length of diversions owing to the Inch Cape and Firth of Forth sites (particularly as no areas of the Firth of Forth site appear to have been ruled out for development at this stage) and the safety implications of the reduced sea room east of Bell Rock as a result of the Inch Cape site. However, we will reserve detailed comments on these issues for our responses to the applications for these projects, which should include formal safety assessments as part of their respective NRAs. Presuming that the current site boundary proposals for NnG gain approval, we would also expect the NRAs for these projects to consider NnG in any assessment of potential route impacts.

The Chamber is willing to provide additional input if required. If you have any questions regarding our comments, please do not hesitate to contact me.

Yours faithfully,

A large black rectangular redaction box covering the signature of the sender.A black rectangular redaction box covering the name of the sender.

Policy Advisor, Safety & Environment  
The Chamber of Shipping

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<sup>1</sup> It will be in the Firth of Forth zone developers' best interests to provide increased certainty on the level of development proposed to take place in the zone. This will allow navigational stakeholders to provide a more confident assessment of navigational impacts and will increase the probability of approval being granted for projects.



**REPORT TO:** Cabinet

**MEETING DATE:** 15 January 2013

**BY:** Executive Director (Services for Communities)

**SUBJECT:** Consultation by Marine Scotland on a Section 36 application for Neart na Gaoithe offshore windfarm and a Marine Licence application for the windfarm and transmission assets

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## **1 PURPOSE**

- 1.1 To inform Members of a Section 36 Electricity Act application for an offshore windfarm and associated works off Fife Ness and to agree the Council's consultation response to Marine Scotland.

## **2 RECOMMENDATIONS**

- 2.1 It is recommended that the Council:
- 2.1.1 Approves this report as its response to the consultation on the Neart na Gaoithe offshore windfarm proposal;
- 2.1.2 Advises Marine Scotland that it has some concerns over the visual impact of the proposed Neart na Gaoithe offshore windfarm on the seascape of the Firth of Forth and its offshore islands, and its impact on the landscape setting of significant built environment features in East Lothian;
- 2.1.3 Requests that Marine Scotland review the accompanying Environmental Report's assessment of the magnitude of the impacts of the proposed development on landscape and seascape, particularly within East Lothian;
- 2.1.4 Requests that Marine Scotland consider the implications of any change to these impacts, and to the other matters raised in this submission, prior to taking any decision on this section 36 application.

### 3 BACKGROUND

- 3.1 An application with an accompanying Environment Statement (ES) has been made by Mainstream Renewable Power under Section 36 of the Electricity Acts for an offshore windfarm, as well as for a Marine Licence for the windfarm and transmission assets. Marine Scotland is seeking the views of East Lothian Council on this application, along with statutory and other consultees. As the Section 36 application covers the windfarm itself and not the transmission assets, and no part of that application is within East Lothian, an objection by this Council would not automatically require Scottish Ministers to hold a public inquiry. The Environment Statement is available online at <http://www.neartnagaoithe.com/environmental-statement.asp>. Visualisations and visibility mapping are in *Appendix 21.2 – Extended* of this document, at the foot of that page. Alternatively, the ES can be seen at Planning Reception in John Muir House.
- 3.2 The Neart na Gaoithe (NnG) windfarm site covers an area of 105km<sup>2</sup>. It is some 15km (9 miles) from Fife Ness, the closest point to the coast, and some 28km (17 miles) northeast of Dunbar and 32 km (19 miles) northeast of North Berwick. The exact design details of the windfarm have not been determined due to the need to allow for technological progress and detailed technical work between consenting and construction of the windfarm which may lead to alterations in the details of the design. Design parameters are set to allow for assessment and consent, and are based on ‘worst case’ for each potential impact, but one that nonetheless gives a realistic project. There will be between 64 and 125 turbines, of 3.6MW – 7MW capacity. The maximum height will be between 171m and 197m above lowest astronomical tide. For reference, the turbines at Aikengall are 125m to blade tip, the Forth Road Bridge towers are 156m above mean river level, and North Berwick Law is 187m. The windfarm will have a maximum capacity of 450MW. For comparison, Aikengall has a maximum capacity of 48MW, Crystal Rig (all phases) 253.5MW, and Pogie 5.1MW. There will be either more, smaller, or fewer, taller turbines. The colour of the turbines will be decided in discussion with the Northern Lighthouse Board and Civil Aviation Authority but are likely to be light grey.
- 3.3 Consent is also sought for turbine foundations, a meteorological mast, one or two offshore collector stations, an inter-array of subsea cables connecting the turbines to the offshore substation, and 2x 33km export cables to landfall, which is at Thorntonloch, near Torness, in East Lothian. There will also be further onshore works associated with the grid connection within East Lothian, which will be the subject of a separate planning application and Environmental Impact Assessment submitted to this Council. These works will include a transition pit at Thorntonloch, as well as cabling and a substation at Crystal Rig, which are considered an integral part of this project. As Marine Scotland is responsible for consenting works up to the High Water Mark and East Lothian Council is responsible for consenting works above the Low Water Mark, there is an overlap in the intertidal zone.

- 3.4 In considering an application for a Marine Licence, Scottish Ministers must take into account the need to protect the environment and human health, prevent interference with legitimate uses of the sea and such other matters as they consider relevant. In considering an application under the Electricity Act 1989, Scottish Ministers must have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest, and the extent to which the developer has done what they can to mitigate any adverse effect on these.

*History and context*

- 3.5 In 2008, the Crown Estate sought bids for offshore windfarm sites within Scottish Territorial Waters (STW) (which extend to 12 nautical miles offshore). Exclusivity agreements were reached with 10 developers, 4 in the Firth/Tay area. Of these four, this application and a further project at Inch Cape off the Angus Coast are still being taken forward. The Scottish Government identifies NnG as a short term option in *'Blue Seas – Green Energy – the Sectoral Marine Plan for Offshore Wind Energy in STW'*. This plan recommends: that evidence available at the stage of publication suggests that the East region [in which NNG is located] is a suitable region to progress the development of offshore wind in the short and medium term; that the short term options in the East Region [including NNG] should be taken forward to the licensing stage; that there is potential for effects including cumulative effects which will require careful consideration. The key findings of the plan include that *"the development of the short term options appear at this stage to be publicly and environmentally acceptable"*.
- 3.6 A further offshore site close by, known as 'Firth of Forth' has been identified in Scottish Offshore Waters through 'Round 3'. The Crown Estate has awarded an exclusivity agreement to Seagreen Wind Energy Limited to bring forward development here. Both Inchcape windfarm and parts of the Firth of Forth site are expected to be visible from East Lothian, though at a greater distance than NnG. An application for Phase 1 of the Firth of Forth site, off the Angus coast, has been submitted to Marine Scotland.
- 3.7 The Scottish Government has strong support for renewable energy which is seen as key in meeting climate change targets. Their Climate Change Delivery Plan has, as a transformational outcome, *"a largely de-carbonised electricity generation sector by 2030, primarily using renewable sources for electricity generation"*.
- 3.8 The policies of the East Lothian Local Plan do not apply to the offshore works as the plan only covers land to the Low Water Mark; however, they will apply to the inter-tidal works.

## Potential Impacts on East Lothian

### *Landscape and Seascape*

- 3.9 There are likely to be significant adverse seascape and visual impacts from the development. The main impact will be from the introduction of turbines, associated lighting, and associated structures into an area of formerly open sea. The turbines and associated infrastructure will require to be lit for aviation and navigation purposes. It is not certain how visible the lighting will be but the assumption is that it will be visible in the dark in suitable weather conditions from wherever the turbines are visible in the day. This will lead to changes in the perception of the seascape and landscape character, and impacts on visual amenity. There will also be impacts from construction and maintenance in the movement of boats, cranes and other equipment. In the case of cranes, these impacts are likely to be temporary and, in the case of construction traffic, an intensification of the shipping already in the Forth. There will also be temporary impacts on the beach at Thorntonloch during construction.
- 3.10 There are also likely to be consequent impacts from the grid connection onshore works which are not part of this application but are integral to this project.
- 3.11 The proposal will be visible from the coast and coastal areas from Yellowcraig to the boundary with the Scottish Borders Council area. The proposal will also be visible from the parts of the A1 and East Coast Mainline and from the A199 from Pencraig Hill to Dunbar. It will be visible from higher ground such as Traprain Law, the Garleton Hills, and parts of the Lammermuir edge. Where there are no intervening buildings or trees, there will be views from North Berwick, Dunbar, parts of Gullane and, further afield, Tranent. According to the ES, due to weather conditions there will be visibility at 30km (18 miles) (the rough distance to Dunbar or North Berwick) for around half of the time, while beyond 50km (30 miles) (Tranent, roughly), there will be visibility less than 20% of the time.
- 3.12 The coastal landscape where there is predicted visibility is varied with extensive beaches at North Berwick, Ravensheugh and John Muir Country Park. The seascape is wide and open generally but has more intricate coves and rocky promontories closer to the shore with views across the offshore islands. The seascape of the outer Firth of Forth and Islands is almost completely untouched by built development. Most of the coast is designated as an Area of Great Landscape Value.
- 3.13 There are three areas of seascape assessed in the Environmental Statement (ES): SA16 (Edinburgh to Gullane), SA17 (Eyebroughy - by Gullane – to Torness Point) and SA18 (Torness Point to St Abbs Head). The ES states the sensitivity of these areas is **Medium**. It is agreed that the sensitivity is medium on SA16 Edinburgh to Gullane and SA18 Torness Point to St Abbs (commenting on the East Lothian section only). However, the sensitivity of SA17, Eyebroughy to Torness Point, is considered by the Council's Principal Landscape and Projects Officer to

be **High** as, using the classification system in the ES, *“it’s a seascape of landscape of particularly distinctive character which may be nationally designated for its scenic quality or where its key characteristics have limited resilience to change of the type proposed.”* This section of seascape contains iconic views from North Berwick (and Ravensheugh beach) to the Bass Rock and Isle of May and similarly from Dunbar to Fife Ness.

- 3.14 North Berwick in particular is a popular holiday and recreational resort and home to the Scottish Seabird Centre, which is a centre for bird and wildlife watching, part of whose attraction is the spectacle of the gannets on the Bass Rock and the puffins on the Isle of May. The ES assesses magnitude of effect as **‘Low to Negligible’** in all East Lothian seascape units. The Council’s Principal Landscape and Projects Officer does not agree with this and considers the effect to be at least **Medium** and **possibly High**. For much of this coastline there will be a clearly visible additional change in the view, visible for a long time, and affecting key views e.g. from North Berwick Harbour to the Bass Rock and Isle of May where the turbines would appear on most of the horizon between the Isle of May and the Bass Rock. The development will be seen in context with these islands for much of this unit and will clearly affect the seascape setting.
- 3.15 From SA18 (East Lothian section), the impact is also likely to be at least **Medium** as there will again be a clearly perceptible change to the key characteristic of wildness and openness of the sea view.
- 3.16 The ES gives visualisations from viewpoints at North Berwick Law, Dunbar Harbour and coastal walkway, and West Steel (on the Lammmermuir Edge). The ES includes a viewpoint at the Law (Viewpoint 17B Fig 21.23.2c of the ES) and additional wireframes are supplied of views at the Scottish Seabird Centre. From these viewpoints, the Bass Rock and Isle of May currently appear in an open, wild and uncluttered seascape setting. The proposed development will create a dense line of wind turbines along the horizon broadly from the Isle of May to the Bass Rock. In the viewpoint from North Berwick Law, the turbines will appear on the horizon behind the Bass Rock. From the Seabird Centre, the turbines could appear as higher than the Isle of May, depending on the eventual height chosen. The turbines will form the horizon and backdrop to these islands and will result in a significant change to the seascape setting of these islands from the North Berwick area. The ES (Table 21.17: Viewpoint Assessment Summary) assesses this impact as **Moderate**. This is not accepted; the impact is considered to be **Major** as the sensitivity is agreed to be High, but the magnitude of the effect is also considered High (a clearly perceptible change in key characteristics and character e.g. introduction of a new large scale feature into views from a character area where they are not typical).
- 3.17 From Dunbar, Viewpoint 18A and B (from the Harbour and the walkway to the north of the town), the proposed turbines will be clearly visible on the horizon and will potentially have all turbines visible. ES Fig 21.24.2c

(Viewpoint 18B from the Dunbar Coast) shows that the proposal will be a major feature of the seascape. Again this will be a change to the key characteristic of wildness and openness of the sea view. The ES assess the significance of the impact on this viewpoint as **Major-Moderate**, and this is accepted.

- 3.18 From West Steel, Viewpoint 19, the sensitivity is assessed as **Medium**. This viewpoint was suggested to represent views obtained by walkers in the uplands, and these are usually considered to be highly sensitive receptors. The magnitude of effect is said to be **Low**: this is not accepted as it is thought to be higher.
- 3.19 There will be cumulative impact with other proposed offshore wind development including Inchcape and Round 3, as well as potentially with onshore windfarms. The effect of NnG, in addition to the offshore turbines, is that it will in places extend the length of horizon containing turbines and intensify the concentration of turbines, as well as bringing turbine development closer to the coast and increase the number of days offshore windfarm development is visible. It may also result in effects from a difference of design e.g. turbines of different heights, blade size and speed which will be seen from some locations as superimposed on each other.
- 3.20 From higher ground the additional impact for cumulative effect could be significant – there is considerable extra effect shown at the West Steel viewpoint, though this is not an especially sensitive receptor in itself: it was chosen as representative of views from the Lammermuirs and foothills that would be experienced by walkers. There are parts of East Lothian which are shown as only having visibility of NnG and not other existing windfarm development: consequently, this means that there would be fewer remaining areas which have no visibility of a windfarm. (This is difficult to assess as Fallago Rig and developments at Soutra have not been included in the cumulative analysis).
- 3.21 The cumulative information at the North Berwick viewpoint is poorly done (Fig.21.56) as part of the North Berwick Law obscures the Isle of May and what would presumably be the Inchcape proposal: this makes the cumulative effect from this point unclear. The cumulative effect is described as **Moderate-Minor**. This is not accepted as visitors climbing to appreciate the natural beauty of the area from a high point will see wind development in a direction where there was none previously, in addition to the already extensive wind development to the south and south east.
- 3.22 From lower ground, the cumulative impact is likely to be less. Existing onshore windfarms are generally less visible from lower ground, including from north and east facing beaches (though onshore wind development is clearly visible from John Muir Country Park and Barns Ness). Other offshore windfarms will generally be viewed behind NnG, or as a small extension to it, and are in addition at a greater distance which will reduce both the number of days they are visible, their apparent

size and visibility over the horizon. The main impact is of NnG itself, rather than the cumulative effect with other windfarm development.

- 3.23 It is for Marine Scotland to determine the adequacy of the ES. However it is considered that viewpoints from North Berwick Seabird Centre/East Beach promenade, Broad Sands (which have been supplied separately by the applicant), from Pencraig Hill (A199) showing the setting of Dunbar/East Linton in context with the development, and the setting of Tantallon Castle would be useful for public consultation.
- 3.24 The ES describes the impact on the Longniddry to North Berwick and North Berwick to Dunbar and Dunbar – Barns Ness AGLV's as '**Minor to None**': this is not accepted. Their sensitivity is described as **Medium**, which is accepted. However, the magnitude of effect is either **High** (clearly perceptible changes in key characteristics and character, for example introduction of new large scale features into view from a character area where these are not typical) or **Medium** (Perceptible changes in key characteristics but which result in only relatively subtle changes in character; for example introduction of new large scale features into intermittent views from a character area, or where these are not out of character). This would give a more significant impact.
- 3.25 There is no explanation of the design concept for the windfarm. Given the potential impact on seascape it is not clear that a rigorous design process has been followed to attempt to mitigate these impacts. Consideration should be given to possible design options within the Rochdale envelope to ascertain if any mitigation on the visual/seascape impact (especially the Bass Rock and Isle of May) would be possible.
- 3.26 The impacts will be mainly in the north east, including the resort towns of North Berwick and Dunbar, and along the John Muir Way coastal footpath. It is considered that the ES has underestimated the significance of the impacts on landscape and visual receptors in East Lothian. The seascape and key views will change in character, including the skyline, approaches to coastal towns, and seascape features. This will affect the appreciation of the landscape by people including residents, tourists and visitors, and will affect the natural beauty of the area.

#### *Heritage*

- 3.27 It is for Historic Scotland to comment on heritage in the marine environment, such as wrecks. They also comment on national scale impacts on A Listed Buildings, Scheduled Monuments and Historic Gardens and Designed Landscapes. Historic Scotland do not object to the proposal and list assets they have considered in coming to this view. They do not list any assets in East Lothian. The ES does not consider potential impacts on terrestrial heritage assets in East Lothian other than Historic Gardens and Designed Landscapes (HGDL).
- 3.28 There are clearly impacts on the historic environment of East Lothian, both to designated and undesignated sites and monuments. This is of particular concern with those monuments which are linked, either through

primary function or how they are seen and appreciated today, with this seascape. These include the Scheduled Monuments of North Berwick Law, Tantallon Castle, Castle Hill, East Links, North Berwick, Castle Park, Dunbar and Dunbar Castle and the listed buildings at Lamer Battery, Dunbar and Barns Ness Lighthouse.

- 3.29 The main impact will be on the seascape in that the turbines will significantly break the horizon and, from some vantage points, the cumulative effect with NnG, the Forth Array and Inch Cape will essentially fill the seaward horizon. There is the potential for this development to change how these monuments are understood and appreciated for a generation. The impact will be magnified given that turbines have movement, which tends to catch the eye (which could be amplified by the cumulative effect described above of different design for different developments) and may also have visible lighting. This would lead to an adverse impact upon the integrity of the settings of the Scheduled Monuments and Listed buildings affected.
- 3.30 Over all it is likely that there will be an adverse impact upon the historic environment from NnG which will be exacerbated by the construction of further offshore windfarms in this area. Potentially the effects will significantly detract from the appreciation of a number of monuments, both designated and undesignated. Additionally, this development has a high potential to alter how the historic towns of North Berwick and Dunbar (including their Conservation Areas) feel as the seascape is important to the setting of both.

#### *Biodiversity*

- 3.31 It is for SNH to comment on impacts on marine ecology, SSSI's and Special Protection areas including the Firth of Forth and Forth Islands.
- 3.32 SEPA comment that the addition of turbine foundations may promote the introduction of non-native species. They note that the Barns Ness to Wheat Stack waterbody is at high ecological status for alien species. The accidental introduction of Marine Non Native Species (MNNS) has been highlighted as a risk for water body degradation and in line with the Water Framework Directive and other strategies. MNNS could also be introduced through construction processes. SEPA recommend controls are included to mitigate this and minimise the risks.
- 3.33 The RSPB object to the proposal as, firstly, they consider the reporting includes fundamental inaccuracies and discrepancies in the presented data, which leads to incorrect interpretation and assessment of potential effects. This relates in particular to the gannet. Secondly, the degree of flexibility of the design between the best and worst case in their view makes assessment difficult as it leads to widely varying results. In the worst case scenario, the RSPB considers the environmental impacts to be unacceptable. Thirdly, the cumulative impact assessment is founded on limited understanding and knowledge. This is due to a lack of significant information on population scale effects of offshore wind development on bird species including those in the Forth. *Work Package*



*D (Population dynamics of Forth and Tay breeding seabirds: Review of the available models and modelling of key breeding populations* is about to be commissioned by Marine Scotland. This package will seek to review existing literature and population models relevant to the Forth and Tay wind farm developments and provide an appropriate model for kittiwake breeding populations and apply this to the remaining seabird species with modification as appropriate. This is relevant to NnG due to the presence of auk species around these sites. Auks are declining, and are at moderate to high risk of displacement from offshore wind farm sites.

- 3.34 SNH have not yet come to a view on the proposal.

#### *Economic Development*

- 3.35 In terms of economic development, there are two main potential impacts; a negative one on tourism income if visitors are deterred from visiting East Lothian, and a positive one from employment related to construction and operation of the windfarm.
- 3.36 In determining the tourism impacts of this development, officers referred to studies conducted by the RSPB and Visit Scotland. The RSPB study notes the importance of the Firth of Forth due to high numbers of seabirds and abundance of wildlife. Direct and indirect impacts on this resource must be carefully considered and assessed.
- 3.37 Visit Scotland undertook research in 2011 on consumer attitudes to windfarms in which respondents were asked about whether the presence of a wind farm would affect their choice of holiday destination – 80% said not but 20% said it would. The visual impact of the proposal on North Berwick and Dunbar is discussed above. The ES notes '*distant views of the turbines will be seen by visitors who come to appreciate the broad sea views*' at North Berwick and, in Dunbar, '*Turbines will be seen by large numbers of residents and visitors, in the central part of the view*'. Similarly, walkers along the John Muir Way will be exposed to '*continuous but oblique views of the proposed offshore development.*'
- 3.38 Research suggests a minimal impact on visitor numbers and perceptions through the existence of wind turbines and the ES does suggest visual impacts greater than minor in two key tourism destinations for East Lothian, Dunbar and North Berwick.
- 3.39 However page 23.1 of the ES also highlights the positive economic contribution from NnG, namely Gross Value Added for the study area, which covers Angus, Dundee, Fife and Edinburgh as well as East Lothian, of £54million-£440million over the lifetime of the project. Also, for the study area 3000 job years for the project are envisaged with 11900 job years for all project phases. Most of the jobs are associated with construction, which will take around 2 years, though the ES predicts there will also be between 100 – 145 jobs in the operational phase across the study area. This supports the East Lothian Community Planning Economic Development Strategy.

### *Intertidal works*

- 3.40 Where the cable makes landfall at Thorntonloch, a planning application will be made to East Lothian Council. Up to the High Water Mark there is also a requirement for a Marine Licence, so these works are included in this current application. The area is covered by East Lothian Local Plan Policy DC1: Development in the Countryside and Undeveloped Coast: C3: Protection of Open Space, NH4: Areas of Great Landscape Value and NRG2; Torness Consultation Zone. Without prejudice to detailed consideration of the planning application, these works would appear acceptable in principle. It would be through consultation on the proposal as a planning application and East Lothian Councils own consideration as a planning authority to decide whether it is necessary and reasonable to impose any conditional control on the intertidal works.
- 3.41 The Council as planning authority would have regard to comments made by consultees including SEPA. SEPA notes in response to this application that (para 148 of chapter 5 of the ES) the installation method for these works will depend on ground conditions along the route. They highlight that horizontal direct drilling beneath the sand dunes would be their preferred option to minimise impact on sand dune habitats and associated water dependent features. If trenching is taken forward instead, justification should be shown for this through a construction method statement, which should also show how the dune habitat will be restored and erosion problems avoided. SEPA also recommend that beach works will take place outwith the bathing water season as this beach is a designated bathing water.

### *Consultation*

- 3.42 Consultation on this proposal has been undertaken by Marine Scotland. Historic Scotland, SEPA, NERL (air traffic control services), Joint Radio Company Limited (JRC), Firth of Forth Lobster Hatchery do not object to the proposal. The Association of Salmon Fishery Boards and Esk Salmon Fishery Board (Angus area) have objected to the application on the basis that it has not been shown that there are no impacts on atlantic salmon and thus the integrity of Special Area of Conservation rivers on the east coast of Scotland. The Marine and Coastguard agency do not object but raise points about navigational safety. The CAA have responded requesting lighting on each turbine at the periphery of the development. The Northern Lighthouse Board do not object but state their requirements for lighting including marking and lighting of the landfall site of the export cable route in the form of Cable Marker Boards 2.5m x 1.5m, at least 4m about ground level, which should be lit so as to be visible from the seaward side. The RPSB object to the proposal as noted above. SNH are still to respond.

### *Summary and Conclusion*

- 3.43 The Council's technical assessment of this proposed off-shore windfarm suggests that its visual impact and its effect on the seascape, at least when viewed from extensive parts of East Lothian, has been underestimated. Despite their distance, the wind turbines will be a significant feature on the horizon and will be seen as a backcloth to iconic features such as the Bass Rock and Tantallon Castle. It is unlikely that a relatively minor micro-siting of turbines or any practical reduction in their height would significantly reduce this impact.
- 3.44 Against this must be seen the advantages of offshore power generation, contributing significantly to renewable energy production and providing significant capital investment in the construction industry with potential economic spin-off more locally. In addition, the Scottish Government's 'Blue Seas – Green Energy', discussed in para 3.5 above, indicates a degree of qualified support for at least the principle of an offshore windfarm in this location. The very fact that NnG lies within an area within which the Crown Estate has awarded one of the exclusivity agreements for a potential offshore wind farm site further suggests a degree of Government support. Renewable power generation at sea may also reduce the need to accommodate land-based windfarms.
- 3.45 Consequently, and being mindful of the likely impact of this proposal on landscape and seascape, Marine Scotland is requested to ensure that the particular impact assessments highlighted in *landscape and seascape* section of this report (paras 3.9 to 3.26) are reassessed and the implications of any change in this assessment fully considered before a decision is taken on this proposal.

## **4 POLICY IMPLICATIONS**

- 4.1 None

## **5 EQUALITIES IMPACT ASSESSMENT**

- 5.1 This report is not applicable to the well being of equalities groups and an Equality Impact Assessment is not required.

## **6 RESOURCE IMPLICATIONS**

- 6.1 Financial - none
- 6.2 Personnel - none
- 6.3 Other - none

## **7 BACKGROUND PAPERS**

- 7.1 Neart na Gaoithe Environment Statement July 2012, with Appendices
- 7.2 East Lothian Local Plan 2008
- 7.3 East Lothian Community Planning Economic Development Strategy
- 7.4 Consultation Responses to Marine Scotland from various respondents including SEPA, Historic Scotland, the CAA, NERL, the Northern Lighthouse Board.

<b>AUTHOR'S NAME</b>	J Squires
<b>DESIGNATION</b>	Planner
<b>CONTACT INFO</b>	██████████
<b>DATE</b>	12 December 2012

## ESK DISTRICT SALMON FISHERY BOARD

### Response to the marine licence application for the NeartnaGaoithe Offshore Wind Farm project September 2012

The Esk Board has a statutory responsibility for Atlantic salmon in the Lunan Water, River South Esk, River North Esk and Bervie Water. The South Esk is also a Special Area of Conservation for Atlantic Salmon and Freshwater Pearl Mussel, both species of unfavourable status.

The Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003 defines the powers and duties of District Salmon Fishery Boards as follows:

“A district salmon fishery board may do such acts, execute such works and incur such expenses as may appear to them expedient for-

- (a) the protection or improvement of the fisheries within their district
- (b) the increase of salmon; or
- (c) the stocking of the waters of the district with salmon”

In the Act referred to, the term salmon means all fish of the species *Salmosalar* and migratory fish of the species *Salmotrutta* and commonly known as salmon and sea trout respectively.

Phenotypically, it is impossible to distinguish the non-migratory form of *Salmotrutta* (brown trout) from the migratory form (sea trout). The Fishery Board management implication of this is that there is a duty to protect trout and their habitat where it can be shown that a migratory component exists for such fish populations.

The Board is also a custodian of the River South Esk Special Area of Conservation with Atlantic salmon being one of the qualifying species. The first assessment cycle indicates that the species is classed as “unfavourable recovering”. Preliminary analysis of the second assessment cycle indicates that the early-running component has continued to decline. Furthermore, the South Esk has been the subject of application for conservation measures to protect the early-running stock, the need for such measures has been endorsed by MSS.

The Esk Board supports fully the response from the ASFB.

The Habitat’s Directive (Article 6) requires that Member States subject any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other projects to appropriate assessment. In the light of the conclusions of the assessment of the implications for the site and subject to any imperative reasons of overriding public interest competent national authorities shall agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate after having obtained the opinion of the general public.

Guidance issued by Marine Scotland Science relating to information requirements on diadromous fish of freshwater fisheries interest states that an Environmental Statement should provide:

- (i) Information on the use of the development area by such fish and that if such information was lacking then a suitable monitoring strategy should be devised. No monitoring strategy specific to migratory salmonids is set out in the application and we believe that the lack of meaningful monitoring in the present proposal is completely inadequate.

- (ii) Any monitoring strategies must include pre-construction monitoring in order that baseline information on salmon and sea trout movement, abundance, swimming depth, feeding behaviour etc. can be collected.

As with other applications for offshore renewable energy, the Rochdale Envelope approach is set out in the application. It must be emphasised that this approach makes it extremely difficult for stakeholders to assess the potential environmental risk as there is little detailed information on: the likely size of the scheme; the type of devices to be deployed; and the degree of confidence attached to the assessment of impacts. Our comments must therefore be viewed on that basis.

### **Specific comments**

Our specific comments relate to the potential effects highlighted as follows:

Offshore renewable developments have the potential to directly and indirectly impact anadromous fish such as Atlantic salmon and sea trout. We would therefore expect developers to assess the potential impacts of deployed devices on such fish during the deployment, operation and decommissioning phases. Such potential impacts have been highlighted by Marine Scotland Science and could include:

- Avoidance (including exclusion from particular rivers and subsequent impacts on local populations);
- Disorientation effects that could potentially affect behaviour, susceptibility to predation or by-catch; and
- Impaired ability to locate normal feeding grounds or river of origin; and delayed migration

*i. Subsea noise during construction*

A recent review commissioned by SNH<sup>1</sup> states that 'Marine renewable energy devices that require pile driving during construction appear to be the most relevant to consider, in addition to the time scale over which pile driving is carried out, for the species under investigation'.

*ii. Subsea noise during operation*

*iii. Electromagnetic fields (EMFs) arising from cabling*

The SNH-commissioned review (cited above) has shown that EMFs from subsea cables have the potential to interact with European eels and possibly salmonids if their migration or movement routes take them over the cables, particularly in shallow waters (<20m). Marine Scotland Science are currently undertaking a research programme which aims to investigate electro-magnetic force impacts on salmonids. We would hope to have some results from this work later in 2012. It is vital that all cables are appropriately shielded to ensure that EMF effects are below any threshold of effect for salmonids.

*iv. EMFs arising from operation of devices*

It is important to ensure that such effects are quantified and assessed in the Environmental Statement.

*v. Disturbance or degradation of the benthic environment (including secondary effects on prey species)*

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<sup>1</sup>Literature review on the potential effects of electromagnetic fields and subsea noise from marine renewable energy developments on Atlantic salmon, sea trout and European eel. Available at: <http://www.asfb.org.uk/wp-content/uploads/2011/06/SNH-EMF-Report1.pdf>

It is important to ensure that such effects are quantified and assessed in the Environmental Statement.

*vi. Aggregation effects*

Whilst the aggregation of prey items around physical structures might be seen as a positive effect, possible negative effects might include the associated aggregation of predators.

### **Habitats Risk Assessment**

We note from Box 1.7 and Table 11.3 in Chapter 11 that neither the River Dee nor the River Tweed appear to have been considered as part of the HRA. We do not believe that this is acceptable, nor indeed is it compatible with the information on salmonid migration routes provided by Marine Scotland Science<sup>2</sup>. Representatives from both of these rivers attended pre-application events organised by the developers.

#### **15.6.3.7 Diadromous Fish**

Table 15.10 states purports to set out to time of migration **to** and **from** natal rivers. However, only the migration of Atlantic salmon and sea trout smolts **from** natal rivers is actually set out. It is important to note that Atlantic salmon return to Scottish rivers in all 12 months of the year. Equally sea trout would be expected to return to natal rivers during from late spring through to September.

#### **15.7.1 Impact Assessment – Construction Phase**

##### *Noise*

As detailed in the Environmental Statement, the assessment of noise impacts carries high uncertainty. The ES also recognises that the significance of behavioural avoidance is dependent on the behaviour disrupted. For example, avoidance may be significant if it causes a migratory species to be held up or prevented from reaching areas of biological importance, e.g., spawning and feeding areas. The potential zone of effect, at the lower threshold level of 75 dB<sub>ht</sub> (representing significant avoidance) the predicted area which salmon would avoid is significant. The ES states that 85% of fish were found to react to this level of noise, and we believe it is possible that noise at this threshold level has the potential to at least delay smolt migration. As no information is available on smolt migration routes, we must assume that such a delay could, for example, make smolts more susceptible to predation. It must also be noted that salmonid smolts are physiologically stressed in adapting to the environmental challenge of movement between freshwater and seawater. Simultaneous challenge from noise, EMFs etc. during this transition will constitute a significant additional stressor. Stress leads to increased plasma levels of the stress hormone cortisol. Corticosteroids cause a range of secondary effects, including hydromineral imbalance and changes in intermediary metabolism (WendelaarBonga, 1997)<sup>3</sup>. In addition, tertiary responses extend to a reduction in the immune response and reduced capacity to tolerate subsequent or additional stressors (WendelaarBonga, 1997).

The ES operates under the assumption that Atlantic salmon and sea trout are present in the development area. However, the zones of avoidance set out do not appear to be related to the swimming speeds of fish (at different life stages), in order to assess the possibility of such fish swimming out of the zone of effect. We welcome the fact that piling operations will be intermittent, with each pile driving event predicted to occur for no longer than three hours and 20 minutes with noise breaks for up to 26.5 hours estimated between piling events. We also welcome reference to soft start piling which we believe will be necessary to ensure that Atlantic salmon and sea trout, of

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<sup>2</sup>Malcolm, I.A., Godfrey, J. & Youngson, A.F. Review of migratory routes and behaviour of Atlantic salmon, sea trout and European eel in Scotland's coastal environment: implications for the development of marine renewables. Scottish Marine and Freshwater Science Volume 1 No 14.

<sup>3</sup>WendelaarBonga, S. E. (1997). The stress response in fish. *Physiol. J. Rev.* 77, 591-625.

all life stages, can safely avoid traumatic hearing damage. However, no detail is given as to the duration of such soft start piling, and such duration must be appropriate to the swimming speeds of the species in question, to allow that species time to move out of the zone of effect. Should the development be granted consent, we believe that an appropriate duration of soft start piling, related to the swimming speed of juvenile salmon and sea trout, should be a condition of consent.

However, given the paucity of information on noise effects, we do not believe that soft piling alone is an appropriate mitigation. The ES sets out a number of options for turbine design (including gravity bases) of which the worst case scenario for noise is impact piling of pin piles. We believe that, given the sensitivity of early running returning spring salmon, and the uncertainty of effects on juvenile fish, that it is appropriate, should consent be granted for the development, that a condition of consent is that no impact piling occurs during the period from March to June (inclusive). Such a condition is consistent with the precautionary principle and would still allow other forms of construction to continue during this period.

During pre-application discussions with the developers we have continually stressed the need for information on migratory routes and habitat usage for migratory salmonids. In the absence of such data (and the ES simply assumes that they are present), ASFB and DSFBs, in assessing the risks of the development to migratory fish, have no alternative but to assume that the entire run of each river will use the area under development. We note that Marine Scotland Science have previously commented that *'it needs to be categorically established which species are present on the site, and where, before the application is considered for consent'*.

Given the above concerns and the high uncertainty surrounding the assessment of noise impacts we do not agree with the assessment in paragraph 174, 175 and Table 15.15 that 'the magnitude of the effect on salmon and trout is considered to be negligible' and 'the vulnerability of salmon and trout is considered to be low and the overall impact on salmon and trout populations predicted to be of *minor significance*'.

### **15.7.2 Impact Assessment – Operation and Maintenance**

#### *Electromagnetic Fields (EMF) generated by subsea cables*

We are aware that Marine Scotland Science are currently undertaking a research programme which aims to investigate electro-magnetic force impacts on salmonids. Until this work is completed, we are unable to assess the relative magnitude of this impact or the likely behavioural response in salmonids. We therefore do not agree with the assessment that the overall effect of EMF is assessed to be of minor significance based on the relatively small footprint of the cables within the NearthnaGaoithe offshore works area.

We are particularly concerned about the possible effects of EMFs arising from the export cable to shore, given that it crosses a known salmonid migration route, which is likely to be of major significance to all East Coast rivers. Paragraph 235 states that DECC recommends cables to be buried to a depth of at least 1.5 m so as to keep cable below the most active biological layer. However, Chapter 5 (Table 5.16) states that the burial depth is likely to vary across site **up to** 1.5 m. We believe that all cables should be buried to a minimum depth of 1.5m and where this is not possible, all cables should be covered by placing a suitable shielding material above the cable to an equivalent depth.

#### *Introduction of New Substrates*

We are concerned that the potential for the structures to act as fish aggregation devices (FADs) could potentially be negative in the case of wild salmonids. However, if the structures do act as FADs we would be concerned that such areas may in fact represent new 'pinch points' for predation of migrating smolts and returning adults. This possibility does not appear to be considered in the application.

### **Monitoring and mitigation measures**




As stated above, we are disappointed at the lack of salmonid-specific monitoring. We are keen to work with the developers and Marine Scotland to identify appropriate monitoring programmes. We would emphasise that any monitoring strategies must include pre-construction monitoring in order that baseline information on salmon and sea trout movement, abundance, swimming depth, feeding behaviour etc. can be collected.

We are very disappointed to see that no mitigation measures are proposed other than inter-array cable burial/protection, to reduce the effects associated with the construction/decommissioning and operation phase of the development. We believe that **all** inter-array cabling should be buried to a minimum depth of 1.5m or have a suitable shielding material placed over them. We do not believe that there should be any exceptions to this, irrespective of the technical difficulties involved. In addition, we would highlight our comments regarding mitigation with regard to impact driving during the spring. We note that reference is made to mitigation measures to minimise and mitigate noise produced during potential piling operations (such as large or small bubble curtains or sound-absorbing sleeves) in Chapter 25, but no attempt is made to quantify the effect of such mitigation measures.

### **Conclusion**

While the Esk Board recognises the importance of renewable energy, the environmental statement has failed to demonstrate that the development will not adversely affect the integrity of the South EskSAC. Where a Natura site is involved, the onus is on the developer to demonstrate no impact and in the absence of that the precautionary principle will apply. Under these circumstances, we do not consider that the proposed development is compatible with the requirements of the Habitats Directive or Scotland's Marine Nature Conservation Strategy. On that basis, we have no alternative but to formally object to the proposed development, until adequate monitoring and mitigation strategies have been put in place.



Esk District salmon Fishery Board

**From:** [REDACTED]  
**To:** [Tait A \(Adrian\) \(MARLAB\)](#)  
**Subject:** Application to construct and operate an offshore windfarm Firth of Forth  
**Date:** 20 September 2012 09:56:24

---

Adrian,

I write to endorse the comments already made by my colleagues [REDACTED] of the FMA (Pittenweem) Limited and [REDACTED] the Under 10 Metre Association.

Since all my Members trawl for nephrops in the areas in and bounding the Firth of Forth, I would specifically direct you to Points (1), (3), (4) and (10) of [REDACTED] comments.

Because of decreasing fishing opportunities due to lack of quota and effort controls, it is essential to the continued viability of my Members that no further restrictions are imposed on their ability to pursue their fishing activities on their historical grounds.

The tenuous level of economic viability of the vessels in our Organisation means that they cannot suffer financial losses for the proposed project. If this turns out to be the case, then there would be an inevitable claim for compensation which we would vigorously pursue.

I trust that the above comments will be relayed to the relevant officials for their sympathetic consideration.

Yours sincerely,

[REDACTED]  
Chief Executive  
Fife Fish Producers Organisation.

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## **APPLICATION FOR THE CONSENT AND LICENCE TO ERECT THE “NEART NA GOITHE” OFFSHORE WINDFARM – FIRTH OF FORTH – INCORPORATING “SAFEGUARDING FISHING RIGHTS”.**

The fishermen of Fife are represented by the Fishermen’s Mutual Association (Pittenweem) Ltd, the Fife Fishermen’s Association, the Fife Fish Producer’s Organisation, the 10 Metre and under Association and the Fife Creel Association.

“Fishermen’s Mutual” has freedom to speak for all parties concerned but it is likely that some Associations will respond individually.

As a precursor to stating my fishermen’s position on the above, I would like to comment that the members of the Association are not against the construction of windfarms but feel that irrevocable action must be taken to protect their future and the future of the village fishing industry in Pittenweem and the wider Firth of Forth.

Commercial fishing has existed in the “Forth” since the 12<sup>th</sup> Century and it is hoped that a policy of co-operation with other Forth users will allow fishing to continue for many decades to come.

However, I can confirm that the fishermen of the “South Firth” are not convinced that offshore windfarms will be the answer to all our energy problems, nor are they convinced that the building, commissioning and operating of the turbines will not be detrimental to commercial fishing, in and around the windfarm sites.

Bearing this in mind, they feel it is incumbent upon the Scottish Government and by implication Marine Scotland Renewables to ensure that all efforts are made to mitigate the effects that any windfarm development may have on fisheries.

This can only be done through a support mechanism for the fishing industry being built into any licence, before consent is given.

The renewable companies have made verbal commitments to the fishing industry but written assurance must be given to protect fishermen’s rights and livelihoods. Failure to have words supported by documentation could leave the industry without a sustainable future.

No-one knows who will own windfarms after they are commissioned. The vagaries of the financial markets could see a windfarm purchased by a private equity firm, with profit being the only motive and a fishing industry deemed irrelevant. This must not be allowed to happen.

I will now progress to a list of subjects raised by my fishermen, which they feel must be addressed if ongoing support is to be given to Renewable Companies.

1) Windfarm developers or successive operators cannot exclude towed gear from a windfarm, except during construction.

2) Any exclusion zone is limited to 50 metres from a turbine or other structure, except during construction and cable laying works when the zone shall be a maximum of 500 metres.

3) All cable laying must be trenched and back filled, accepting that difficult areas may be subject to appropriate mattress cover.

A schedule of inspecting the cable route must be put in place throughout the life of a windfarm and any remedial/repair work must be completed, as necessary and without delay.

In the event of cable laying or the cable corridor causing loss of earnings to fishermen, a daily rate of compensation must be agreed.

4) Any equipment or debris falling from a ship, turbine or other structure must be reported immediately to local fishing vessels and to local F.I.R.

In the event of an item causing destruction to fishing gear, appropriate compensation will be paid to fishermen.

5) A data gathering programme for commercial species in the inner and outer Forth will be set up and run by Marine Scotland. It will continue throughout the lifetime of any windfarm. Such action will allow fishermen's incomes to be supported, if the figures show that a windfarm, both in the construction period or the operational period or the decommissioning period has caused a decline in stocks, which by the laws of fishing, will have caused fishermen a loss of earnings.

The RBS system of recording catches plus fish salesmen's records, plus harbour authority records can be used to verify fluctuations in catches. The programme costs must be met by the renewable companies.

6) A careful watch should be kept on fishing catches during the period when piling commences as this may have a huge affect on catches and as a result fishermen's earnings. Financial support for fishermen may be inevitable.

7) A working group must be set up in line with what has been offered by the FTOWDG.

- 8) The system of F.L.O. and F.I.R. consultations and reporting must continue. A local F.L.O. must be trained accordingly and deployed on a ship working in the Forth.
- 9) Any monitoring, environmental and decommissioning plan can only be agreed after consultation with the fishing industry.
- 10) During any decommissioning period the benthic seabed must be returned to its original state and work will only be considered to be completed after consultation with the fishing industry.

In conclusion, it should be understood, that with the advent of MPA's, MCZ's, SPA's, SAC's, SSSI's and Offshore Windfarms, fishermen must protect their interests vigorously, or there may soon be no inshore areas left to fish.

I leave you with this thought,

“What is a fisherman if he cannot fish?”

**From:** [REDACTED]  
**To:** [Tait A \(Adrian\) \(MARLAB\)](mailto:Tait.A(Adrian)(MARLAB)@scotland.gsi.gov.uk)  
**Subject:** RE: 008/OW/MainS - 10: MS-LOT to Consultees: One Week Reminder: 03 September 2012  
**Date:** 05 September 2012 17:59:55

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Hi Adrian

I have read the documentation sent and have no real comments to make so submit a nil return.

yours aye

[REDACTED]

---

Subject: 008/OW/MainS - 10: MS-LOT to Consultees: One Week Reminder: 03 September 2012  
Date: Mon, 3 Sep 2012 17:42:07 +0100  
From: Adrian.Tait@scotland.gsi.gov.uk  
To: Adrian.Tait@scotland.gsi.gov.uk

Dear Sirs / Madam

**ELECTRICITY ACT 1989**

*The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000*  
*The Electricity (Applications for Consent) Regulations 1990*

**MARINE (SCOTLAND) ACT 2010**

*The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)*

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 AND  
MARINE LICENCES UNDER PART 4, SECTION 20 OF THE MARINE (SCOTLAND) ACT 2010,  
TO CONSTRUCT AND OPERATE AN OFFSHORE WINDFARM, FIRTH OF FORTH.**

With regards to the request for comment on the Neart na Gaoithe proposal, I would be grateful for any comments you have by **10<sup>th</sup> September 2012**. If you are unable to meet this deadline, please contact us to arrange an extension to the consultation period. If you have no comments to make please submit a "nil return" response.

Apologies if you have received this in error.

Best regards,

Adrian

-----  
Adrian Tait

Marine Renewables Licensing Casework Manager  
Marine Scotland – Marine Planning & Policy Division

Scottish Government | Marine Laboratory, PO Box 101 | 375 Victoria Road | Aberdeen AB11 9DB

T: + 44 (0) 1224 295668  
S: + 44 (0) 1224 876544  
M: + 44 (0) 7557 848720  
F: + 44 (0) 1224 295524

Email: [adrian.tait@scotland.gsi.gov.uk](mailto:adrian.tait@scotland.gsi.gov.uk)  
[ms.marinelicensing@scotland.gsi.gov.uk](mailto:ms.marinelicensing@scotland.gsi.gov.uk)

Web: <http://www.scotland.gov.uk/marinescotland>  
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Dh'fhaodadh gum bi teachdaireachd sam bith bho Riaghaltas na h-Alba air a chlàradh neo air a sgrùdadh airson dearbhadh gu bheil an siostam ag obair gu h-èifeachdach neo airson adhbhar laghail eile. Dh'fhaodadh nach eil beachdan anns a' phost-d seo co-ionann ri beachdan Riaghaltas na h-Alba.  
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HISTORIC SCOTLAND  
ALBA AOSMHOR

Mr Adrian Tait  
Marine Scotland  
Scottish Government  
Marine Laboratory  
375 Victoria Street  
ABERDEEN  
AB11 9DB

Longmore House  
Salisbury Place  
Edinburgh  
EH9 1SH

Direct Line: 0131 668 8730  
Direct Fax: 0131 668 8722  
Switchboard: 0131 668 8600  
Robin.Campbell@scotland.gsi.gov.uk

Our ref: AMN/16/TA  
Our Case ID: 201202824  
Your ref: 018/OW/MAINS - 10

7 September 2012

Dear Mr Tait

**The Electricity Act 1989  
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000  
Application for consent to construct and operate an offshore wind farm, Firth of Forth  
(Near na Gaoithe Offshore Wind Farm)  
Environmental Statement**

Thank you for your letter dated 25 July 2012 and the accompanying Environmental Statement (ES) requesting comments on the above. For information, this letter covers our comments on the ES for our role as consultees through the Scottish Ministers under the terms of the above Regulations. The comments in this letter relate to our statutory remit for scheduled monuments and their settings, category A listed buildings and their settings, gardens and designed landscapes appearing in the Inventory, Inventory Battlefields and designated wreck sites (Protection of Wrecks Act 1973). In this case, our advice also includes matters relating to marine archaeology out with the scope of the terrestrial planning system.

**The Proposed Development**

I understand the proposed wind farm will be approximately 15.5 km to the East of Fife Ness and the offshore elements consist of the following:

- Between 75 and 125 wind turbines with a maximum blade tip height of up to 197m;
- 140 km of inter array cables;
- Two 33 km export cables to shore;
- One meteorological mast;
- One or two offshore collector stations;
- Foundations, substructures, fixtures, fittings etc.

**Terrestrial Assets**

We are content that as a result of the offshore works, there shall be no direct impacts on terrestrial assets within our statutory remit. In terms of indirect impacts, we have considered the potential for impacts on the setting of terrestrial assets, which are as follows:

*Scheduled Monuments*

- Tentsmuir Coastal defences (Index no. 9712);
- Crail Airfield, airfield 1km E of Kirklands Farm (Index no. 6642);
- St Andrews Castle (Index no. 90259);
- St Andrews Cathedral and adjacent ecclesiastical remains (Index no. 90260);



www.historic-scotland.gov.uk





- Crail Airfield, pillbox, Foreland Head (Index no. 6461);
- Crail Airfield, airfield 1km E of Kirklands Farm (Index no. 6642);
- Isle of May, lighthouse (Index no. 887);
- Isle of May Priory (Index no. 883).

*Category A Listed Buildings*

- St Andrews Harbour (HB no. 40596);
- Bell Rock Lighthouse (HB no. 45197);
- Ladyloan, Bell Rock Lighthouse Signal Tower and Entrance Lodges (HB no. 21230)

*Gardens and Designed Landscapes*

- St Andrews Links;
- Cambo

Having reviewed the submitted information, we are content that there shall be no significant adverse indirect or cumulative impacts on terrestrial assets within our statutory remit, as a result of the proposed development.

**Marine Assets**

We note that nine recorded or charted wrecks were identified within the offshore site and that seven of these sites are considered 'live sites'. In addition, we note that the geophysical survey assessment identified a number of anomalies of high and medium archaeological potential within the offshore site and cable corridor. We are content with the predicted significance of impacts on these sites during the construction, operation and maintenance phases of the development. In addition, we are content with the proposed mitigation measures, including the temporary exclusion zones which will be put in place through a Written Scheme of Investigation and a Protocol for Archaeological Discoveries.

**Conclusion**

Overall, we are content with the principle of the development, and consider there shall be no significant adverse impacts on marine or terrestrial assets within our statutory remit. We are satisfied with the proposed mitigation strategy in relation to identified sites which have archaeological potential and for unexpected archaeological discoveries. As such, we offer no objection to the application.

Please contact me should you wish to discuss the contents of this letter.

Yours sincerely

**Robin Campbell**  
Senior Heritage Management Officer (EIA)

The Scottish Government  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB

Our ref: EIA/Neart/4.2.1.1701

Your ref: 018/OW/MainS-10

Date: 15 August 2012

Dear Sirs

**ENVIRONMENTAL ASSESSMENT FOR PROPOSED DEVELOPMENT OF AN OFFSHORE WIND FARM AT NEART NA GAOITHE, FIRTH OF FOURTH.**

Thank you for your letter of 25 July 2012, asking HSE to comment on the above environmental statement (ES). We have not received a copy of this ES regarding an offshore wind farm; however we have received an ES regarding the on-shore works relating to this wind farm. HSE have the following standard response to ES.

Environmental Impact Assessments are concerned with projects which are likely to have significant effects on the environment. HSE's principal concerns are the health and safety of people affected by work activities. HSE has no comments on this environmental statement.

Yours faithfully



**Kirsten Laidlaw**  
**Admin Support**

Hazardous Installations  
Directorate

**Kirsten Laidlaw**

Chemical Industries  
Belford House  
59 Belford Road  
Edinburgh  
EH4 3UE

Tel: 0131 247 2000  
Fax: 0131 247 2041  
kirsten.laidlaw@hse.gsi.gov.uk

<http://www.hse.gov.uk/>

HM Principal Inspector of Health &  
Safety  
Dr G. A. Cook

Dear Mr Tait,

Site Name: Neart na Gaoithe Offshore Wind Farm

Boundary Coordinates (lat/long)

1. 56.254517 2.164967
2. 56.212017 2.154250
3. 56.212533 2.233300
4. 56.212767 2.271550
5. 56.257983 2.327133
6. 56.263783 2.334250
7. 56.290500 2.337200
8. 56.329200 2.297100
9. 56.338533 2.275300
- 10.56.336183 2.248500

Hub Height: 140m Rotor Radius: 53m

This proposal cleared with respect to radio link infrastructure operated by Scottish Power (Manweb)

JRC analyses proposals for wind farms on behalf of the UK Fuel & Power Industry. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal. Please note that due to the large number of adjacent radio links in this vicinity, which have been taken into account, clearance is given specifically for a location within 100m of the declared grid reference (quoted above).

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, you are advised to seek re-coordination prior to submitting a planning application, as this will negate the possibility of an objection being raised at that time as a consequence of any links assigned between your enquiry and the finalisation of your project.

JRC offers a range of radio planning and analysis services. If you require any assistance, please contact us by phone or email.

Regards

[REDACTED]  
Wind Farm Team

The Joint Radio Company Limited  
Dean Bradley House,  
52 Horseferry Road,  
LONDON SW1P 2AF  
United Kingdom

TEL: +44 20 7706 5196

[REDACTED]@jrc.co.uk>

## Tait A (Adrian) (MARLAB)

---

**From:** andy.mulholland@dundeecity.gov.uk  
**Sent:** 08 July 2013 11:16  
**To:** MS Marine Licensing  
**Subject:** Consultaion Response on Addendum. Neart Na Gaoithe Offshore Windfarm.

fao Adrian Tait

Please note that I have no planning comments to make on the above addendum.

Regards  
Andy

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Date 4.12.2012  
Agenda Item No.

**12/03102/NEA - Application under Section 36 of the Electricity Act 1989 for the construction and operation of an offshore wind farm at Neart Na Gaoithe Offshore Wind Farm, Fife,**

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Report by: Keith Winter, Head of Enterprise, Planning and Protective Services

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Wards Affected:

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**Purpose**

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Fife Council has been consulted as Planning Authority in relation to this application by Marine Scotland who has been delegated by the Scottish Government to assess the proposal under Section 36 of the Electricity Act, 1989.

The purpose of this report is to seek the Committee's agreement on the proposed Council formal response to the consultation.

**Recommendation(s)**

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It is recommended that the Executive Committee:

- Agrees the content of the recommended formal response attached at Appendix 1 as Fife Council's recommendation to the proposal which supports the principle of the development, whilst highlighting areas that will require further assessment, particularly noise, visual and landscape impact and other aspects associated with wind turbine development.
- Remits to the Head of Enterprise, Planning and Protective Services the submission of Fife Council's formal response to the Scottish Government (Marine Scotland).

**Resource Implications**

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In terms of Section 57 of the 1997 Planning (Scotland) Act, Scottish Ministers may, on granting consent under Section 36 of the Electricity Act, also grant deemed planning permission with conditions, which the planning authority would subsequently enforce, in the same way as conditions imposed by a Reporter on appeal.

**Legal & Risk Implications**

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Fife Council is being consulted as part of the determination process for the Section 36 application. Fife Council is not the determining Authority with regard to this particular application and is responding to Scottish Ministers as a Statutory Consultee. All other

statutory consultees will be submitting individual comments and views direct to Scottish Ministers. If the Council as a Statutory Consultee is minded to object to the proposals, Scottish Ministers will be obliged to call a Public Inquiry unless the areas of objection can be satisfactorily addressed through modifications to the proposal or the imposition of appropriate conditions.

## Impact Assessment

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An EQIA checklist is not required because the report does not propose a change to existing policies and practises.

## Consultation

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Consultation was undertaken with the Executive Director, Corporate Services (Directorate), who supports the content and recommendation of this report.

Under the Electricity Act the onus for public consultation rests with the applicant and not with the Local Authority as is usually the case for a planning application. The Environmental Statement submitted as part of the proposal stated that the applicant held public information events throughout July, 2012. Consultation has also taken place with a wide range of relevant authorities and agencies as part of the scoping stage for the Environmental Impact Assessment.

## 1.0 Background

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1.1 The proposed Neart na Gaoithe Offshore Wind Farm to the north east of the Firth of Forth has been submitted under Section 36 of the Electricity Act 1989 to the Scottish Government for determination. The Section 36 application is accompanied by a detailed Environmental Statement which sets out the environmental considerations associated with the proposed development and also includes a Planning Statement and relevant drawings, photographs and photo montages illustrating the potential visual impact of the proposal.

1.2 The Development will comprise of the following:

- Offshore wind turbines (between 75 – 125), each with an output of between 3.6 Mega Watts (MW) and 7 MW (a maximum cumulative output of 450 MW)
- One meteorological mast (subject to a separate permission from Marine Scotland)
- One or two offshore collector stations

1.3 The proposed wind farm is located to the northeast of the Firth of Forth, 15.5 km directly east of Fife Ness and covers an area of approximately 105 square kilometres. It is proposed to connect the turbines via subsea cables to the offshore collector stations and then export the electricity from the collector stations to the shore at a point on Thorntonloch beach, East Lothian via further cabling. The onshore infrastructure is outwith the scope of the Section 36 application and would be the subject an application for

planning permission from East Lothian Council as Planning Authority. No onshore works are proposed within the landward boundary of Fife Council.

1.4 The maximum capacity allowed under the terms of the agreement for lease given by the Crown Estate for the site is 450 MW and therefore this shall dictate the number of turbines being erected should permission be given. The applicant is considering a range of turbines with a rated output of 3.6 MW to 7MW. The applicant has requested to Marine Scotland that a flexible approach is taken into account with this application as the exact details of the proposal can not currently be defined. The application to Marine Scotland describes the minimum and maximum parameters of the development to allow an evaluation to be carried out. This process is commonly referred to as the 'Rockdale Envelope'. Marine Scotland has agreed to this approach being taken.

1.5 Several foundation methods are assessed as part of the proposals but in essence all require the turbines to be rooted onto the seabed. The proposed turbines are to be a combination of the following, (all heights are relative to a sea level at lowest astronomical tide):

- 3.6 MW with a maximum rotor tip height of 175 metres. Maximum of 125 turbines to meet 450 MW capacity.
- 4.1 MW with a maximum rotor tip height of 171.25 metres. Maximum of 109 turbines to meet 450 MW capacity.
- 6 MW with a maximum rotor tip height of 175.5 metres. Maximum of 75 turbines to meet 450 MW capacity.
- 7 MW with a maximum rotor tip height of 197 metres. Maximum of 64 turbines to meet 450 MW capacity

1.6 Two indicative layouts have been submitted as part of the proposals each with a maximum number of the different turbine models. Indicative layout A uses the 3.6MW and the 4.1MW turbines and Indicative layout B uses the 6MW and 7MW turbines. Indicative layout A shows 128 turbines and Indicative layout B shows 80 turbines all within the designated 105 square kilometre application boundary.

1.7 Although not required to solicit the views of the general public Fife Council has received 6 objections from 5 individual third parties and 1 letter of support with regard to the proposals. Fife Council is not the determining Authority in this instance and these representations have been forwarded to Marine Scotland for their attention as part of the application.

## **2.0 Issues and Options**

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2.1 It is considered that all relevant operational and environmental issues have clearly been identified within the Environmental Statement submitted as part of the Section 36 Application to Marine Scotland. Fife Council is seeking to become Scotland's "Leading Green Council" as one of its Big 8 Priorities and is generally supportive of the development



of renewable energy technologies. It is considered that this development will in many ways contribute to meeting the aims and objectives of the Council.

2.2 The Marine (Scotland) Act received Royal Assent 10 March 2010. The Act creates a new legislative and management framework for the marine environment to manage the competing demands of the use of the sea whilst protecting the marine environment. In particular, Part 3 of the Act places a duty on Scottish Ministers to prepare and adopt a National Marine Plan, followed by regional marine plans. The National Marine Plan will sit alongside and interact with existing planning regimes. The Pre-Consultation Draft Marine Plan for Scotland was published in 2011 and sets strategic context for developing major offshore wind farms around Scotland, which includes reference to the subject site.

2.3 SPP (Renewable Energy) states that Planning Authorities should support the development of a diverse range of renewable energy technologies, guide development to appropriate locations and provide clarity on the issues that will be taken into account when specific proposals are assessed. Development plans should support all scales of development associated with the generation of energy and heat from renewable sources, ensuring that an area's renewable energy potential is realised and optimised in a way that takes account of relevant economic, social, environmental and transport issues and maximises benefits.

2.4 National Planning Framework (NPF) 2 sets out a national framework covering energy generation amongst other land-use themes. The development of offshore wind farms are expected to contribute to the wider mix of renewable energy generation technologies being created in Scotland and are to assist in reducing harmful carbon emissions and meeting the stringent climate change related targets. There is specific reference to proposals for the development of Sub-Sea grids to assist in meeting UK and Scottish energy needs but also to allow export of electricity to other mainland European countries that would benefit the Scottish Economy.

2.5 National Renewable Energy Infrastructure Plan (N-RIP) supports the development of a globally competitive offshore renewables industry based in Scotland. The focus of the document seeks to ensure that there is adequate infrastructure in place to support the development and growth of offshore renewables, including land for economic development and port infrastructure. These are identified based upon their proximity to candidate sites for offshore wind farms that have been identified by the Crown Estates and are being taken forward in the upcoming Marine Plans. Neart Na Gaoithe is specifically identified within the plan as part of a proposed cluster of offshore wind farms in the Forth/Tay area.

2.6 A Draft Plan for Offshore Wind Energy in Scottish Territorial Waters was produced by Marine Scotland in 2010. This document has been consulted upon however no finalised version of the plan has been published yet. Fife Council responded positively to the consultation. This document is considered to have some weight as a material consideration in the assessment of the development proposals. Neart Na Gaoithe is identified within the plan as a short term development option within the East region of Scotland. Within the Draft Plan potential environmental and technical issues which are in need of addressing are identified, these include biodiversity; particularly marine life and migratory birds. Spawning grounds and nursery areas for fish species are located in the footprint of the works. The draft plan acknowledges that offshore wind development in this

area is also likely to have visual and seascape impacts due to its relative proximity to land and nationally designated landscapes. Overall, interaction with fishing is likely to be an important issue in the east region as a whole given current catch levels. In the context of each of the six identified Scottish marine regions it is notable that there are constraints on all of the regions, however the East region appears to have fewer environmental and technical issues than many of the other regions.

2.7 The principal policy considerations for developments of this nature are provided within the aforementioned emerging Marine Plans for Scotland and within the National Renewable Energy Infrastructure Plan (N-RIP). The scale of the proposals, in terms of turbine heights and numbers, requires it to also be assessed against the Fife Development Plan. In this instance, the Fife Development Plan comprises TAYplan Strategic Development Plan 2012 – 2032 and the Adopted St Andrews and East Fife Local Plan (2012). Fife Council's Supplementary Planning Guidance on Wind Energy (updated 2011) whilst carrying less weight as a consideration than the Development Plan supplements the local plan policies.

2.8 Policy 3: Managing TAYplan's Assets of TAYplan states that 'development likely to have a significant effect on a designated or proposed Natura 2000 sites (either alone or in combination with other sites or projects), will be subject to an appropriate assessment. Appropriate mitigation requires to be identified where necessary to ensure there will be no adverse effect on the integrity of Natura 2000 sites in accordance with Scottish Planning Policy.'

2.9 The relevant policies of the Adopted Local Plan and their criteria are as follows:

- Policy E3: The policy requires new development to make a positive contribution to the quality of its immediate environment both in terms of its environmental impact and the quality of place it will create. Developments must secure the most practicable energy efficiency benefit, demonstrate a commitment to landscape protection and improvement taking into account linkages to existing landscape features and the need to provide biodiversity enhancement; include measures to promote, enhance, and add to biodiversity; minimise waste by design and during construction.
- Policy E8: The policy states that development affecting a listed building, or its setting, shall preserve the building, or its setting, or any features of special architectural or historic interest which it possesses. The layout, design, materials, scale, siting and use of any development shall be appropriate to the character and appearance of the listed building and its setting.
- Policy E11: The policy requires developments affecting Historic Gardens and Designed Landscapes to protect, preserve, and enhance such places and shall not impact adversely upon their character, upon important views to, from or within them, or upon the site or setting of component features which contribute to their value.
- Policy E12: Scheduled Ancient Monuments and other identified nationally important archaeological resources shall be preserved in situ, and with an appropriate setting. Developments that have an adverse effect on scheduled monuments or the integrity of their setting shall not be permitted unless there are exceptional circumstances. A report of an archaeological evaluation should be provided prior to determination of the application.
- Policy E20: The policy states that development will only be permitted where it would have an adverse effect, either directly or indirectly, on the ecological status of water bodies.

- Policy E21: Development that will have an adverse affect on European Protected Species will not be permitted unless the developer shows that the proposed development is in the interests of preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment and there is no satisfactory alternative. Furthermore the proposed development must not be detrimental to the maintenance of the population of the European protected species concerned at favourable conservation status in their natural range. The policy requires relevant surveys on the status of the species to demonstrate the acceptability of proposals.
- Policy E22: The policy states that development that may affect a Local Biodiversity Site or Local Geodiversity Site will only be permitted where it can be demonstrated that the overall ecological integrity of the site will not be compromised and any significant adverse affects on the site are clearly outweighed by social or economic benefits of significant local importance. Appropriate surveys must identify how any anticipated damage will be minimised or mitigated, including replacement habitat for any losses incurred; and proposals for the conservation, protection, enhancement and future management of the natural heritage interest of the Site.
- Policy E23: Development that may affect national and local priority habitats or species, as identified in the Scottish Biodiversity List or Fife Local Biodiversity Action Plan, will not be permitted unless the developer submits an appraisal showing
- Policy I1: Renewable energy technology will be supported and is encouraged providing there are no adverse effects on communities or the environment; it provides employment opportunities, and uses brownfield or contaminated land where possible.

2.10 Policy R1 of Fife Council's Supplementary Planning Guidance (SPG) on Wind Energy (2011) reflects the intent of the SPP and Local Plan Policy noted above but indicates further that proposals for wind turbines/farms will be assessed against the following constraints, any positive or adverse effects on them and how the latter can be overcome or minimised:

1. historic environment
2. areas designated for their regional and local natural heritage value
3. tourism and recreational interests
4. communities
5. buffer zones
6. aviation and defence interests
7. broadcasting installations.

2.11 Policy R1 states that wind farm proposals affecting areas designated for their local and regional natural heritage value shall satisfactorily address any impacts on the particular interest that the designation is intended to protect but the designation shall not unreasonably restrict the overall ability of the plan area to contribute to national targets.

2.12 R1 further states that in all cases, applications for wind farms should be assessed in relation to criteria including as appropriate, grid capacity, impacts on the landscape and historic environment, ecology (including birds), biodiversity and nature conservation, the

water environment, communities, aviation, telecommunications, noise and shadow flicker (the flickering effect when rotating wind turbine blades periodically cast shadows through constrained opening such as windows).

2.13 SPG Policy R3 states that Fife Council will support offshore installations where they do not have an adverse effect on local maritime activities or the natural and historic environment.

2.14 On the whole the off shore turbines do not trigger an assessment against many of the land based policy criteria. It is considered that the Environmental Impact Assessment (EIA) documents submitted as part of the Section 36 application to Marine Scotland contains relevant surveys and adequate mitigation methods to minimise any potential ecological impact the proposal may have. The submission documents contain assessments of the potential impact the offshore turbines may have on the setting of any listed buildings and designed landscapes within the Local Authority boundary of Fife Council and note that the 15 kilometre distance from the shore minimises the proposed development's impact. This 15 kilometres (9 miles) off the coast of Fife (from Fife Ness) also reduces its impact in terms of visual, noise and potential shadow flicker. Whilst all within the same site area, the proposed number of turbines varies depending on their generating capacity and therefore any proposal that requires fewer turbines should naturally have a lesser impact and would therefore be the optimum development. There remains two areas of concern that the Council believes have not been fully explored by the documentation prepared in support of the application.

2.15 The cultural heritage section of the Environmental Statement offers a comprehensive assessment of the archaeological potential of the general area of the development site including known archaeological sites. However the ES does not mitigate for potential archaeological deposits to exist within the sea bed footprint of each turbine. Whilst the specific location of each turbine footprint cannot be defined at this point it would still be expected that a future archaeological mitigation strategy would be in place. Any archaeological strategy should include the detailed examination of each seabed turbine footprint (including all associated cable trenching) and a strategy for the treatment of any archaeological deposits should they be encountered. It is therefore considered that, whilst the decision is solely within the remit of Marine Scotland as Consenting Authority, it would be prudent to recommend further archaeological mitigation to form part of any permission.

2.16 According to the ES the construction noise impacts have not been considered as requiring a mitigation strategy given the distance from the nearest coastal communities. There is no data within the ES to support this assumption. The possibility of noise and vibrations being heard on the developed Fife Coastline is a concern that should be addressed due to the large scale nature of the construction works (dredging, seabed foundations etc). Fife Council is not certain that the construction works would create noise and vibrations that could be audible or felt on the coast but would require this to be evidenced and a strategy in place to mitigate any potential issues. Hours of operations for construction would also be a factor that would form part of any noise mitigation strategy.

2.17 In all other aspects, it is considered that the EIA submission documents, the distance from the Fife Coastline and the engagement of maritime stakeholders as part of the process is considered to meet the requirements of SPG Policies R1 and R3. It is therefore

considered that the principle of the development is acceptable and complies with the relevant criteria of the Development Plan, subject to compliance with all the mitigation methods outlined within the submitted EIA documents and the provision of additional archaeological and construction noise assessment work and any associated mitigation measures arising from that work.

### **3.0 Conclusions**

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3.1 Fife Council is being consulted as part of the determination process for the Section 36 application. The final decision will be made by the Scottish Government (Marine Scotland).

3.2 The proposed Council response highlights support for the general principle of the proposal, and welcomes the benefits the proposal will bring to meeting national renewable energy targets and of Fife's aspirations of being a leading 'green' Council. The predicted impacts of the offshore wind farm are likely to be more limited in nature compared with their onshore equivalents and will support the development of Fife's economy by supporting uses at the Energy Park and other strategic economic development sites. However the response also highlights specific concerns which particularly relate to additional archaeological and construction noise mitigation methods to be proposed.

#### **List of Appendices**

Appendix 1- Letter to Marine Scotland / Scottish Government

Appendix 2 – List of suggested conditions.

Appendix 3- Location Plan

#### **Background Papers**

In addition to the application submission documents the following documents, guidance notes and policy documents form the background papers to this report:

National Renewable Energy Infrastructure Plan 2

Emerging Marine Plans for Scotland

National Planning Framework 2


The Scottish Planning Policy

Approved TAYplan (2012)

Approved St Andrews and East Fife Local Plan (2012)

Fife Council's Supplementary Planning Guidance on Wind Energy (2011)

#### **Report Contact**

Author Name	James Wright
Author's Job Title	Planner, Development Management
Workplace	Kingdom House, Glenrothes
Telephone	
Email	<a href="mailto:development.central@fife.gov.uk">development.central@fife.gov.uk</a>

Report agreed and signed off by Mary Stewart, Service Manager, and Jim Birrell, Senior Manager, Development and Buildings.

APPENDIX 1- Letter to Marine Scotland

**Marine Scotland  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB**

**Direct Line:** Keith Winter  
08451 55 55 55  
ext [REDACTED]

**Email:** [keith.winter@fife.gov.uk](mailto:keith.winter@fife.gov.uk)

**Your Ref:**

**Our Ref:** 12/03102/NEA

**Date:**

Dear Sir/Madam

**RE: APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 AND MARINE LICENCES UNDER PART 4, SECTION 20 OF THE MARINE (SCOTLAND) ACT TO CONSTRUCT AND OPERATE AN OFFSHORE WINDFARM, FIRTH OF FORTH.**

I write in response to the invitation to comment on proposals for the above project. Thank you for providing Fife Council with the opportunity to submit a response to this development proposal. I would be pleased if you could formally acknowledge receipt of this submission.

Fife Council welcomes any investment and development interest that will generate positive Opportunities and benefits for Fife and Scotland. Fife Council is seeking to become Scotland's "Leading Green Council" and supports the development of appropriate renewable energy technologies generally. It is considered that this development will in many ways contribute to meeting these objectives.

Whilst the Council supports the general principle of the proposal, and welcomes the inherent benefits it is likely to generate for Fife and Scotland, there are a number of areas of concern in relation to the Environmental Statement which we would wish to highlight to the Scottish Government.

Fife Council would wish to comment on the following issues in particular, with regard to the proposal:

## **NOISE**

It is noted that the wind farm is some 15 Km or 9 miles off the coastline of Fife Council and therefore the potential for noise may be dissipated by this separation distance. It is accepted that operational noise will be negated by the separation distance from the Fife Coast yet there appears to be no evidence that construction noise will be controlled and monitored. The Environmental Statement, however, does not identify an intention to create a noise and vibration mitigation strategy as part of a construction plan.

The possibility of construction related noise and vibrations being heard or experienced on the developed Fife Coastline is a concern that should be addressed due to the large scale nature of the construction works (dredging, seabed foundations etc). Fife Council is not certain that the construction works would create noise and vibrations that could be audible or felt on the coast but would welcome conditions requiring this to be evidenced and a strategy in place to mitigate any potential issues. Hours of operations for construction would also be a factor that would form part of any noise mitigation strategy.

## **ECOLOGY AND ORNITHOLOGY**

In relation to the Chapters in the Environmental Statement relating to the Offshore Biological Environment, Fife Council would expect full consultation to be undertaken with the relevant key agencies SNH, SEPA and the RSPB. The Environmental Statement's Chapters on the Offshore Biological Environment (11-15) appear to be generally thorough assessments of the possible impacts of the proposal, are supported by surveys for the appropriate habitats and species and from the information presented draw reasonable conclusions.

The possible impacts upon species associated with the Firth of Forth and Forth Islands SPAs have been taken into consideration and the report considers there to be no significant impact. This will need to be confirmed and agreed by SNH. The Ornithological Assessment identifies monitoring to be undertaken however this has not been identified and carried forward to the Environmental Statement. This should be a requirement, in line with SNH guidance.

## **CULTURAL HERITAGE**

It is noted that the Environmental Statement utilises the 'Rochdale' principle and does not provide specific location or numbers of turbines but in terms of archaeological mitigation, Fife Council, would recommend that once identified a detailed mitigation strategy should be provided for each specific turbine footprint and for the footprint of associated cable trenching. For archaeological mitigation to be of value, it is considered that any mitigation strategy should involve the detailed examination of each seabed turbine footprint. Such examinations could make use of divers, remotely operated vehicles or remote sensing regimes (preferably multibeam).

## COMMERCIAL FISHERIES

From dialogue with organisations such as the South East Inshore Fisheries Group, the Fishermen's Mutual Association (Pittenweem) Ltd, and the 10 Metre & Under Association, Fife Council is aware of concerns raised by the local fishing industry about Neart Na Gaoithe and other proposed offshore wind farm developments, and wishes to see these matters addressed.

The commercial fishing industry in Fife is small but locally important. The fishing fleet & onshore infrastructure is centred in the East Neuk. The main port is the village of Pittenweem, with some landings also taking place elsewhere. Other working harbours from which commercial vessels operate include Crail, St Monans, Anstruther, Methil, Burntisland & St. Andrews. The fleet at Pittenweem presently consists of around 40 vessels and provides direct employment to around 100 people. The fleet depends almost exclusively on in-shore fishing for shellfish (prawns, lobsters). It comprises of mostly smaller vessels (under 10 metres in length) fishing within 12 nautical miles of shore.

These small businesses are often single vessel operations and are highly dependent on the local fishing grounds around the Firth of Forth; they have limited capacity to cope with displacement, being constrained by lack of capital and licence/ quota regulations from fishing in other areas and/or diversifying into other fisheries.

Part of the concern of the local fishing interests centres on the lack of clarity as to precisely what the impact of the development will be; For example, despite numerous research studies, it is still unclear as to how the installation work will affect the seabed and fisheries stocks; it is still unclear if exclusion zones will operate, and if so whether this will be a permanent displacement of all fishing, or a selective approach based on vessel size and/or fishing method (with mobile gear operations excluded, but static gear fishing allowed).

In addition, Fife fishermen are not convinced that the new business opportunities for the sector, suggested by the Offshore Renewables industry, will materialise, notably the potential for fishermen to gain income from maintenance/ supply contracts for the turbines. Many doubt that this will be feasible - believing that the offshore industry will favour its own specialist suppliers/ contractors, or need to use the latter for practical reasons.

Fife Council is aware that there is a strong demand from local fishermen for assurance that they will be compensated for loss of income following disruption to/ exclusion from fishing grounds resulting from turbine development. To this end, they are seeking some form of mitigation clause for damages to be built into or underwritten in the licence agreement. Fife Council therefore would like Marine Scotland to give this due consideration.

This Council is aware of that the Offshore Developers' Forth/Tay Offshore Wind-farm Development Group has recently set up a new consultation forum, the Commercial Fisheries Working Group, to which the fishing industry (both individual fishermen and Associations like the Fishermen's Mutual Association (Pittenweem) Ltd) are invited, along with Scottish Natural Heritage and Marine Scotland.



This forum may enable matters such as compensation to be addressed. If so, we would urge those organising the Working Group, to ensure that meetings are held as frequently as fishing interests consider to be necessary, and at a time of the week that suits working fishermen, so that they can readily take part.

Should the Scottish Government (Marine Scotland) be minded to approve the development, Fife Council would respectfully suggest that conditions be attached to any statutory permission granted, as set out in this submission. Fife Council would request that the role of Enforcement would be one taken forward by Marine Scotland as the Consenting Authority. Any monitoring of conditions and any potential action required, should non compliance be evidenced, should solely be within the remit of Marine Scotland.

In all other respects, Fife Council would offer support for the project subject to following the mitigation methods within the related Environmental Statement submission and relevant advice from other Statutory Agencies/ Bodies. Fife Council would also support any proposal that used the minimum number of turbines to reach the licensed capacity of the project.

I trust this response is helpful but if you require any further information or clarification then please contact me.

Yours sincerely

Keith Winter  
Head of Enterprise, Planning & Protective Services  
Fife Council

## Appendix 2 – Recommended Conditions:

### Archaeology:

BEFORE ANY WORK STARTS ON THE CONSTRUCTION OF THE FIRST FOUNDATION FOR THE TURBINE SUPPORT STRUCTURES, details of an archaeological mitigation strategy for each footprint of the turbine support structures, shall be submitted for the further approval of Marine Scotland and thereafter all works disturbing the sea bed shall be carried out in accordance with the archaeological mitigation strategy as approved. For the avoidance of doubt the strategy shall include the detailed examination of the footprint on the sea bed of each turbine support structure including all associated cable trenching). The method of examination shall include some or all of the following techniques; the use of divers, remotely operated vehicles or remote sensing regimes (preferably multibeam).

Reason To ensure a full and detailed assessment of seabed archaeology is carried out in advance of the construction works to disturb the sea bed taking place.

### Noise:

BEFORE ANY CONSTRUCTION WORK STARTS ON SITE, details of a construction noise mitigation strategy shall be submitted for the further approval of Marine Scotland and thereafter the construction works shall be carried out in accordance with the details as approved. For the avoidance of doubt, the construction noise mitigation strategy shall assess the levels of noise expected, and if the noise levels are found to be at a level above 20 dB (A) at the coastal communities and/ or single residences of North East Fife the strategy shall incorporate measures to ensure that these effects are minimised in terms of disturbance to those communities. If it is evidenced that the levels of noise disturbance to the coastal communities are below a level of 20 dB (A) those communities and/ or single residences then further mitigation measures would not be required.

Reason: To ensure that the developer has fully demonstrated that the construction project would not give rise to noise levels that would affect the amenity of Fife's coastal communities nearest to the site of the off shore turbines.

Vibration:

BEFORE ANY CONSTRUCTION WORK STARTS ON SITE, details of a construction vibration mitigation strategy shall be submitted for the further approval of Marine Scotland and thereafter the construction works shall be carried out in accordance with the details as approved. For the avoidance of doubt, the construction vibration mitigation strategy shall assess the levels of vibration expected, and if the vibration levels are found to be perceptible at the coastal communities and/ or single residences of North East Fife the strategy shall incorporate measures to ensure that these effects are minimised in terms of disturbance to those communities. If it is evidenced that the levels of vibration disturbance to the coastal communities are below a level of that is perceptible to those communities and/ or single residences then further mitigation measures would not be required.

Reason: To ensure that the developer has fully demonstrated that the construction project would not give rise to vibration levels that would affect the amenity of Fife's coastal communities nearest to the site of the off shore turbines.

Mr Adrian Tait  
Marine Scotland  
Marine Laboratory PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

Tel: +44 (0)23 8032 9191  
E-mail: Graeme.proctor@mcga.gov.uk  
Your ref: 018/W/MainS-10  
Our ref:  
31<sup>st</sup> August 2012

Dear Andrew

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1998 AND A MARINE LICENCE UNDER PART 4, SECTION 20 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE AN OFFSHORE WINDFARM, FIRTH OF FORTH**

Many thanks for your letter of 25<sup>th</sup> July inviting comment on the Environmental Statement (ES) for the proposed Mainstream Renewable Power Marine Licence application to construct and operate the Neart na Goithe wind farm.

The MCAs remit for offshore renewable energy development is to ensure that safety of navigation is preserved, as progress is made towards government targets for renewable energy. The full ES is a necessarily large and wide ranging series of documents, this response is focused on the shipping and navigation elements of the ES, primarily the Navigation Risk Assessment (NRA).

**Survey Data**

MGN 371 Annex 2 Paragraph 6 iii requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager. This information is yet to be submitted, Failure to report the survey or conduct it to Order 1a might invalidate the Navigational Risk Assessment if it was deemed not fit for purpose.

**Cumulative Impacts**

The cumulative impact assessment at appendix 17.1 chapter 16, provides a comprehensive overview. Traffic in the area although not heavy, will be displaced by the development; the effects therefore need to be carefully monitored.

**Safety Zones**

The requirements and provisos identified for Safety Zones at table annex 17.1 are correct, however it should be noted that a detailed justification would be required for



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Department for  
**Transport**

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a 50m operational safety zone, with significant evidence from the construction phase in addition to the baseline NRA required supporting the case.

**Cable Routes**

Export cable routes, cable burial protection index and cable protections are issues that are yet to be fully developed. However due cognisance needs to address cable burial and protection, particularly close to shore where impacts on navigable water depth may become significant. Existing charted anchorage areas should be avoided.

**Emergency Response & Co-operation Plans**

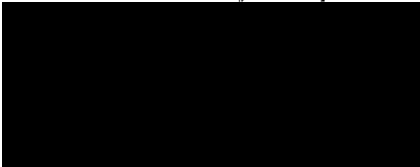
An Emergency Response & Cooperation Plan is required to meet the requirements of annex 4 and 5 of MGN 371. An approved ERCOP will need to be in place prior to consent being provided.

**Conclusion**

It is noted that the NRA does not draw any formal conclusions from its assessment; it has been used as a tool to outline impacts on traffic, its purpose purely to highlight risks, and consider any mitigation that may be appropriate in ensuring shipping will not be adversely impacted from the safety of navigation perspective.

The comments detailed above are not considered to be blocks to development, but provided to highlight areas of concern. Subject to the developer meeting requirements addressed in this letter, it provides a cautious acceptance of the licence request, detailed consent conditions will be provided once highlighted concerns are addressed.

Yours sincerely



Graeme Proctor  
MCA  
Navigation Safety

**NOT PROTECTIVELY MARKED**





MINISTRY OF DEFENCE

Adrian Tait  
SCOTTISH GOVERNMENT  
5 Atlantic Quay  
150 Broomielaw  
Glasgow  
G2 8LU

# Defence Infrastructure Organisation

David Naylor-Gray  
Safeguarding Officer  
Safeguarding - Wind Energy  
Defence Infrastructure Organisation  
Kingston Road  
Sutton Coldfield  
West Midlands  
B75 7RL

Telephone: [REDACTED]  
Facsimile: 0121 311 2218  
E-mail: [DIOOpsNorth-LMS7a2@mod.uk](mailto:DIOOpsNorth-LMS7a2@mod.uk)

**Your Reference:**

**Our Reference:** DIO/SUT/43/10/1/12560

19 October 2012

Dear Mr Tait

**DIO Reference Number: 12560**

**Site Name: Neart Na Gaoithe**

**Application for consent to construct and operate an offshore windfarm**

Thank you for consulting the Ministry of Defence (MOD) about the above planning application dated 25 July 2012

I am writing to inform you that the MOD objects to the proposal. We have been presented with two possible layouts. Our assessment has been carried out on the basis of the maximum number of turbines at the maximum height. Consequently our response is modeled on 128 turbines, 175 metres in height from ground level to blade tip and located at the grid reference below as stated in the planning application or provided by the developer:

Turbine	100km Square letter	Easting	Northing
1	NO	80667	07183
2	NO	80623	06334
3	NO	81069	05676
4	NO	81473	05081
5	NO	81900	04452
6	NO	82329	03822
7	NO	82752	03195
8	NO	83179	02566
9	NO	79563	11309
10	NO	79871	10599
11	NO	80160	09971
12	NO	80528	09311
13	NO	80897	08650
14	NO	81265	07991
15	NO	81633	07330
16	NO	82002	06670
17	NO	82370	06009
18	NO	82739	05350
19	NO	83107	04690

20	NO	83430	04113
21	NO	83844	03370
22	NO	84213	02709
23	NO	80094	12093
24	NO	80495	11373
25	NO	80827	10776
26	NO	81196	10117
27	NO	81564	09457
28	NO	81933	08796
29	NO	82301	08137
30	NO	82670	07476
31	NO	83038	06816
32	NO	83407	06155
33	NO	83775	05496
34	NO	84144	04836
35	NO	84512	04175
36	NO	84881	03516
37	NO	85249	02855
38	NO	80758	12904
39	NO	81022	12245
40	NO	81495	11583
41	NO	81864	10923
42	NO	82232	10263
43	NO	82601	09603
44	NO	82969	08942
45	NO	83338	08283
46	NO	83706	07622
47	NO	84074	06962
48	NO	84443	06302
49	NO	84811	05642
50	NO	85180	04982
51	NO	85548	04321
52	NO	85917	03662
53	NO	86285	03001
54	NO	86654	02341
55	NO	81808	13257
56	NO	82163	12389
57	NO	82531	11729
58	NO	82900	11069
59	NO	83268	10409
60	NO	83637	09748
61	NO	84005	09089
62	NO	84374	08429
63	NO	84742	07768
64	NO	85111	07108
65	NO	85479	06448
66	NO	85848	05788
67	NO	86216	05128
68	NO	86585	04468
69	NO	86953	03808
70	NO	87321	03147
71	NO	87690	02487
72	NO	82240	14116

73	NO	82831	13196
74	NO	83199	12535
75	NO	83568	11876
76	NO	83943	11202
77	NO	84305	10555
78	NO	84673	09894
79	NO	85042	09235
80	NO	85410	08575
81	NO	85778	07914
82	NO	86147	07255
83	NO	86515	06594
84	NO	86884	05934
85	NO	87252	05274
86	NO	87621	04614
87	NO	87989	03954
88	NO	88358	03293
89	NO	88726	02634
90	NO	83130	14662
91	NO	83499	14002
92	NO	83867	13342
93	NO	84235	12681
94	NO	84604	12022
95	NO	84972	11361
96	NO	85341	10701
97	NO	85709	10041
98	NO	86078	09381
99	NO	86446	08721
100	NO	86815	08060
101	NO	87183	07401
102	NO	87552	06740
103	NO	87920	06080
104	NO	88289	05420
105	NO	88657	04760
106	NO	89012	04136
107	NO	89388	03440
108	NO	89762	02780
109	NO	84167	14808
110	NO	84512	14135
111	NO	84904	13488
112	NO	85273	12828
113	NO	85660	12135
114	NO	86010	11507
115	NO	86378	10847
116	NO	86747	10187
117	NO	87115	09527
118	NO	84840	15617
119	NO	85211	14959
120	NO	85583	14301
121	NO	85955	13642
122	NO	86327	12984
123	NO	86699	12324
124	NO	87029	11665
125	NO	87443	11008



126	NO	90415	02272
127	NO	85603	02348
128	NO	87343	08799

### **Air Traffic Control (ATC) Radar**

The turbines will be 34.3-47.6 km from, detectable by, and will cause unacceptable interference to the ATC radar at RAF Leuchars.

Wind turbines have been shown to have detrimental effects on the performance of MOD ATC and Range Control radars. These effects include the desensitisation of radar in the vicinity of the turbines, and the creation of "false" aircraft returns which air traffic controllers must treat as real. The desensitisation of radar could result in aircraft not being detected by the radar and therefore not presented to air traffic controllers. Controllers use the radar to separate and sequence both military and civilian aircraft, and in busy uncontrolled airspace radar is the only sure way to do this safely. Maintaining situational awareness of all aircraft movements within the airspace is crucial to achieving a safe and efficient air traffic service, and the integrity of radar data is central to this process. The creation of "false" aircraft displayed on the radar leads to increased workload for both controllers and aircrews, and may have a significant operational impact. Furthermore, real aircraft returns can be obscured by the turbine's radar returns, making the tracking of conflicting unknown aircraft (the controllers' own traffic) much more difficult.

### **Precision Approach Radar (PAR)**

The turbines will be 34.2-40.9 km from the PAR at RAF Leuchars. Turbines 72, 73 and 90 will be detectable by and will cause unacceptable interference to the Radar.

The MOD's PAR is a very accurate radar used by air traffic controllers to guide aircraft down in inclement weather (although the procedure is practised in all weather conditions). The accuracy and integrity of this radar is critical as air traffic controllers must control the aircraft in descent and very close to the ground. Wind turbines constructed in line of sight of the PAR can cause localised "track seduction", leading to aircraft disappearing from the radar. A further possible effect is the overload of the radar's processor, in that wind turbines generate "false plots" which use up processing ability. Once its threshold is reached the radar may be unable to detect smaller targets, which are likely to be aircraft in head-on profile. Technical aspects of the PAR are covered by international arms traffic regulations, and therefore cannot be released by the MOD, but on these grounds the MOD will object to any wind turbine constructed within the PAR's coverage.

### **Air Defence (AD) radar**

The turbines will be 91.8-106.1 km from the Air Defence Radar at Brizlee Wood. A field strength coverage plot indicates that 84 turbines to the East and South of the development will be visible to the Radar and that 44 turbines to the North and West will not be. We are in the process of carrying out a more accurate "Level 3" assessment. However, on the basis of the current assessment it has been determined that the development will cause unacceptable interference to the Radar.

Trials carried out in 2005 concluded that wind turbines can have detrimental effects on the operation of radar which include the desensitisation of radar in the vicinity of the turbines, and the creation of "false" aircraft returns. The probability of the radar detecting aircraft flying over or in the vicinity of the turbines would be reduced, and the RAF would be unable to provide a full air surveillance service in the area of the proposed wind farm.

## **Physical Safeguarding**

I am still awaiting the results of an assessment of the physical impact of the development on off-shore defence interests.

## **Lighting**

If the developer is able to overcome the issues stated above, the MOD will request that all turbines be fitted with 200 candela omni-directional red lighting or the new approved 2000cd/IR combination maritime lights at the highest practicable point.

MOD Safeguarding wishes to be consulted and notified about the progress of planning applications and submissions relating to this proposal to verify that it will not adversely affect defence interests.

I hope this adequately explains our position on the matter. Further information about the effects of wind turbines on MOD interests can be obtained from the following website:

**MOD:** <http://www.mod.uk/DefenceInternet/MicroSite/DIO/WhatWeDo/Operations/ModSafeguarding.htm>

Yours sincerely

David Naylor-Gray  
Safeguarding Officer – Wind Energy  
Defence Infrastructure Organisation

**SAFEGUARDING SOLUTIONS TO DEFENCE NEEDS**

**From:** [Gibson P \(Philip\)](#)  
**To:** [MS Marine Licensing](#)  
**Subject:** Neart na Gaoithe Offshore Wind farm  
**Date:** 24 September 2012 10:24:24

---

**REF: 018/ow/MainS - 10**

With regard to the above application, I spoke to [REDACTED] of FMA (Pittenweem) Ltd, and [REDACTED] (Chartered Accountant), who both act as Agents for a number of the Fife based commercial fishing vessels.

[REDACTED] confirmed that he had also received consultation paperwork and had already put in a reply on behalf of the vessels that work through his office. [REDACTED] advised me that she had still to complete a reply to the consultation, but was also putting comments back in writing.

Both said that they had fishermen who had concerns about the proposal put forward. [REDACTED] had already suggested some adjustments to the proposal which had been put back in his reply. The information they have from their "members" would be the same comments that I would receive as these are the vessels I would have consulted with.

The area of the proposed Wind Farm was, historically well used by Demersal Trawlers. Fishing in the area has changed now, with more boats pursuing Nephrops, Scallops, Squid and other Shellfish. Numbers are reduced but there are still fishing boats using various different methods working close to the area in question. The position of the cable is probably going to have more of an affect on the boats working from the southern side of the Forth around Port Seton, Dunbar and North Berwick. Several of the Pittenweem Trawlers and Creelers do work in that area, and their comments will be highlighted by [REDACTED] and [REDACTED]

It is worth noting that reference is made in the application to fishing vessels over 15 metres. This unfortunately only covers 1 of the Anstruther District fleet. The rest of the fleet – around 104 vessels - are actually below this size. There are vessels below 10 metres overall length who work Trawl and Creel methods out towards the Bell Rock grounds. This does not take into account any of the Arbroath based Creel fleet which is covered by the Aberdeen Fishery Office.

Regards

**Philip Gibson**

Senior Fishery Officer

Marine Scotland – Compliance

Scottish Government | Fishery Office | 28 Cunzie Street | Anstruther | Fife KY10 3DF

Tel: +44 (0)300 244 9100

Mob:+44 (0)7796 196735

Fax: +44 (0)1333 311320

e: [philip.gibson@scotland.gsi.gov.uk](mailto:philip.gibson@scotland.gsi.gov.uk)

w: <http://www.scotland.gov.uk/marinescotland>

**From:** [REDACTED] on behalf of [NERL Safeguarding](#)  
**To:** [MS Marine Licensing](#)  
**Subject:** Proposed Windfarm: Neart Na Gaoithe (Our Ref: W(F)8577)  
**Date:** 30 July 2012 07:29:06

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The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NERL (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NERL in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours faithfully,

[REDACTED]  
On behalf of NERL Safeguarding Office

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# Northern Lighthouse Board

**CAPTAIN PHILLIP DAY**  
**DIRECTOR OF MARINE OPERATIONS**

Your Ref: 018/OW/MainS - 10  
Our Ref: AJ/OPS/ML/O6\_12\_137

Mr Adrian Tait  
Licensing Casework Manager  
Marine Planning and Policy Division  
Marine Laboratory  
PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

84 George Street  
Edinburgh EH2 3DA  
Switchboard: 0131 473 3100  
Fax: 0131 220 2093  
Website: [www.nlb.org.uk](http://www.nlb.org.uk)  
Email: [enquiries@nlb.org.uk](mailto:enquiries@nlb.org.uk)



20 August 2012

Dear Adrian

## **The Marine (Scotland) Act 2010**

*The marine Works (EIA) Regulations 2007 (as amended)*

### **Application for consent under Section 20 of the Marine (Scotland) Act 2010 to construct and operate an Offshore Wind Farm, Neart na Gaoithe, Firth of Forth.**

Please find our response to the Section 20 application by **Mainstream Renewable Power** regarding the intention to construct and operate the Neart na Gaoithe Offshore Wind Farm in the Firth of Forth.

With regard to the consultation and the scope of the assessment, we would only comment on any part relating to Shipping and Navigational Safety. We would require that Notices to Mariners, Radio Navigation Warning and publication in appropriate bulletins will be required stating the nature and timescale of any works carried out in the marine environment relating to this project.

We would propose that marking and lighting schedules for the site will be required for the three phases of the windfarm life, namely the construction, operational and decommissioning phases, to give the best possible indication to the mariner of the nature of the works being carried out.

#### **Construction Phase**

During the construction phase we require that the site boundary shall be marked by seven buoys as follows:

- 1 x North Cardinal Buoy
- 2 x West Cardinal Buoys
- 2 x South Cardinal Buoys
- 2 x East Cardinal Buoys, one of which would be fitted with an X/S band radar beacon (Racon).

NLB will advise suitable positions for each buoy once the final site design is published.

Mr Adrian Tait

20 August 2012

All buoys shall be a minimum of 3 metres in diameter at the waterline, have a focal plane of at least 3 metres above the waterline, be fitted with a radar reflector, and be of suitable construction for the sea conditions commonly experienced in the Firth of Forth and North Sea. The light range on all buoys shall be 5 Nautical Miles. All required buoyage shall remain in place until completion of the construction phase.

During this construction phase, any vessel engaged in these works shall be marked in accordance with the International Rules for the Prevention of Collisions at Sea whilst under way, and in accordance with the Standard Marking Schedule for Offshore structures if secured to the seabed.

### Operational Phase

We are unable to specify final marking and lighting requirements owing to the lack of clarity in the licence application with regard to the number and layout of turbines and the number and location of offshore sub-stations (as stated in our response letter Ref;O6-12-133), which we must be consulted on. Final requirements will be specified once these are confirmed.

In general terms, during the Operational Phase the windfarm site shall be marked and lit as per IALA Recommendation O-139 as follows:

- The tower of every wind generator should be painted yellow all round from the level of Highest Astronomical Tide (HAT) to 15 metres or the height of the Aid to Navigation, if fitted, whichever is greater.
- The structures designated as Significant Peripheral Structures (SPS) shall have lights visible from all directions in the horizontal plane. These lights should be synchronised to display a character of one yellow flash every 5 seconds, with a range of not less than 5 nautical miles.
- Selected Intermediate Structures (IS) on the periphery of the wind farm should be marked with lights visible from all directions in the horizontal plane. These lights should be synchronised to display a character of one yellow flash every 2.5 seconds, with a range of not less than 2 nautical miles.
- All lights shall be placed not less than 6 metres and not more than 30 metres above Mean High Water Springs (MHWS)
- A sound signal shall be attached to each SPS and IS as to be audible upon approaching the wind farm from any direction. The sound signal should be placed not less than 6 metres and not more than 30 metres above MHWS and should have a range of at least 2 nautical miles. The character shall be rhythmic blasts corresponding to Morse letter 'U' every 30 seconds. The minimum duration of the short blast shall be 0.75 seconds. The sound signal shall be operated when the meteorological visibility is two nautical miles or less. All sound signals should be synchronised.
- Each tower shall display identification panels with black letters or numbers one metre high on a yellow background visible in all directions. These panels shall be easily visible in daylight as well as at night, by the use of illumination or retro-reflecting material.
- All navigation lights should have an availability of not less than 99.8% (IALA Category 1) over a rolling three year period. Sound signals should have an availability of not less than 97% (IALA Category 3) over a rolling three year period.



Mr Adrian Tait

20 August 2012

Appropriate means of ensuring the required IALA Availability target for Category 1 AtoN is achieved through redundancy, monitoring and repair must be in place, and arrangements made to warn the Mariner promptly of any AtoN fault and its subsequent return to fully operational service.

Any existing Meteorological Masts within the site area will have marking and lighting amended to suit the final layout of the wind farm.

The marking and lighting of the wind farm may require to be altered or amended to reflect development of the adjacent Round 3 site in order to form a continuation of suitable marking of the area occupied by turbines and sub-stations. Neart na Gaoithe operator must co-operate fully in this matter.

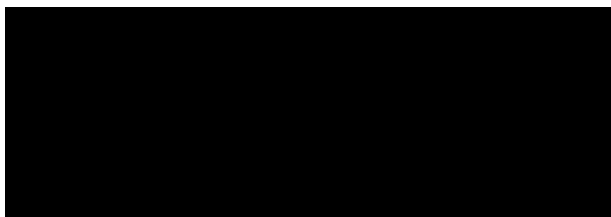
We also require that once agreed, the final number, layout and positions of each of the wind turbine generators, along with that of any sub-sea infrastructure is communicated to the UKHO in order that all the relevant nautical charts are correctly updated.

#### Decommissioning Phase

When the site eventually reaches the end of its designed life and there is a need to enter into dialogue with stakeholders on decommissioning options, we would require that the Northern Lighthouse Board is consulted on the requirement for marking and lighting during this phase.

All navigational marking and lighting of the Offshore Wind Farm site or its associated marine infrastructure will require the Statutory Sanction of the Northern Lighthouse Board prior to deployment.

I would be obliged if any further communication to the Northern Lighthouse Board can be sent via fax on 0131 220 0235, e-mail to [navigationxnlb.org.uk](mailto:navigationxnlb.org.uk) or our postal address as letterhead.



# Northern Lighthouse Board

**CAPTAIN PHILLIP DAY**  
**DIRECTOR OF MARINE OPERATIONS**

Your Ref: 018/OW/MainS - 10  
Our Ref: AJ/OPS/ML/O6\_12\_133

Mr Adrian Tait  
Licensing Casework Manager  
Marine Planning and Policy Division  
Marine Laboratory  
PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

84 George Street  
Edinburgh EH2 3DA  
Switchboard: 0131 473 3100  
Fax: 0131 220 2093  
Website: [www.nlb.org.uk](http://www.nlb.org.uk)  
Email: [enquiries@nlb.org.uk](mailto:enquiries@nlb.org.uk)



10 August 2012

Dear Adrian

## **The Electricity Act 1989**

*The Electricity Works (EIA) (Scotland) Regulations 2000*

## **S36 Application for consent for the Neart na Gaoithe Offshore Wind Farm Transmission works.**

Please find our response to the Section 36 application by **Mainstream Renewable Power** regarding the Neart na Gaoithe Offshore Wind Farm Transmission Works in the Firth of Forth.

With regard to the consultation and the scope of the assessment, we would only comment on any part relating to Shipping and Navigational Safety. We would require that Notices to Mariners, Radio Navigation Warning and publication in appropriate bulletins will be required stating the nature and timescale of any works carried out in the marine environment relating to this project.

We note that there remains no final decision on the number and location of the Offshore Sub-Station platforms to be used in the transmission works other than there will be one or possibly two locations selected from the four indicative locations in the application documentation. Marking and lighting recommendations for these sub-stations will be given once final plans are submitted. They will be marked and lit under the requirements of the Marine Licence for the Neart na Gaoithe Offshore Wind Farm.

In addition we require marking and lighting at the landfall site of the export cable route at the Thorntonloch location. This would be achieved by Lit Cable Marker Boards positioned as near as possible to the shoreline so as to mark the points at which the cables come ashore. The Cable Marker Boards shall be diamond shaped, with dimensions 2.5 metres long and 1.5 metres wide, background painted yellow with the inscription 'Cables' painted horizontally in black. The marker boards shall be mounted at least 4 metres above ground level, with a navigation light flashing yellow once every five seconds (Fl Y 5s) mounted on the upward apex of the board. The nominal range of each light should be 3 nautical miles. It will be acceptable to screen the navigation light to landward.

Page 2

*For the safety of all*

*Certified to: ISO 9001:2000 · The International Safety Management Code (ISM) · OHSAS 18001*

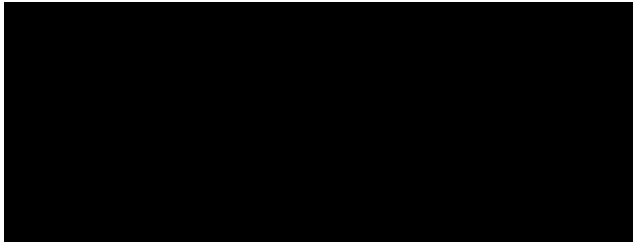
Mr Adrian Tait

10 August 2012

We would further require that the cable route(s) and landfall site, along with any sub-sea infrastructure is communicated to the UKHO in order that all the relevant nautical charts are correctly updated.

All navigational marking and lighting of the cable landing site or its associated marine infrastructure will require the Statutory Sanction of the Northern Lighthouse Board prior to deployment.

I would be obliged if any further communication to the Northern Lighthouse Board can be sent via fax on 0131 220 0235, e-mail to [navigation@nlb.org.uk](mailto:navigation@nlb.org.uk) or our postal address as letterhead.



Mainstream Renewable Power  
Nearth na Gaoithe Offshore Wind Limited  
Sheppard & Wedderburn  
191 West George Street  
Glasgow  
G2 2LB

Date 23 August 2012

Our Ref. DM/EIA/Nearth na Gaoithe/4.2.1.1701.

Dear Sir or Madam

Hazardous Installations Directorate

**Dean Moffat**

Chemical Industries Division  
Belford House  
59 Belford Road  
Edinburgh  
EH4 3UE

Tel: 0131 247 2000  
Fax: 0131 247 2041  
Landuseplanning.Scotland@hse.gsi.gov.uk

<http://www.hse.gov.uk/>

HM Principle Inspector of Health & Safety  
Mrs Jo Walker

**ENVIRONMENTAL ASSESSMENT FOR PROPOSED NEARTH NA GAOITHE OFFSHORE WIND FARM**

Thank you for your letter enclosing a copy of the environmental statement for the proposed development.

Environmental Impact Assessments are concerned with projects which are likely to have significant effects on the environment. HSE's principal concerns are the health and safety of people affected by work activities. HSE has no comments on this environmental statement.

Yours faithfully



Dean Moffat  
HID C11B Edinburgh



nature's voice

RSPB SCOTLAND

Adrian Tait - Licensing Casework Manager  
Marine Scotland – Licensing Operations Team  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB

8th October 2012

Dear Mr Tait

**Neart na Gaoithe Offshore Wind Farm Application for Marine Licenses and Section 36 Consents**

Thank you for inviting RSPB Scotland to comment on the proposed Neart na Gaoithe offshore wind farm application located ~15.5km to the east of Fife Ness and extending to some 105km<sup>2</sup>.

RSPB Scotland welcomes the approach taken by the applicant, including the extensive survey effort and appropriate application of assessment methodologies as demonstrated in the relevant ornithological sections of the environmental assessment documentation. In part, we also consider the assessment on impacts to ornithological interests to be adequate and appropriate. However, we have identified specific fundamental issues that need to be addressed:

1. The reporting includes fundamental inaccuracies and discrepancies in the presented data, which leads to incorrect interpretation and assessment of potential effects.
2. Inappropriate application of the Rochdale Envelope approach which makes appraisal of the assessment difficult.
3. The cumulative impact assessment is founded upon limited understanding and knowledge. This is due to a significant lack of available information on population scale effects of offshore wind development on bird species in the Forth & Tay and lack of design detail of the Inch Cape and Firth of Forth Round 3 offshore wind farm proposals.

In light of these issues, RSPB Scotland **objects** to the proposals as currently presented within the application. We would be happy to review our position should further



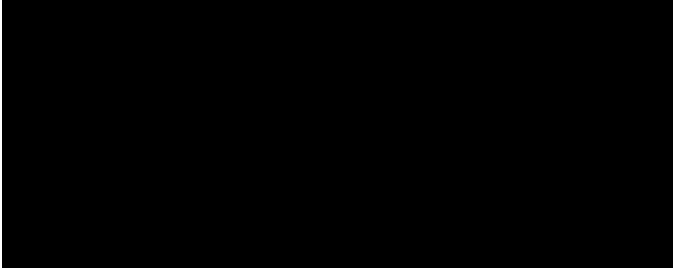
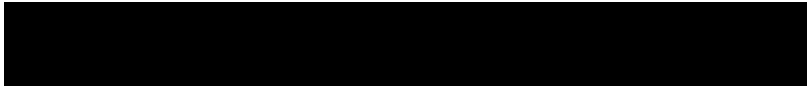
[www.rspb.org/scotland](http://www.rspb.org/scotland)



information be provided to address these issues. Further detail and explanation of the concerns raised are presented in Annex 1.

We are willing and would welcome any requests to discuss in detail any of the points or advice raised in our response.

Yours sincerely,

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## **ANNEX 1 – Neart na Gaoithe Offshore Wind Farm Application: RSPB Scotland Consultation Response (October 2012)**

### **Background**

The Neart na Gaoithe proposal comprises 64 - 125 turbines with a maximum site capacity of 450 MW and includes export cables that run south west from the site making landfall at Thorntonloch beach to the south of Torness Power Station. Neart na Gaoithe lies relatively close to two separate sites leased for offshore wind development, including Inch Cape comprising 180 turbines/ 1GW; and Firth of Forth Round 3 with a maximum 3.5GW capacity. The proposed project programme for Neart na Gaoithe seeks to start construction in 2015 with a completion date set for 2016.

### **Key Concerns**

RSPB Scotland has identified specific fundamental issues that need to be addressed, which are summarised here and detailed further in the sections below:

1. The reporting includes fundamental inaccuracies and discrepancies in the presented data. This leads to incorrect interpretation and assessment of potential effects and an associated redundancy in conclusions made on significance of effects to species and/ or designated sites. This issue is particularly relevant to the assessment of northern gannet.
2. The environmental assessment has progressed through use of the Rochdale Envelope approach, which is an accepted approach taken for assessing the potential impacts of offshore wind developments. However, in this instance, the degree of flexibility given between the minimum and maximum parameters leads to widely varying conclusions for the same potential impacts. The extent of this variety makes it very difficult to judge the acceptability of the development, particularly as the worst case scenario, assessed using a precautionary approach, results in unacceptable environmental impacts. In this regard RSPB Scotland seek further definition and refinement of the development parameters to better align and increase the accuracy of the assessment to what may eventually be developed.
3. At present there is a lack of information that would otherwise enable a robust cumulative impact assessment of Neart na Gaoithe in combination with two other offshore wind farm proposals in the Forth and Tay, namely Inch Cape and Firth of Forth Round 3. Currently there is less than two years baseline ornithological data and limited development design detail for the two other proposals. In addition, there is little contextual information on the population scale effects of offshore wind farm development on bird species in the Forth & Tay area. We consider it reasonable and necessarily precautionary to postpone the cumulative impact assessment for Neart na Gaoithe, until sufficient information is made

available. We understand this information will be available early 2013, so any delay would be relatively limited.

RSPB Scotland is concerned that significant effects under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended) and the effects on integrity of the conservation objectives of the Natura network under the Conservation (Natural Habitats & c) Regulations 1994 (as amended) have not been adequately addressed in the environmental assessment as presented. In this regard, we would seek clarification on the issues noted below and also that additional information is presented to inform our considerations of this application, including:

- the supply of revised and amended sections of environmental reporting and clarification of issues identified below.
- further refinement of the development parameters to better reflect what may actually be built and hence increase the accuracy of the environmental assessment.
- a revised cumulative impact assessment, undertaken and informed by:
  - published information presented in Marine Scotland's completed research package on population scale effects of offshore wind farm development on seabird species (particularly relevant to auks) in the Forth & Tay, expected spring 2013;
  - design information submitted as part of the applications for Firth of Forth Round 3 (expect autumn 2012) and Inch Cape (expected spring 2013) offshore wind farms.

### **Species Sensitivity Scores**

The use of species sensitivity scores is a suitable way of assessing the impacts of offshore developments. The first of these was created by Garthe and Hüppop (2004)<sup>1</sup>, and reviewed by a panel of experts. This was considered to be appropriate for developments in German waters, but less so for British waters. By literature review, Langston (2010)<sup>2</sup> drew up an index more appropriate to British waters, but with the caveat that it was not peer reviewed, or subject to an expert panel. Subsequently, Furness and Wade (2012)<sup>3</sup>, under contract to Marine Scotland, have produced an up-to-date index, appropriate for Scottish waters, reviewed by an expert panel and published in a peer-reviewed journal. The 2012 paper takes into account the widest range of factors to determine species sensitivity including conservation status and vulnerability factors for each species. In this regard Furness and Wade (2012) should be considered the more authoritative source, with Langston (2010) the secondary reference for species such as little gull that are not covered by the more recent review.

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<sup>1</sup> Garthe, S. & Hüppop, O. (2004) Scaling possible adverse effects of marine wind farms on seabirds: developing and applying a vulnerability index *Journal of Applied Ecology*, 41, 724-734.

<sup>2</sup> Langston, R. (2010) Offshore wind farms and birds: Round 3 zones, extensions to Round 1 & Round 2 sites & Scottish Territorial Waters *RSPB*, Sandy.

<sup>3</sup> Furness, R. W., Wade, H. M., Robbins, A. M. C., and Masden, E. A. 2012. Assessing the sensitivity of seabird populations to adverse effects from tidal stream turbines and wave energy devices. *ICES Journal of Marine Science*, 69



- The general approach in Chapter 12 is to present a ‘species sensitivity’ section, based on Langston 2010, SPA populations and distances, followed by a separate ‘Offshore wind farm studies’ section for each species. This should instead be based on Furness & Wade (2012).
- Presentation of ‘overall risk score’ without any consideration of the scores presented in Furness & Wade (2012) is misleading. The majority of species will be scored as ‘moderate’ in Langston (2010). But species scores vary considerably and should be considered in relation to each other.
- Skov *et al.* (1995), Stone *et al.* (1995) and Kober (2010) are used for non-breeding populations and this is a sound approach.
- The main reference for species sensitivity should be Furness and Wade (2012), with Langston (2010) a secondary reference for species (e.g. little gull) not included in the former.

### **Cumulative Impact**

The cumulative impact assessment is informed by information, which is limited in breadth and detail. This is evidenced by the following key points:

- Use of only 1 year’s worth of site ornithological data from Inch Cape and Firth of Forth Round 3.
- Incomplete or unavailable design information for the other two sites, with the assessment having to rely on a wide variety of assumptions. Whilst these assumptions are deemed sensible, it results in a great level of uncertainty in the assessment conclusions.
- There is a lack of understanding on population scale effects of offshore wind development on bird species in the Forth & Tay area. The applicant will be aware of the imminent commissioning of *Work Package D (Population dynamics of Forth & Tay breeding seabirds: Review of available models and modelling of key breeding populations)*, by Marine Scotland. This research package will seek to a) review the existing literature and population models relevant to the Forth and Tay wind farm developments and develop an appropriate (‘proof of concept’) model for kittiwake breeding populations and b) apply the agreed model used for kittiwake populations to the remaining breeding seabird species (with appropriate modifications as may be necessary) identified for the Forth and Tay Offshore Wind Developer Group.

Marine Scotland’s research is particularly relevant to the Neart na Gaoithe, Inch Cape and Firth of Forth Round 3 proposals given the presence of auk species in and around these sites. In addition to the fact that recent population trends are showing declines for auks; that they are susceptible to displacement; and they are at moderate to high risk of displacement from offshore wind farms. This is discussed in a report on displacement of auks at windfarms, commissioned in the context of the Neart na Gaoithe wind farm (McDonald *et al.*, 2012<sup>4</sup>), concluding:

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<sup>4</sup> McDonald, C., Searle, K., Wanless, S. And Daunt, F. 2012. Effects of displacement from marine renewable development on seabirds breeding at SPAs: a proof of concept model of common guillemots breeding on the Isle of May. *CEH*, Edinburgh.

*“displacement ... from an offshore wind farm could result in changes to their time/energy budgets with potential consequences for breeding performance and/or survival”*

In this regard, whilst the Neart na Gaoithe proposal can be considered as a development in isolation, Marine Scotland must establish what information they require to undertake an ‘appropriate assessment’ (under the Conservation (Natural Habitats & c) Regulations 1994 (as amended)) of the cumulative impacts of Neart na Gaoithe with the other Forth & Tay proposals. RSPB Scotland believes a reasonable approach is to postpone any consideration of cumulative impacts until sufficient information is made available to Marine Scotland so that they may make a robust assessment of the application. This information should include:

- design, survey and assessment details of the other two offshore wind farm proposals, both of which are soon to be submitted as applications to Marine Scotland; and
- Marine Scotland’s published research paper into the population scale effects of offshore wind development on bird species in the Forth & Tay (due for publication in spring 2013). Or indeed any interim findings of this research that enables Marine Scotland to adequately undertake their assessment.

### **Potential Barrier Effect**

The use of Thaxter et al (2012)<sup>5</sup> is appropriate. However, this impact cannot be assessed on its own, and the cumulative impacts from barrier effects caused by Neart na Gaoithe must be considered in combination with the two other Forth and Tay proposals.

### **Species Accounts**

**Fulmar:** Populations for places as far as Orkney are used in the figures input into the assessment of impacts (e.g. 12.6.2.3 – population). However, this is at odds with discounting cumulative impacts of Moray Firth proposals (Appendix 12. 1 Section 3.1). The approach used should be consistent and appropriately justified.

**Gannet:** Specifically in terms of gannets, the Appendix 12.1 - Technical Report and ES as presented are considered to be inadequate in determining significance of impact. RSPB Scotland request that all relevant sections are reviewed and amended in response to the key issues discussed below.

- Langston (2010) is misquoted in the report stating gannets are at moderate risk from offshore windfarms. Langston (2010) assesses overall risk as **high** and Garth & Huppopp 2004 give a score of 16.5 (i.e. rated 12/26 species).
- ES section 12.6.4.5 – quotes studies that state high risk of displacement and loss of foraging for gannet which contradicts the statements in section 12.6.4.2 that refer to these risks being rated as low. Furthermore, Leopold et al. (2011), in showing

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<sup>5</sup> Thaxter, C.B., Lascelles, B., Sugar, K., Cook, A.S.C.P., Roos, S., Bolton, M., Langston, R.H.W. & Burton, N.H.K. (2012) Seabird foraging ranges as a preliminary tool for identifying candidate marine protected areas. *Biological Conservation*

that gannets stopped foraging within the EaZ windfarm, suggested that habitat loss is effectively total.

SOSS-04 is taken out of context in terms of risk to population of removal of gannets. The figure quoted is of a 50% chance of causing population decline. A more cautious approach to population decline, at 95% probability of no decline, would reduce the number of “harvestable” gannets.

- The gannet CRA on two occasions inappropriately factors in ‘far field’ avoidance into the model. Both at the stage of factoring in birds flying into/avoiding the site, and again when the new avoidance rate is applied in the CRM. This is not a justifiable approach and has not been applied for other species.
- In the CRA, there are a number of inconsistencies and inaccuracies in the data presented, both in the text and tables. The CRA needs reviewing and correcting.
- A 1km buffer is inadequate for gannets, for which flight activity can be displaced 2-4km from a wind farm (Petersen *et al.* (2006)<sup>6</sup>, Krijgsveld *et al.* (2011)<sup>7</sup>). Both citations focus on migratory gannets, central place foraging theory predicts different behaviour for breeding birds.
- While other species have a behavioural category of “post-breeding period”, which is welcome, this is not included for gannets. Remote sensing of gannets shows that there is post-breeding, pre-migration dispersal of gannets for 4-6 weeks (Langston pers comm.).
- Page 87 of Appendix 12.1. The barrier effect is predicted to affect 26% of the gannet population. Although studies show the species has high resilience to extending foraging trips, this is still a very high percentage of the population to be affected. Therefore we disagree that overall barrier effect is ‘**not significant**’.
- Similarly in Section 4.4.7.7 - cumulative impact for barrier is high at 67%, we disagree that cumulative barrier effect is of minor significance, particularly for a species for which most individuals on site will be part of the qualifying interest of a nearby SPA.
- **Note:** The population increase of gannets in Britain and Ireland is slowing. Further slowing is likely, and their population will likely be impacted further if there are changes in fishery discard legislation.

**Common Guillemot:** Chapter 12, section 12.6.11.2 ‘Species Sensitivity’ contains only a summary of the relevant SPAs for which guillemot is a qualifying species. There is no assessment of species sensitivity from reference to published studies or assessment of the sensitivity.

No reference to or interpretation of McDonald 2012 is made in either the Species Baseline information section – 12.6.11 or the Species Impact Assessments – potential impacts – 12.7.10. The recent publication by McDonald 2012 (see full reference above) should be referenced and interpreted in this instance.

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<sup>6</sup> Petersen, I.K., Christensen, T.K., Kahlert, J., Desholm, M. and Fox, A.d. (2006) *Final results of bird studies at the offshore wind farm at Nysted and Horns Rev, Denmark*. National Environmental Research Institute, Rønde

<sup>7</sup> Krijgsveld, K. L., Fijn, R. C., Japink, M., van Horsen, P. W., Heunks, C., Collier, M., Poot, M. J. M., Beuker, D. & Dirksen, S. 2011. *Effect studies offshore wind farm Egmond aan Zee: Final report on fluxes, flight altitudes, and behaviour of flying birds*. Nordzeewind, Culemborg.

**Puffin:** We disagree that the effects of displacement on puffin would be not significant. Particularly given the statements in paragraph 507 relating to the potential temporal significance of displacement during post-breeding periods. Similarly we disagree with barrier effects being minor significance given, in light of the studies on increased energy expenditure from increased flight distances.

**For the auk species there is an assumption that sandeel rich areas lie beyond the barrier once they fly round or that having lost this area to forage in they can go elsewhere rather than these displaced birds failing to breed. The potential productivity impacts have therefore not been appropriately considered.**

**Kittiwake:** Given the sharp decline of this species in Scotland, we strongly disagree that the additive mortality for this species is not significant or is reversible.

### **Information to inform Habitats Risk Appraisal (HRA)**

Notwithstanding issues identified elsewhere in this annex, which will likely influence the conclusions relevant to the HRA, there are a number of discrepancies throughout Chapter 11 which make it difficult to identify what the assessment conclusions are. We would welcome a thorough review and amendment of Chapter 11, in light of the comments noted here, to enable proper consideration of the assessment.

- Chapter 11 does not make clear what data are used to make the assessments. This makes it difficult to follow the steps taken by the assessor in making their conclusions. For instance, there is no indication of what population estimates were used to calculate changes in baseline mortality rates: were they those made when SPAs were classified, or more recently? Although it appears that more recent estimates have been used, this should be specified, and for ease of reference these estimates should be presented and referenced in Chapter 11, under site information for each SPA.
- There are various discrepancies which lead to a confused presentation of the assessment and any conclusions made, making it difficult to appraise the potential significant impacts. Using the Forth Islands SPA (see Forth Islands SPA – Box 1.10 in Chapter 11) as an example:
  - In-combination – collision risk assessment states potential adverse effect on herring gull & lesser blacked back gull. However in conclusion it is stated that there are no in-combination adverse effects.
  - For kittiwake the baseline adult mortality rate of the population is stated to increase by 17.4% at 98% avoidance rate. However, in conclusion this percentage is reduced to 13.6%.
  - For herring gull there is reference to the condition of the site population as being last assessed under Site Condition Monitoring as ‘favourable maintained’, but also a more recent condition is provided from SMP 2012 as ‘unfavourable declining’. The conclusion reverts back to the ‘favourable maintained’ condition recommending an increased baseline mortality of 2.1% is predicted to not cause an adverse effect. The most recent condition should be used.

- RSPB recommended that the Solway Firth & Slamannan Plateau SPAs should be included in the HRA. However these SPAs were screened out from assessment and no explanation is given as to why. In light of current scientific knowledge of the migration routes of Svalbard barnacle goose and taiga bean goose, there is a *prima facie* possibility of impacts on both species as qualifying features of their respective SPAs. We would welcome an explanation for these SPAs having been screened out of the HRA, and a clear indication of the information used to conclude that there is no likely significant effect. In our view, appropriate assessment is needed of the effect of Neart na Gaoithe (on its own and in combination with other proposed Forth and Tay wind farms) on both qualifying goose species. A determination that there would be no adverse impact on site integrity may be possible in both cases – but such a conclusion can be drawn safely only in light of the more detailed appraisal that forms appropriate assessment.

### **Other Species**

RSPB Scotland's response has focused on ornithological elements of the environmental assessment, but we are also aware of inconclusive assessment on the potential negative effects on other mobile marine species, namely harbour seals and bottlenose dolphin, and consequently on the integrity of the Firth of Tay & Eden Estuary and Moray Firth Special Areas of Conservation (SACs) respectively. In this regard we consider that further assessment and information are likely to be required in order to meet the requirements of the Habitats Directive in determining this application.

### **Mitigation and Monitoring**

- Should the proposal be consented, RSPB Scotland would request to be consulted on the preparation of the Site Environmental Management Plan and the Construction Management Plan
- Similarly, we would wish to be consulted in the preparation of the Monitoring Plan. This is of particular importance given the need to understand the accuracy of the models used in the environmental assessment and to inform future development of offshore wind. In this regard the monitoring plan must be rigorous and robust.

### **General Comments**

- The layout of the Environmental Statement is in landscape making it difficult to read at normal A4 page size and also when reading on a computer screen. This makes it more time consuming and difficult to review the documents.
- There is extensive cross referencing between chapters and appendices. This makes it very difficult to follow the logical process of thought taken by the assessor and seems to have resulted in numerous discrepancies between the data presented in different sections.
- Maps in Appendix 12.1 - Technical Report are incorrectly and poorly labelled.
- Statements are repeatedly made in Chapter 12 concerning 'existing wind farm studies,' however there are no references provided.

- There is undue and unattainable accuracy in reporting of flight height below 22.5 metres, into 5m bands, and then no breakdown in height above this.
- The use of buffers is confusing. Initial text refers to the survey boundary, with an 8km buffer, but then for all species a 1km buffer is considered adequate for modelling impacts. For gannets and auk species a 1km buffer is inadequate.
- Incomplete references e.g. McDonald *et al*, 2012, and Roos *et al*, 2008 are cited in Appendix 12.1 –Technical Report but are missing from bibliography
- Use of a default generic 1% threshold to determine whether the rate of change in mortality is significant is not considered to be best practice. Each species should be considered on their own merits, using contemporary data.
- Use of appropriate rate of change in baseline mortality. We would recommend those presented in Furness and Wade (2012)<sup>8</sup>.

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<sup>8</sup> Furness, R. W., Wade, H. M., Robbins, A. M. C., and Masden, E. A. 2012. Assessing the sensitivity of seabird populations to adverse effects from tidal stream turbines and wave energy devices. *ICES Journal of Marine Science*, 69

Marine Licensing  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB

Caledonia House  
1 Redheughs Rigg  
South Gyle  
Edinburgh  
EH12 9DQ

Tel: +44 (0)131 317 7388  
Fax: +44 (0)844 556 9549  
Email: [admin@ryascotland.org.uk](mailto:admin@ryascotland.org.uk)  
Web: [www.ryascotland.org.uk](http://www.ryascotland.org.uk)

17 August 2012

Dear Sir/Madam

### **Neart Na Gaoithe Offshore Wind Farm Environmental Statement**

I have read the relevant parts of the Environmental Statement on behalf of the RYA and RYA Scotland and am broadly in agreement with them although there are some points that need to be clarified. The cable landfall should not pose any problems and the layout of the wind farm with associated structures is unlikely to cause a significant impediment to navigation by day or by night.

#### **Chapter 7 section 5.3.1**

The promulgation of Notices to Mariners by established channels is important. However, it may be unrealistic to expect recreational sailors to continually monitor these notices because of the sheer number of Notices to Mariners associated with the development of all forms of renewable energy schemes. Also, vessels may be on a long cruise or coming from a continental port and unable to access Notices to Mariners. Thus it is suggested that Notices to Mariners are distributed to and publicised in marinas and harbours from which recreational vessels are likely to make passage through this area.

#### **Chapter 7 section 5.6 and elsewhere**

There are inconsistencies in the figures quoted for clearance below the blades. In the Navigational Risk Assessment and in chapter 17 the industry standard of not less than 22 m above mean High Water Springs is quoted. However, Fig. 5.2.1 gives a gap of 26 m above LAT and Table 6.1 gives MHWS as 4.9 m above LAT resulting in a gap of only 21.9 m. Although the discrepancy is not large, consistency and accuracy throughout the ES is important. It is recommended that in accordance with guidance given in MGN 371(M+F), air draughts are quoted above MHWS (being not less than 22m) and tidal heights are quoted above Chart Datum (CD).

#### **Chapter 7 Section 5.13**

We very much welcome the collaboration between the Forth and Tay Developers' Group and the Moray Firth Offshore development to develop common mitigation strategies and hope that this will extend to the other two proposed East Coast offshore sites.

#### **Appendix 17.1**

It is unclear whether all the recommendations in this NRA are considered as requirements in chapter 17. For example it is not clear that the useful comments in the last paragraph of section 5.2.6 have been considered as part of the proposed mitigation. The current usage of this area by recreational craft is not particularly high. However, the RYA estimates that fewer than 10% of such craft transmit an AIS signal. Also, I would expect traffic to be greatest at the beginning and end of the sailing season as vessels are on passage, for example to Orkney or the Caledonian Canal and beyond. Thus the figures quoted are likely to be an underestimate.

Moreover, marine tourism is still expanding and is influenced by publicity campaigns and the opening of new facilities. It is suggested that risks are reduced because of low numbers of recreational craft. However, the opposite could also be argued as a better watch is likely to be kept where other vessels are expected. I broadly agree with the comments made about radar in Table 17.7 but note the important statements in section 2.3 of the NRA that the radar operator may adjust the gain on the set to minimise clutter and as a result may be unable to spot recreational craft. I am not as confident about the attentiveness of watchkeepers in this area as the authors of the ES as it is still a considerable distance off the reporting point for the Forth and Tay Navigation Service.

I assume that operational safety zones are not being considered although this is unclear from the NRA. The RYA accepts the declaration of temporary 500 m safety zones around offshore structures, construction vessels and cable laying vessels for the period of construction, specified maintenance operations and decommissioning of a project. However, the RYA continues to object to any application to declare a general 50 m safety zone during normal operations which would make it a criminal offence for all types of vessel irrespective of their size and activity to enter or remain in a safety zone unless given express permission to do so.

Yours sincerely,



PP

RYA Scotland Planning and Environment Officer

Copy To:

CC 



**SCOTTISH BORDERS COUNCIL**

**PLANNING AND BUILDING STANDARDS COMMITTEE**

**10 DECEMBER 2012**

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT  
1989 AND MARINE LICENCES UNDER PART 4, SECTION 20 OF THE MARINE  
(SCOTLAND) ACT 2010**

<b>ITEM:</b>	<b>REFERENCE NUMBER:</b>	12/00966/S36
<b>OFFICER:</b>	Ian Aikman	
<b>WARD:</b>	East Berwickshire	
<b>PROPOSAL:</b>	To construct and operate an offshore windfarm comprising of up to 125 turbines	
<b>SITE:</b>	Near Na Gaoithe Offshore Wind Farm, Firth Of Forth	
<b>APPLICANT:</b>	Mainstream Renewable Power	
<b>AGENT:</b>	None	

**1.0 PURPOSE OF REPORT**

- 1.1 To advise the Scottish Government of the response from Scottish Borders Council on the application by Mainstream Renewable Power to construct and operate an offshore windfarm at Near Na Gaoithe in the Firth of Forth.

**2.0 PROCEDURE**

- 2.1 Marine Scotland process applications for off-shore renewable energy developments of more than 1 MW within 12 nautical miles of the shore but consult relevant Local Authorities for their views on such proposals. They advertise the application and carry out direct consultation with other interested bodies. There is, therefore, no need for Scottish Borders Council to undertake a tandem process although consultation has taken place with relevant officers within the Council. Marine Scotland has made officers aware of comments received from other interested parties.
- 2.1 Unlike for shore windfarm development, it is Marine Scotland, rather than the planning authority, that are also the relevant enforcement authority responsible for monitoring compliance with the terms of an approval and any conditions imposed thereon.

**3.0 SITE DESCRIPTION:**

- 3.1 The proposed Near na Gaoithe offshore wind farm is located to the north east of the Firth of Forth, 15.5 km directly east of Fife Ness. At its nearest point the proposed windfarm will be over 30 km to the north of the Scottish Borders coastline.
- 3.2 Near na Gaoithe is adjacent to other proposed offshore windfarms at Inch Cape (approximately 180 turbines; 1GW) and Firth of Forth Round 3 (three phases, totalling 3.5GW). These other proposals are at different stages of the

planning process and it is unlikely, due to their relative distance from the Scottish Borders, that the Council will be consulted on these applications.

#### 4.0 PROPOSED DEVELOPMENT:

- 4.1 In May 2008, the Crown Estate invited developers to bid for potential offshore wind farm sites within Scottish territorial waters. The Crown Estate subsequently offered exclusivity agreements for ten sites around Scotland, with the potential to generate over 6 Gigawatts (GW). Mainstream Renewable Power was awarded one of these exclusivity agreements and is now seeking to apply to the Scottish Government for consent to construct and operate an offshore wind farm at Neart Na Gaoithe.
- 4.2 The proposed wind farm will cover an area of approximately 105 km<sup>2</sup>, comprising between 75 and 125 turbines, and have a maximum capacity of up to 450 megawatt (MW). The proposal sets out a range of potential turbine options ranging from 64 to 125 turbines at between 175m to 197m to blade tip height above lowest astronomical tide (LAT). The options being considered are set out table 21.2 below, which is extracted from the Environmental Statement:

Table 21.2

Turbine Options	Number of turbines	Tip height above lowest astronomical tide (LAT)	Hub height above LAT	Rotor diameter
7 MW	64	197 m	115 m	164 m
6 MW	75	175.5 m	115 m	121 m
4.1 MW	109	171.25 m	115 m	112.5 m
3.6 MW	128*	175 m	115 m	120 m

\* - a maximum of 125 will be constructed

- 4.3 At this stage, the design of the wind farm, in terms of turbine height, turbine numbers, and layout, has not been finalised. The application is therefore being progressed using a 'Rochdale Envelope' approach, which allows flexibility for the project to evolve during the consenting process. This approach has been agreed by Marine Scotland. The Environmental Statement therefore makes its assessment of visual impacts on the basis of two scenarios: a maximum height scenario and a maximum density scenario. The turbines will be painted a pale grey colour and will have navigational and aviation lighting fitted.
- 4.4 There is no on-shore development within the Scottish Borders. The power cabling for the windfarm will come ashore at Thorntonloch in East Lothian and will then proceed underground to a new sub station next to the existing substation at Crystal Rig II windfarm. The precise details of this connection will be subject to a section 37 application.
- 4.5 It is anticipated that the offshore construction would start in 2015 with the windfarm being fully commissioned by mid to late 2016.

## **5.0 PLANNING HISTORY:**

- 5.1 There is no local planning history of relevance to the proposal.
- 5.2 A scoping opinion was issued by Marine Scotland and was attached with the submitted application papers at Appendix 6.1 in the Environmental Statement.

## **6.0 APPLICANTS' SUPPORTING INFORMATION**

- 6.1 The application has been supported by a full Environmental Statement (ES) which is available to view on Public Access. The ES provides an assessment of potential impacts on the following:
- Geology and Water Quality
  - Physical Processes
  - Air Quality
  - Nature Conservation
  - Ornithology
  - Marine Mammals
  - Benthic Ecology
  - Fish and Shellfish Ecology
  - Commercial Fisheries
  - Shipping and Navigation
  - Military and Aviation
  - Maritime Archaeology and Cultural Heritage
  - Ordnance
  - Seascape, Landscape and Visual Impacts
  - Other Users
- 6.2 A Seascape, Landscape and Visual Impact Assessment produced by Land Use Consultants has been submitted, along with a series of technical appendices addressing the topic areas outlined above.

## **7.0 REPRESENTATION SUMMARY**

- 7.1 Third party representations are submitted to Marine Scotland and it is for that agency to take these into consideration when assessing the proposed development on behalf of Scottish Ministers.

## **8.0 DEVELOPMENT PLAN POLICIES:**

### **Consolidated Scottish Borders Structure Plan 2001-2018**

Principal S1 – Environmental Impact  
Policy N6 – Environmental Impact  
Policy N7 – Protection of Nature Conservation Interest  
Policy N9 – Maintaining Landscape Character  
Policy N11 – Areas of Great Landscape Value  
Policy N12 - Coastline  
Policy N14 – National Archaeological Sites  
Policy N15 – Regional and Local Archaeological Sites  
Policy N20 – Design  
Policy E22 – Protection of the Tourist Industry  
Policy I19 – Renewable Energy

Policy I20 – Wind Energy Developments

**Consolidated Scottish Borders Local Plan 2011:**

Principle 1 – Sustainability  
Policy G1 – Quality Standards for New Development  
Policy BE2 – Archaeological Sites and Ancient Monuments  
Policy NE3 – Local Biodiversity  
Policy EP2 - Areas of Great Landscape Value  
Policy EP4 - Coastline  
Policy H2 – Protection of Residential Amenity  
Policy D4 – Renewable Energy Development

**9.0 OTHER PLANNING CONSIDERATIONS:**

Adopted SBC Supplementary Planning Guidance and other documents:

Supplementary Planning Guidance on Renewable Energy 2007  
Supplementary Planning Guidance on Wind Energy 2011  
Supplementary Planning Guidance on Local Landscape Designations 2012  
Supplementary Planning Guidance for Biodiversity 2005

The Borders Landscape Assessment, 1998

Scottish Government Planning Policy and Guidance:

Scottish Planning Policy 2010  
National Planning Framework for Scotland (2) 2009  
Scottish Historic Environment Policy 2011

Scottish Government On-line Renewables Advice  
PAN 1/2011 Noise  
PAN 3/2011 Environmental Impact Assessment (S) Regulations 2011  
PAN 2/2011 Planning and Archaeology  
PAN 1/2011 Planning and Noise  
PAN 60 Planning for Natural Heritage 2008  
PAN 58 Environmental Impact Assessment 1999  
PAN 51 Planning, Environmental Protection and Regulation

SNH On line advice on renewables

**10.0 CONSULTATION RESPONSES:**

**Landscape Architect:**

- 10.1 The applicant has submitted a detailed Environmental Statement including Seascape, Landscape and Visual Impact Assessment (SLVIA) dated February 2012, prepared by Land Use Consultants.

Table 8.4 of the SLVIA identifies a 'Moderate' impact on St Abb's Head which I expect is the most significant effect on our area.

The ES includes a number of photomontages from coastal viewpoints such as figures 21.2 7.1d and 2d showing anticipated views from St Abbs. Such views, when possible in clear visibility, will perhaps be considered as objects of interest rather than giving any sense of intrusion?

In terms of potential impacts on Scottish Borders receptors, I am content that this development is acceptable.

#### Recommendation

I have no objection to the application on landscape / seascape grounds and I recommend that the findings of the submitted ES are accepted.

#### **Roads Planning Officer:**

- 10.2 Given that the proposed site is located some 30km off the coast, it is anticipated there will be no significant impact on the public road network within the Scottish Borders. However there appears to be no information on the transportation of components and materials to the site, should any part of this journey be by land. If any of the transportation routes involve the public road network within the Scottish Borders, I will require a Traffic Management Plan (TMP) to be submitted for approval. The TMP should include the following information; all proposed transportation routes, swept path analysis for any abnormal load routes and details of any mitigation measures required as part of the works

#### **Ecologist:**

- 10.3 The Environmental Impact Assessment identifies a likely significant effect on two designated sites in Scottish Borders, Fast Castle to St Abbs Head SPA and the Berwickshire and North Northumberland Coast SAC. I note that a Habitats Regulations Appraisal has been carried out. The Competent Authority (Scottish Government) is required to carry out a Habitat Regulations Appraisal. I am content to follow the recommendations of SNH and RSPB.

#### **Archaeologist:**

- 10.4 Direct impacts from marine development on archaeological assets are solely the remit of Marine Scotland and Historic Scotland, so I will restrict my comments to impacts on historic environment assets within the Scottish Borders.

There will be broad visibility of the wind farm from a number of Scheduled Monuments in the Borders including the sites of Fast Castle, Kirk Hill St Abbs and Ewieside Hill. However, given the distance of the wind farm from these sites I do not feel that the visual connections to the coastline and sea that in part mark the settings of these monuments will be impacted by this development.

Given the low impacts to heritage assets in the Scottish Borders, I have no objection to this development.

## **11.0 KEY PLANNING ISSUES:**

11.1 The proposed development gives rise to a range of potential landscape and environmental impacts and these are identified in the Environmental Statement that accompanies the application. A balanced judgement must be made as to whether the extent and significance of the resultant impacts allows the Council to support or formally object to the proposed windfarm.

## **12.0 ASSESSMENT OF APPLICATION:**

12.1 This is the first off shore windfarm proposal to be considered by the Council.

12.2 The application is supported by an Environmental Statement that has considered the potential magnitude, the significance and the acceptability of the predicted changes to the seascape, landscape and illustrated the potential visual impacts in the study area (50km which is beyond that normally required for an on-shore EIA due to the scale of the development), as well as the range of potential impacts to the marine environment.

12.3 Through reference to national guidance, Council policies and through the various submitted studies, the Environmental Statement draws a number of conclusions concerning the potential impacts of the development and their mitigation. In general, officers are content with the terms of the ES but acknowledge that there are matters such as the impacts on the physical environment, biological environment, commercial fisheries and shipping and navigational interests, which will be more appropriately addressed by other agencies and interested parties in their responses to Marine Scotland. SNH have also highlighted some concerns about the content of the ES (see 13.1 below)

### Planning Policy Principle:

12.4 Wind energy development (both on-shore and off-shore) is considered positively in principle, and this project, if delivered, will make a significant contribution to meeting Scottish Government targets for renewable energy generation as set out in the SPP and in subsequent Ministerial policy statements.

12.5 The development requires to be assessed against a number of relevant policies in the Consolidated Structure Plan 2001-2018 and Consolidated Local Plan 2011. The approved Structure Plan Policy I19 "Renewable Energy" supports the development of renewable energy that is developed in an environmentally acceptable manner. Policy I20 states the criteria against which any proposals for wind farm developments will be assessed. These are

- Impact on the landscape character
- Structure Plan environmental policies
- Impact of noise on residential and other noise sensitive developments
- Interference with aircraft activity
- Significantly increased risk of shadow flicker or driver distraction or
- Any unacceptable cumulative impacts

12.5 The Council's principal Development Plan Policy for windfarm development is Local Plan Policy D4, which sets out a clear spatial preference for commercial scale windfarms when considering on-shore windfarms. However, no such

spatial guidance is available to assess off-shore development. Locational criteria (1) to (3) in Policy D4 focus fundamentally on land based proposals and identify the key components for a suitably accommodating landscape type. They are clearly not applicable to off shore windfarms. Similarly, the spatial strategy in the Supplementary Guidance for Wind farms gives little assistance in this respect.

- 12.5 Officers consider that there is no policy conflict with the provisions in respect of noise, traffic generation and access, telecommunications and aviation and the provisions for decommissioning and that these matters are adequately addressed by the terms of the Environmental Statement.
- 12.6 It is therefore necessary to focus on the development's compliance with the remaining policy criteria relating to impact on landscape/seascape, a range of receptors and visual impacts.

#### Seascape and Landscape Character Impacts

- 12.7 The site lies off shore in Firth of Forth over 30km from the nearest land fall in the Scottish Borders. The ES has established through a baseline Seascape Character Assessment of the east coast of Scotland (from Aberdeen to Holy Island), 21 Regional Seascape Character Areas, of which 16 are listed within the Neart Na Gaoithe study area. The key characteristics of these areas are listed along with their sensitivities to the development. In the Borders, the Seascape Units are SA18 Torness Point to St Abb's Head, SA19 St Abbs Head to Eyemouth and SA20 Eyemouth to Berwick upon Tweed and they are identified as having medium to high sensitivity.
- 12.8 It is accepted that there will be both direct and indirect impacts during construction and operational periods of the windfarm and that the introduction of a large number of large structures into an area of open sea will undoubtedly change the perception of the seascape by receptors. In gauging the degree of impact, an examination of the ZVT for SA18 highlights that the development is theoretically visible along the whole coastline of this seascape, extending to most of the hinterland. The ES also accepts that views of turbines may be more likely to affect perceptions of the southern area, particularly at headlands such as Fast Castle. In respect of SA19 and SA20, the ZTV indicates the theoretical visibility around the prominent St Abb's Head, but shows that this headland would screen much of the coast to the south. As such, theoretical visibility is relatively limited in these seascapes. Whilst the turbines would be a noticeable feature in views, the distance they would be located from the Berwickshire coastline and the influence of weather conditions would limit visibility and the degree or significance of impact.
- 12.8 There will undoubtedly be interplay between the development and the Berwickshire coastal zone. This will, according to the ZTV, extend up to 5km inland from the East Lothian border to St Abbs Head and as mentioned already, to a lesser extent to the south of that headland. The ES identifies a number of landscape receptors in Berwickshire including the Lammermuir Hills and Berwickshire Coast AGLV's within the extended study area (although these are now superseded by the designation of Special Landscape Areas).

- 12.9 In the Lamermuir Hills AGLV visibility is limited to hilltops and ridges, and most of the area, particularly the Scottish Borders, will have no visibility. It is accepted that from this landscape receptor the impact is negligible.
- 12.10 The Berwickshire Coast AGLV's is a dramatic and open landscape, although there are forest plantations that filter some views from this landscape area. The turbines would be a visible feature on clear days but at a distance of between 32 and 35 km, it is acknowledged that they would be a relatively small feature on the wider horizon. It is accepted that the turbines would have a "low to negligible" impact on the character and appearance of the AGLV.
- 12.11 The Landscape Character Areas identified in the Scottish Borders Landscape Assessment are referred to in the ES and the coastal landscape character types are stated to have a "medium sensitivity" to offshore development as coastal views are an important feature of this landscape, and offshore development has the potential to affect its character. Whilst it is considered that the landscape's sensitivity to change is higher than that specified in the ES, its findings that the impacts are "low to negligible" are accepted.
- 12.12 Cumulative impacts on the landscape are often addressed by considering whether an area will become a 'wind farm landscape'. Due to its position some distance offshore, there is limited potential for the Neart na Gaoithe Wind Farm to alter the perception of adjoining character areas or landscape designations. It is accepted that the development will not result in significant cumulative landscape impact.
- 12.13 It is accepted that the impacts on the seascape adjoining the Borders and the landscape character of the Berwickshire coast line will be limited. The policy provisions relating to these issues are complied with.

Visual Impacts:

- 12.14 Policy D4 requires consideration of visual effects on high sensitivity receptors including major tourist routes, residential properties, recreational users and important landscape viewpoints.
- 12.15 A number of visual receptors are identified at 21.5.5.2 in the ES and it is clear that the greatest potential for receptor impact in the Borders is along the coast, both for those living and working in the area but also for tourists and recreational users. Many sections of the Berwickshire coastline have a high recreational value, and as a result there are numerous coastal cliff-tops or beach-side car parks, viewpoints and short recreational walks, as well as piers and harbours in the coastal settlements.
- 12.16 Due to the location and distance the windfarm will be located from the Berwickshire coast only two viewpoints have been identified in the ES to represent key locations where the windfarm will be viewed and to illustrate the potential impacts. The viewpoints are View point 20 - Coldingham Moor and Viewpoint 21 - St Abb's Head. A range of visualisations are produced in the ES to illustrate the degree of impact for both maximum density and height scenarios at St Abb's Head – Fig 21-27 -1a to 1c and at Coldingham Moor - Fig 21-26 -1a to 1c and Fig 21-26 -2a to 2c.
- 12.17 The sea view at Coldingham Moor occupies a significant percentage of the view itself and it is accepted that in good clear weather conditions, the



turbines will be seen in front of the distant Fife coast, which is 70 km away. In both assessment scenarios, the vertical form of the turbines and their movement will contrast with the horizontal open sea. Comparatively, both scenarios will appear similar from this viewpoint. Due to the distances involved any change in height and spread of the windfarm will be difficult to discern. It is worth noting that weather conditions will also reduce the number of days the turbines will be visible of up to 47% of the year, although that figure may be a degree optimistic.

- 12.18 The viewpoint from St Abbs Head has a higher degree of sensitivity due to the recreational interests, its open sea views and the rugged nature of the headland, which is without human influences. The viewpoint is only marginal closer to the application site boundary (0.2km) than viewpoint 20, so the range of impacts is broadly similar, although the spread of the development in the field of view does reduce due to the angle of view. It is accepted that the level of visual impact from both viewpoints will not be significant.
- 12.19 Whilst there will also be change to the both views at night through the introduction of navigational and aviation lights, this is not considered to add significantly to their impact from receptors in the Borders.
- 12.20 In terms of impacts on other receptors, it is considered that users of the Southern Upland Way and coastal walkways will have limited views of the windfarm. No significant impacts are predicted, due to the short section of the long distance route affected. In addition, users of the A1 Trunk Road and the railway will only experience intermittent oblique views of the windfarm. The impact on the views will often be fleeting dictated by the speeds that vehicles/trains are travelling at the time they pass through the Borders.
- 12.21 It is also accepted that there will be no impacts on road users in terms of distraction using coastal routes or any problems of shadow flicker to residential properties along the coast.
- 12.22 It is considered that the overall visual impact of the development will be within acceptable limits. The policy provisions relating to this issue are complied with.

#### Cumulative Visual Impact

- 12.23 Policy D4 states that the cumulative impact of wind farm development, including developments in adjoining local authority areas must be considered. Unacceptable cumulative impact may restrict development potential in otherwise appropriate areas. In assessing potential cumulative impact, account will be taken of the effect of perceived visual impact.
- 12.22 The ES includes a series of visualisations that illustrate the potential cumulative impact of the windfarm with the two other proposed off windfarms and also windfarm proposals on shore that are located close to the coastline. These are shown at St Abb's Head - Fig 21.60.1 VP21 and 21.60.2 and Coldingham - Fig 21.59 VP20 -1 and Fig 21.59 VP20 -2. The ES considers cumulative impact on the basis of offshore and on shore development separately and from each viewpoint in turn.

- 12.23 From Coldingham Moor it is accepted that the proposed windfarm at Neart na Gaoithe would be visible in conjunction with Inch Cape (50 km) largely behind. The tips of Round 3 turbines would be visible at 65 km, slightly to the east.
- 12.24 In terms of on shore cumulative impacts, the viewer would be conscious when looking along the coast and towards the west of the proposed Penmanshiel and Drone Hill wind farms at close range (5 km), and of Aikengall and Crystal Rig visible to the west. There are distant theoretical views of onshore wind farms in Fife and Angus but these are so distant that they are unlikely to influence the perception of impacts from this viewpoint.
- 12.25 The ES accepts that the construction of Neart na Gaoithe would increase the presence of offshore turbines, but in a view already affected by a high level of onshore development. It is accepted that the degree of cumulative impact from this viewpoint is "Moderate – minor", as specified in the ES.
- 12.26 The cumulative impacts offshore from St Abbs Head viewpoint would be very similar to those from Coldingham. It is also acknowledged that there would be no visibility of nearby onshore proposals. The theoretical visibility of schemes in Fife and Angus is negligible. It is accepted that the degree of cumulative impact from this viewpoint is also "Moderate – minor".
- 12.26 There are concerns about the overall impact that this scale of offshore development will have on the east coast of Scotland by spreading large scale development along the coastline but in terms of immediate impact on the views from the Borders it is considered that, although there will be a noticeable intensification of visual impact, it would not be so sufficient to warrant objection.

#### Other Impacts

- 12.27 There have been objections and concerns expressed by a number of agencies and interested parties about the impact the development would have on Special Areas of Conservation, fisheries operations, fish stocks, wave formation, etc. These are matters which are most appropriately dealt with directly by Marine Scotland and those parties.

### **13.0 SNH RESPONSE**

- 13.1 SNH has concerns about some of the information provided in the ES and in particular the standard of assessment of the cumulative impact of the development and how seascape and landscape character and impacts have been considered.
- 13.2 Notwithstanding these concerns, they indicate that in respect of the Scottish Borders coastline, Neart na Gaoithe would be seen at distances of 30-45km, lying to the north. Here the coastal landscape becomes simpler, emptier and larger scale, with broad sections of low-lying land coastal land rising eastwards to plateaux and cliffs around 200m high near St Abb's Head. This section of coast is sparsely settled and has fewer prominent coastal features and almost no offshore islands or other features. Although it is of relatively high scenic quality and wildness, with most of the coast being AGLV, its inherent seascape, landscape and visual sensitivity to wind energy development is less than in East Lothian; in addition the windfarm is further

away. Seascape, landscape and visual impacts are therefore expected to be minor or locally moderate. Neart na Gaoithe wind farm is unlikely to detract significantly from the simple seascape composition that currently exists.

#### 14.0 CONCLUSION:

14.1 The assessment of the application has been carried out in terms of the development's implications for the Scottish Borders only. It is anticipated that other planning authorities consulted will consider the implications for their areas, which may ultimately be more consequential than those for the Scottish Borders. It will also be legitimate for Scottish Natural Heritage to consider the wider consequences for the east coast of Scotland of this development in association with the other proposed off-shore windfarm developments.

14.2 In terms of impacts on the Scottish Borders, it is considered that the distance and location of the windfarm combine to limit any significant impact. At over 30km to the north of the Borders the visual and landscape impacts would be at worst moderate and would be minor or negligible from many receptors.

#### 15.0 RECOMMENDATION BY HEAD OF PLANNING AND REGULATORY SERVICES:

15.1 That the Council indicate to Scottish Government that it has **no objections** to the application for an off-shore windfarm at Neart Na Gaoithe.

#### Approved by

Name	Designation	Signature
Brian Frater	Head of Planning and Regulatory Services	

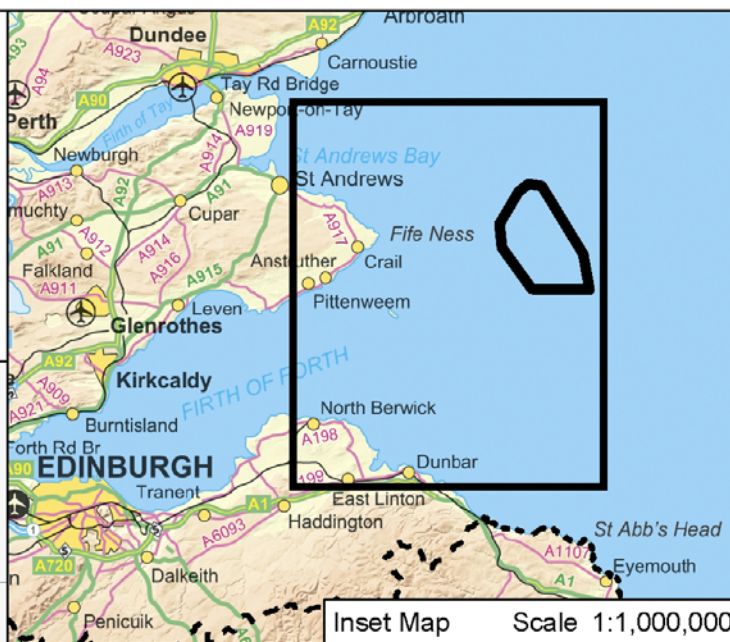
The original version of this report has been signed by the Head of Planning and Regulatory Services and the signed copy has been retained by the Council.

#### Author(s)

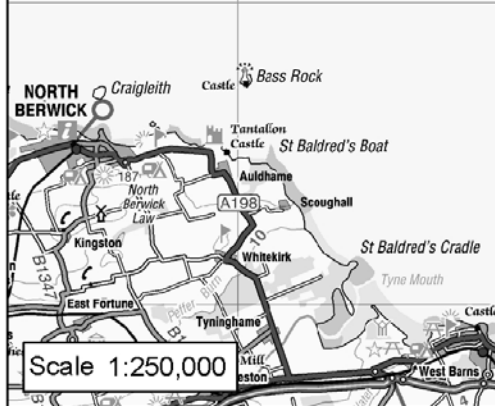
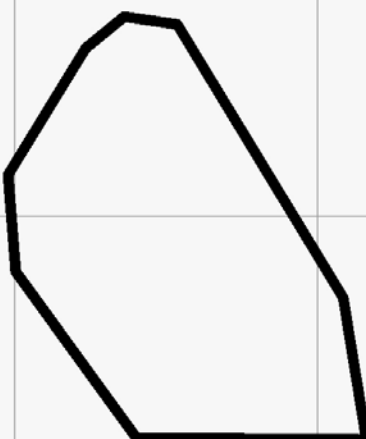
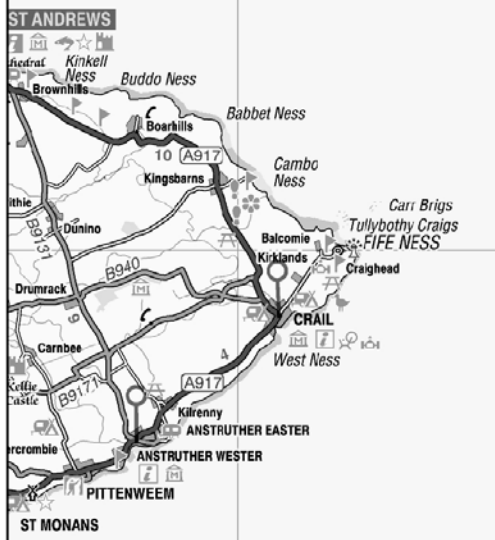
Name	Designation
Ian Aikman	Major Applications, Review & Enforcement Manager

12/00936/S36

**Neart na Gaoithe**  
**Offshore Windfarm**



Inset Map Scale 1:1,000,000



Scale 1:250,000

Our ref: PCS/121635  
Your ref: 018/OW/MainS - 10

Adrian Tait  
Marine Scotland  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB

If telephoning ask for:  
[REDACTED]

10 September 2012

By email only to: [MS.MarineLicensing@scotland.gsi.gov.uk](mailto:MS.MarineLicensing@scotland.gsi.gov.uk)

Dear Mr Tait

## **The Electricity Act 1989**

## **Marine (Scotland) Act 2010**

### **Application for consent under Section 36 of the Electricity Act 1989 and Marine Licences under Part 4, Section 20 of the Marine (Scotland) Act 2010 to construct and operate an offshore windfarm Firth of Forth**

Thank you for your consultation letter of 25 July 2012. We have **no objection** to this development proposal. The following comments are based on the Environmental Statement (ES) dated July 2012 which has been submitted in support of the application.

#### **Advice for the planning authority**

#### **1. Marine non-native species (MNNS)**

- 1.1 Paragraphs 141-142 and the related Table 14.16 outlined in Chapter 14 of the ES recognise that the addition of turbine foundations may promote the introduction of non-native species. As detailed on our [River Basin Management Plans](#), the Barns Ness to Wheat Stack waterbody is at high ecological status for alien species. The accidental introduction of MNNS has been highlighted as a risk for water body degradation and in line with the Water Framework Directive, Marine Strategy Framework Directive objectives and [EU Biodiversity Strategy](#) targets, we would recommend that controls are included through the licensing process to mitigate any impact on the water environment.
- 1.2 Accidental introduction of MNNS can occur via attachment to construction plant, specialised equipment or moorings. We would recommend that a Construction Method Statement is produced prior to the commencement of any works which includes measures which will be adopted to minimise these risks. Guidance that may be drawn upon includes:
- The alien invasive species and the oil and gas industry guidance produced by the Oil & Gas industry ([www.oqp.org.uk/pubs/436.pdf](http://www.oqp.org.uk/pubs/436.pdf)).
  - SNH web-based advice on Marine non-native species ([www.snh.gov.uk/land-and-sea/managing-coasts-and-sea/marine-nonnatives/](http://www.snh.gov.uk/land-and-sea/managing-coasts-and-sea/marine-nonnatives/))



Chairman  
David Sigsworth  
Chief Executive  
James Curran

**Strathearn House**  
Broxden Business Park,  
Lamberkine Drive, Perth, PH1 1RX  
tel 01738 627989 fax 01738 630997  
[www.sepa.org.uk](http://www.sepa.org.uk)

- Marine non-native guidance from the GreenBlue (recreation advice) ([www.thegreenblue.org.uk/clubs\\_and\\_training\\_centres/antifoul\\_and\\_invasive\\_species/best\\_practice\\_invasive\\_species.aspx](http://www.thegreenblue.org.uk/clubs_and_training_centres/antifoul_and_invasive_species/best_practice_invasive_species.aspx)).

## 2. Intertidal construction works

- 2.1 We note from paragraph 148 of Chapter 5 of the ES that the method of installation for intertidal works will be dependant on the ground conditions along the cable route. We would highlight that horizontal direct drilling (HDD) beneath the sand dunes would be our preferred option with regard to minimising impacts to the sand dune habitats and any associated water dependent features (e.g. dune slacks). In addition, this method will help to maintain dune integrity in the longer term.
- 2.2 Should trenching through the dunes be taken forward as the preferred option, justification for this should be provided through a construction method statement. The statement should demonstrate how the dune habitats will be restored and how potential for erosion problems will be avoided in the future. It is important that the coastal dunes should be left in as natural a condition as possible with any hard engineering kept to a minimum.
- 2.3 We note that beach works will take place within Thorntonloch which is a designated bathing water under the Bathing Water Directive. We would strongly recommend that works in this area take place outwith the bathing water season (1st June to 15<sup>th</sup> September).

## 3. Terrestrial infrastructure

- 3.1 We note from paragraph 19 of Chapter 5 of the ES that terrestrial infrastructure will be consented separately. For your information, we have previously provided scoping comments to East Lothian Council (under the Environmental Impact Assessment (Scotland) Regulations 2011) relating to this part of the proposal.

### Detailed advice for the applicant

## 4. Watercourse engineering

- 4.1 Paragraph 165 of Chapter 5 of the ES mentions a temporary crossing across the Thorntonloch Burn. It should be ensured that General Binding Rule (GBR) 6 of the Water Environment (Controlled Activities)(Scotland) Regulations 2011 (CAR) [Practical Guide](#) is adhered to through construction.

### Regulatory advice for the applicant

## 5. Regulatory requirements

- 5.1 Details of regulatory requirements and good practice advice for the applicant can be found on our website at [www.sepa.org.uk/planning.aspx](http://www.sepa.org.uk/planning.aspx). If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the operations team in your local SEPA office at:

Edinburgh Office, Clearwater House, Avenue North, Heriot Watt Research Park, Edinburgh, EH14 4AP. Tel - 0131 449 7296.



Chairman  
David Sigsworth  
Chief Executive  
James Curran

**Strathearn House**  
Broxden Business Park,  
Lamberkine Drive, Perth, PH1 1RX  
tel 01738 627989 fax 01738 630997  
[www.sepa.org.uk](http://www.sepa.org.uk)

If you have any queries relating to this letter, please contact me by telephone on 0131-273-7332 or e-mail at [planning.se@sepa.org.uk](mailto:planning.se@sepa.org.uk).

Yours sincerely

[REDACTED]  
Senior Planning Officer  
Planning Service

Ecopy: [REDACTED], Mainstream Renewable Power, [REDACTED] [@mainstreamrp.com](mailto:[REDACTED]@mainstreamrp.com);  
[REDACTED] Angus Council, [PLNProcessing@angus.gov.uk](mailto:PLNProcessing@angus.gov.uk);  
[REDACTED] Fife Council, [development.central@fife.gov.uk](mailto:development.central@fife.gov.uk)

*Disclaimer*

*This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at the planning stage. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. If you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found in [How and when to consult SEPA](#), and on flood risk specifically in the [SEPA-Planning Authority Protocol](#).*



Chairman  
David Sigsworth  
Chief Executive  
James Curran

**Strathearn House**  
Broxden Business Park,  
Lamberkine Drive, Perth, PH1 1RX  
tel 01738 627989 fax 01738 630997  
[www.sepa.org.uk](http://www.sepa.org.uk)



Our Ref: MM/fi/CR12-104

Your Ref:

13<sup>th</sup> September 2012



Marine Scotland Licencing Operations Team  
PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

Dear Sirs,

#### **Applications for Consents and Licences for the Neart na Goithe Windfarm in the Firth of Forth.**

The Scottish Fishermen's Federation (SFF) represents the interests of fishermen in membership of the Anglo Scottish Fishermen's Association, the Clyde Fishermen's Association, the Fishsalesmen's Association (Scotland) Ltd, the Mallaig and North-West Fishermen's Association, the Orkney Fishermen's Association, the Scallop Association, the Scottish Pelagic Fishermen's Association, the Scottish White Fish Producers Association Ltd and the Shetland Fishermen's Association. The SFF clearly understands the importance of engagement in the consultation process surrounding the development of offshore renewables and, on behalf of its members is pleased to have the opportunity to comment on this application.

Before commenting on the specifics of the application we are compelled to register our disappointment at the presentation of such a huge amount of information to stakeholders. We would contend that for most, it would be impossible to devote enough time to study this, indeed are worried that this process is being used to pummel all into submission; nevertheless we shall endeavour to comment appropriately on the application. To put this into full context, it is the perception of stakeholders that the developers have invested significant human and financial resources on preparing their applications but fishing industry stakeholders, even on a national basis, have very few staff and even those few have many other responsibilities to attend to, before the additional burden of addressing the multitude of such applications expected in the near future. This is a major problem, which needs to be addressed by all concerned before the system collapses, leading to a total lack of coherent stakeholder input.

On behalf of our members the SFF must take the position that we remain opposed to this development until it can be proved that it will not be detrimental to the fishing industry, and shall remain so until such time as the concerns and conditions set out below are addressed to the extent that we become convinced the fishing industry will have some protections from the said developments effects.

Having said that, the SFF is fully aware of the societal and political imperative pushing forward the development of offshore renewables, and having discharged our role concerning the protection and preservation of fishermen's livelihoods, we accept it is our secondary duty to offer leadership in the process of developing the path towards co-existence of fishing with offshore renewables.

#### **Members:**

Anglo Scottish Fishermen's Association  
Clyde Fishermen's Association  
Fishsalesmen's Association (Scotland) Ltd

Mallaig & North-West Fishermen's Association  
Orkney Fisheries Association  
Scallop Association

Scottish Pelagic Fishermen's Association Ltd  
Scottish Whitefish Producers' Association Ltd  
Shetland Fishermen's Association

VAT Reg. No: 605 096 748



The SFF understands from chapter 16 on the Commercial Fisheries that the developer sees the need for a Fisheries Working Group (FWG) and we welcome this and remain ready to participate in this work. Therefore the SFF believes it is important to begin the formation of the FWG for the Forth and Tay areas as soon as possible, in order to develop the practical mitigation and cooperation needed to achieve this co-existence. The inception of this FWG should be high in the list of priorities for the developers, and its outputs should initially concentrate on the issues that we would expect to see as licence conditions, outlined in this letter.

The SFF would like to refer to the section on Sub Tidal Benthic ecology, where it is claimed that exclusion of mobile fishing gear would automatically restore the area. We would highlight the fact that mobile fishing methods have been operating sustainably in this area for generations and such a bold statement has little basis in science.

Moving on to the Commercial Fisheries assessment, which the industry was happy to contribute to, there is a statement in 6.1.1 that the fishing grounds encompassed by this development are of relative importance on a Scottish scale. To the Federation this is crucial to understanding the massive impact that this development will have on the local industry, which to be realistic may not have the ability to migrate to fishing grounds further afield, but is hugely important to both the local and national economy.

The SFF would thus contend that the claim in chapter 16.6.2.7 that fishing may safely resume within the site post-development has yet to be proved and therefore the application is underplaying the potential impacts of displacement. In the bigger picture, it is our belief that displacement needs to not only consider the cumulative effects of the other nearby development proposals, but also the burgeoning area of sea that is to be covered by such legislative demands as Special Areas of Conservation, Marine Protected Areas etc.

The data in sections 7.2.2 and 7.2.3 further reinforce the assertion in 6.1.1 that this is a nationally important fishing ground for both scallop and nephrops fleets for which, therefore, it is imperative that the FWG is set up to help developers investigate measures to address mitigation of said displacement issues. The SFF would support the establishment of a full and proper fisheries assessment procedure, preferably done by Marine Scotland, but at the very least designed by them, which would elaborate on the fisheries baseline thus far developed, and then carry on to continuously monitor the effects of the development on fishing activity in the area. This would give much confidence to the fishing industry that if adverse effects were to appear they would be properly assessed and understood.

In the Navigation Risk assessment, page 21, para 5.2.4 states the wind farm is not in a heavily fished area, which we would contend is in contradiction to statements above from the commercial fisheries assessment, 6.11, 7.22 and 7.2.3. This confliction raises serious concerns about the veracity of this paper. Given that, the second paragraph in 5.2.4 is a recommendation which echoes our desire for full and proper scientific assessments. The SFF would strongly support the idea that if this development is to go ahead, a condition for the licence should be the instigation of a scientific and socio-economic assessment, using the methodology described above. This condition should include a means of verification of the effects of displacement on the earnings of the fleet, and an outline description of actions to mitigate those losses.

The SFF believes that with the growth of the renewables industry and its associated infrastructure there needs to be developed a mechanism for dissemination of information on the physical elements, such as described in the Fishing Liaison with Offshore Wind & Wave (FLOWW) guidelines which SFF with the Crown Estate lead, were instigators and collaborators in writing. These are based on the successful models developed between the fishing industry and the Oil & Gas sector as it grew. The SFF would consider it very important that the Mainstream participated in this information flow to ensure that their developments do not become hazardous and that they are seen as safe users of the sea.

The SFF notes that in the Commercial Fisheries chapter, 16.2 refers to the BERR 2008 report of Fisheries Liaison and recommends that developers engage with the updated version being produced by the Crown Estate, particularly in the context of the system of Company Fishing Liaison Officers and Fishing Industry Representatives described there-in. The SFF are pleased to see that Mainstream have adopted this strategy as it is our belief that both these posts will be essential to the full and proper engagement exercise between the two industries.

At the outset of the project the SFF would expect the developers to sign up to a system whereby agreement would be reached on who is responsible for any debris or damage caused by such, and a clear procedure for compensation is in place. This should be in line with the FLOWW recommendations, which are again based on the successful Oil and Gas UK system.

For the SFF, as construction becomes an every closer reality, it is vital that once the Rochdale Envelope is finally superseded industry received clarity on all aspects of the proposed construction. The SFF believes that this should be a condition of the licence and should cover turbine type and size, spacing, inter-array cabling etc. This is very important in terms of dialogue within the proposed FWG if there is ever to be any reality to the claim that fishing will continue within the development.

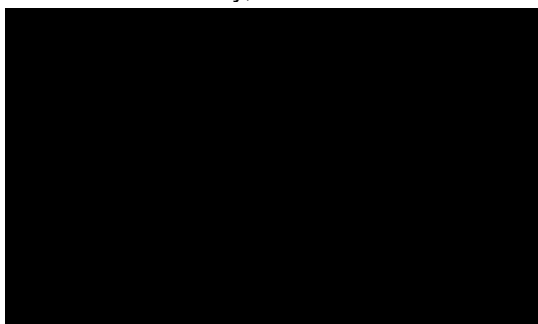
The actual construction phase then should also be agreed and timed in order to minimise disruption to the fleet, again the SFF would expect this to be a licence condition. Following on from the construction and operation phase, the fishing industry does expect to see a proper plan for future decommissioning to be integrated as a licence condition, which to the fishing industry would mean a plan for complete removal and re-instatement of the sea-bed..

Contrary to the impression given throughout this report, the SFF clearly states that its first preference for cables and pipelines is for them to be trenched and buried to the normal offshore industry standard depth. We accept that this may not be possible in all areas so the next option to be examined should be rock dumping, again, in line with existing industry standards. Failing this, mattresses are the final option, but in all cases the SFF would insist on the appropriate over trawl procedures being conducted as soon as possible upon completion of this work to ensure seabed safety is ensured. This would seem to be in accordance with the statement on page 116 in para 13.4 of the Navigation Risk assessment.

The SFF would expect through the medium of the proposed FWG, using the Best Practice Guidelines from FLOWW and with the input of the FIR's, that developers such as Mainstream would be able to design a realistic strategy for economic/ employment opportunities for local fishermen and fishing communities as part of the mitigation package which we would insist must be a licence condition before the development goes ahead.

The SFF remains open to dialogue concerning all these issues and trust that our concerns, as given in this response will be addressed. It is our expectation a continuation of previous clear and open dialogue between Mainstream and the fishing industry would continue, and thereby reach the stage where our concerns are assuaged to the degree that we can revise our opposition and become more supportive of this application.

Yours faithfully,



**From:** [REDACTED]  
**To:** [Tait A \(Adrian\) \(MARLAB\)](mailto:Tait.A@marlab.org)  
**Subject:** FW: Neart na Gaoithe offshore windfarm  
**Date:** 08 October 2012 17:09:02

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Adrian,

Thank you for including us in the consultation process for the above.

The Scottish Seabird Centre is an independent charity which operates a wildlife visitor attraction at North Berwick harbour. The Centre attracts over 250,000 visitors per annum and over 1 million visits pa to [www.seabird.org](http://www.seabird.org)

Visitors to the Centre operate remote interactive solar powered cameras to zoom in on the internationally significant wildlife nearby without disturbance. Images are also viewed globally on [www.seabird.org](http://www.seabird.org) Cameras are located on the Bass Rock as well as on the islands of Craigleith, Fidra and the May. The Bass Rock gannet colony and puffins on Craigleith, Fidra and the May are major attractions along with the wide range of seabirds that can also be seen. In addition, the May cameras are popular during the grey seal breeding season. The Centre operates a wide range of wildlife boat trips to islands in the Forth including the Bass and the May and is an official whale and dolphin watching site.

The Centre is a major contributor to the local economy (over £2M pa) and employs over 60 staff. It is regarded as an outstanding exemplar in sustainable and wildlife tourism and a world leader in remote wildlife viewing.

The Centre is keen to build on its many successes and is currently planning to build a major extension to house the proposed National Marine Centre to highlight the importance of Scotland's seas and the need to sustain them.

We recognise the need to reduce climate change and we support renewable energy projects in appropriate locations where negative impacts can be demonstrated to be minimal.

The proposed Neart na Gaoithe offshore windfarm is in a particularly sensitive area with major seabird and seal breeding colonies nearby. We are concerned about the impacts of the proposal on wildlife and about the knowledge gaps that still exist regarding what these impacts are likely to be.

We support the RSPB's comments on the need for further work on the environmental impact assessment as detailed in their response. In addition, we recommend that detailed monitoring should be undertaken from the start of construction and continued during operation to compare predicted wildlife impacts with actual impacts. This may also assist with any additional ongoing mitigation actions that may be identified.

Please contact me if you require any further information.

I would be grateful if you would confirm receipt of this email.

Regards,

[REDACTED]

**From:** [REDACTED] **Chief Executive, Scottish Seabird Centre**

This email was received from the INTERNET and scanned by the Government Secure Intranet anti-virus service supplied by Cable&Wireless Worldwide in partnership with MessageLabs. (CCTM Certificate Number 2009/09/0052.) In case of problems, please call your organisation's IT Helpdesk. Communications via the GSi may be automatically logged, monitored and/or recorded for legal purposes.

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**Surfers Against Sewage comments on the Neart Na Gaoithe  
Environmental Statement**

Surfers Against Sewage (SAS) would like to make the following comments on the Neart Na Gaoithe Environmental Statement.

Surfing is a highly popular recreational activity on the East Coast of Scotland, with many well established surf spots located in the vicinity of the proposed project. Popular spots include Pease Bay, White Sands, Belhaven Bay, Kingsbarns and St Andrews, but many other surf spots exist along the coastline that are less well-known but by no means less important or valuable to the surfing community.

There is a very real possibility that the project could have an impact on swell reaching the coast, particularly if gravity base structures are used for the foundations. The size of the foundations, at a maximum of 45m diameter, causes concern as larger cross-sectional areas have a greater potential to affect wave regimes (swell height, direction and period and peel angle). Swell could also be reduced further down the coast as a result of the site. It is therefore vital that extensive modelling is done to ensure that any impacts are identified as early as possible- a number of people rely on the surfing and recreation industry for their livelihoods, and if the wave climate is affected to such an extent that swell is reduced significantly, the surf industry in the area could suffer.

Section 110 in Chapter 22 is a concern to SAS- "the vulnerability of the surfers is rated as low overall due to the presence of alternative beaches and sites". This is not the case as each wave is unique and even beaches very close together and apparently similar in bathymetry and direction can offer very different wave types- indeed, one beach can experience a variety of different waves so an "alternative beach or site" may not offer a tangible replacement for the wave that may be lost as a

result of the project. As well as this, the potential use of rock dumping (section 111) to install the cable have been shown to impact on wave regimes and therefore the potential effects of this should be modelled. Displacement of activities and restriction of access to an area as highlighted in Table 22.12: Impact assessment conclusions for construction phase of export cables (coastal) for other users, should not be classed as "low significance" for the reasons stated above.

Intrinsic values of surfing in the area should also be considered- for example, once a surfer has a board and wetsuit, surfing is essentially a free activity, that can be enjoyed by many and provides a valuable antidote to the "playstation generation" of the UK. It could also help to reduce the amount spent by the NHS (£4.2 billion in 2011 (The Independent, 2011)) on obesity. Surfing provides a free workout, a healthy and active lifestyle, a lot of fun, and also fosters community spirit, so a price cannot be affixed to the activity- the health and happiness of surfers in the area is not something that has a monetary value.

It is highly recommended that the SAS reports "Guidance on Environmental Impact Assessment of Offshore Renewable Energy Development on Surfing Resources and Recreation" (2009) and "The WAR Report" (2010) - both available online at <http://www.sas.org.uk/campaigns/education/sas-reports-and-research-papers/>, are understood in order to ensure impacts on recreational water users are adequately addressed, and appropriate consideration is given to the watersports community in all stages of the project.

Cabling landfall sites must not interfere with coastal processes and wave regimes, and full consideration and modelling must be done as to ensure that this is the case. This includes the placement of rock armour to protect cabling, as this can also have an impact on coastal processes.



Surfers Against Sewage



We would request that SAS is consulted throughout all stages of the planning process for the project.



# ***TAY DISTRICT SALMON FISHERIES BOARD***

26 September 2012

Adrian Tait  
Marine Renewables Licensing Casework Manager  
Marine Scotland – Marine Planning & Policy Division  
Scottish Government  
Marine Laboratory  
PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

Dear Mr Tait,

## **Response to the marine licence application for the Neart na Gaoithe Offshore Wind Farm project**

### ***General comments***

The Tay District Salmon Fisheries Board has significant concerns relating to the proposed development, particularly with regard to the uncertainty surrounding the potential negative effects on Atlantic salmon and sea trout and the integrity of a number of Special Areas of Conservation for Atlantic salmon.

Should these potential negative impacts (e.g. construction noise (piling) and electromagnetic fields) have significant impacts on salmon, then this proposal could have significant impacts on the migration of salmon into and out of the River Tay. Potential negative impacts have been detailed in the response of the Association of Salmon Fishery Boards, which we fully endorse and refer you to.

### ***Comments additional to those raised by ASFB***

#### ***Geographic extent of rivers potentially impacted***

In addition to the points raised by the ASFB, we would also draw your attention to Appendix 16.2 of the Environmental Statement. It states that

“The conclusions of the *Review of the migratory routes and behaviour of salmon, sea trout and European eel in Scottish coastal waters*, recently published by Marine Scotland (Malcolm *et al*, 2010), suggests that for salmon originating in the east and north east coast rivers, the general direction of

*Site 6, Cromwellpark, Almondbank, Perth, PH1 3LW*  
Tel: 01738 583733 Email: [REDACTED]@btconnect.com



coastal movement is northerly and coastal migration may start as far south as the north east coast of England (Figure 4.1). This is in line with the model of adult salmon migration proposed by Shearer (1992) where it was suggested that from Aberdeenshire southwards, fish travel in a northerly direction having migrated south past their home rivers through the North Sea and approach the coast around Northumberland (Malcolm et al., 2010). Assuming this is the case, there is potential for not only salmon originating in rivers within the regional study area, but also in rivers further north (Dee, Don, Ythan, etc), to transit through or in close proximity to the Neart na Gaoithe Offshore Wind Farm site and export cable route.”

You should be aware that a currently ongoing salmon tracking experiment from sea nets south of Montrose has revealed to some extent a southerly movement of salmon, i.e. to the River Tay.<sup>1</sup> Furthermore, in a recent report by the Environment Agency,<sup>2</sup> Figure 1.44 in that report shows that half the recoveries of tagged salmon from the River Esk in Yorkshire caught in the NE England drift net fishery were actually caught between the mouth of the River Tyne and northern boundary of that fishery (around the Farne Islands), i.e. to the north of the Esk.

These data suggest, that not only may some salmon move from south to north along this coast, but others, or indeed perhaps the same ones at different times, can move from north to south. A major contributor to the idea that salmon predominantly move from south to north along this coast comes from the fact that the Northumbrian drift net fishery mainly takes Scottish fish, particularly from the River Tweed. However, as there is no comparable fishery to the north of the Tweed, it cannot be ruled out that fish may in fact travel in both directions when seeking out rivers.

Thus, it is possible that, not only may Tay district, Forth district, Esk district, Dee district, Don district and Ythan district fish traverse the area of interest but also fish from the Tweed and even Northumbrian rivers.

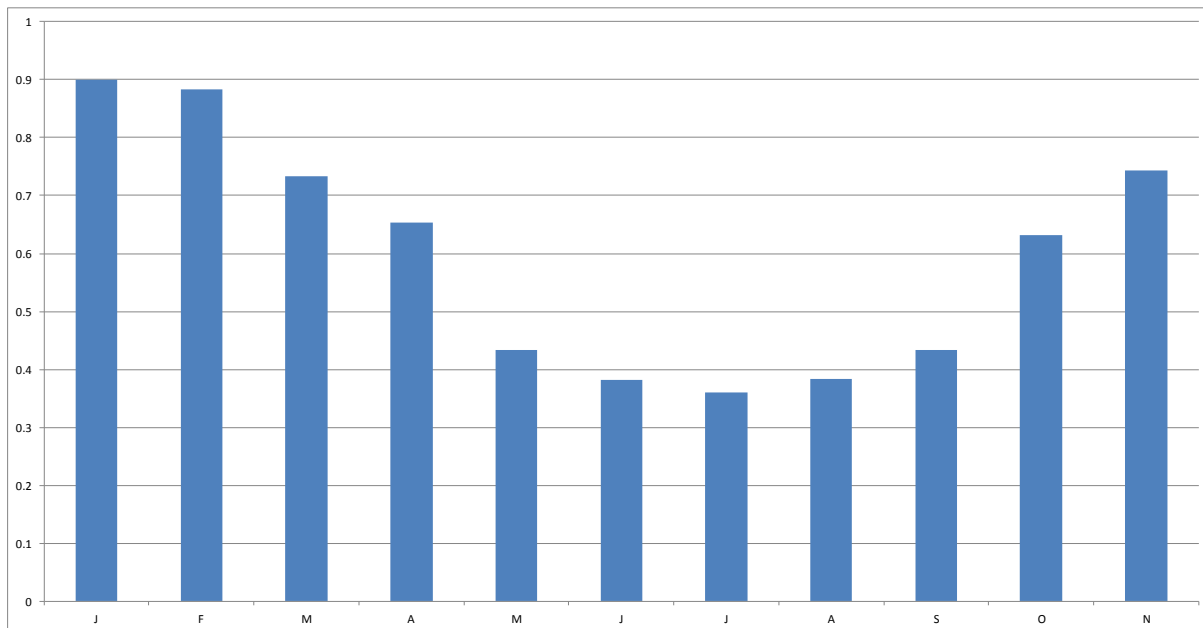
Using recently published rod catch figures for 2011, the figure below clearly shows that the rivers from the Tweed to the Ythan account for a very substantial proportion of the entire Scottish salmon catch and thus the Scottish salmon population. When it comes to spring salmon up to the end of March or end April, the proportion is very high.

As numbers of spring salmon, particularly very early spring salmon (say those returning before [redacted] are now very scarce south of Scotland and have always been absent in Scandinavia [redacted] it is too cold), the rivers in this part of eastern Scotland account for a very substantial proportion of all the winter / early spring running Atlantic salmon (widely considered [redacted] genetically distinct sub-stock) in the entire world. Thus, this part of the Scottish coast is highly significant for the Atlantic salmon species in global terms. Therefore, potential impacts on salmon need to be viewed with this in mind.

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<sup>1</sup> See <http://www.scotland.gov.uk/Topics/marine/science/Research/Freshwater/southesk/TrackingtheFish>

<sup>2</sup> [http://www.environment-agency.gov.uk/static/documents/Research/NLO\\_Fisheries\\_Assessment.pdf](http://www.environment-agency.gov.uk/static/documents/Research/NLO_Fisheries_Assessment.pdf)



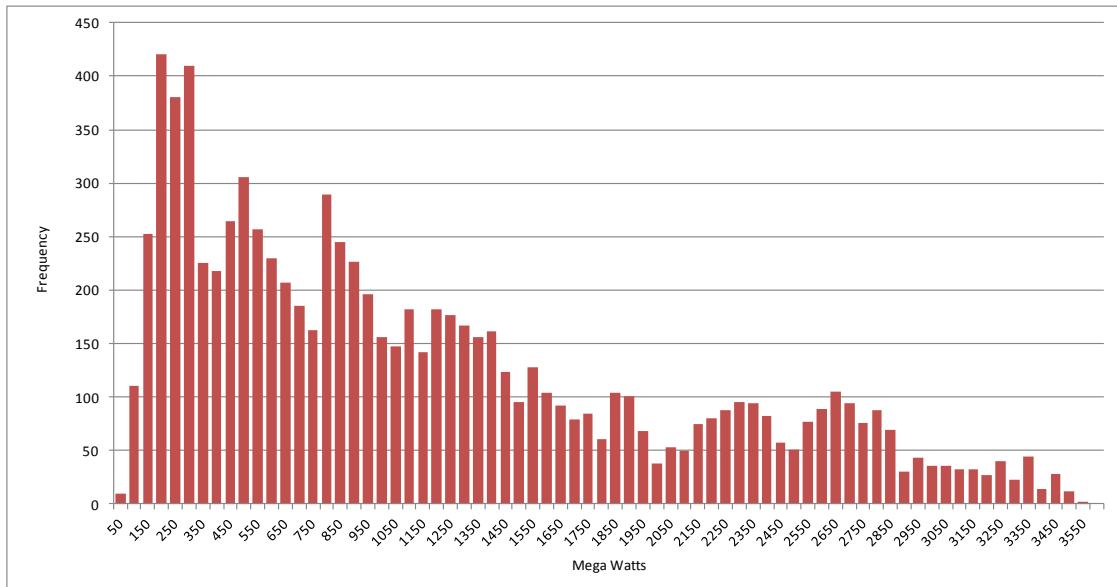
*The proportions of the total declared Scottish salmon (including grilse) rod catch caught in the districts between the Tweed and Ythan (inclusive) for each month of 2011. (Data from Marine Scotland Science)*

#### *Appropriateness of this area for wind farms*

We can understand some of the reasons why this part of the Scottish coast might be perceived suitable for this type of project. For example, it is relatively close to centres of demand and the distribution network. However, if there is a requirement to compare this with alternative sites we would suggest that this area may also have significant disadvantages which need to be considered.

For example, it may be that this is the one of the least windy parts of the Scottish coast. Average wind speeds at Leuchars are half of those at Tiree or Lerwick ([http://www.climatetrendshandbook.adaptationscotland.org.uk/Chapter03/3\\_02.html](http://www.climatetrendshandbook.adaptationscotland.org.uk/Chapter03/3_02.html)). This is highly significant because wind power varies according to the cube of wind speed, i.e. a double wind speed gives an 8 fold increase in wind power. The significance of this is now illustrated by the following figure.

The figure is based on data obtained from the New Electricity Trading Arrangements website [www.bmreports.com](http://www.bmreports.com). This website publishes, every five minutes, UK electricity generation by generation method. The figure shows, for 5 minute blocks, the frequency of power output from UK wind farms in March 2012. While the mean level of generation was 1,149MW, the median was 907MW and the mode only the 150 – 200 MW class. As is quite clear, wind turbines have a highly skewed output, as would be predicted by simple physics. For a small part of the time they can produce significant amounts of electricity, but from a large part of the time, very little. Given this reality, a most important consideration in locating wind farms must be average wind strength.

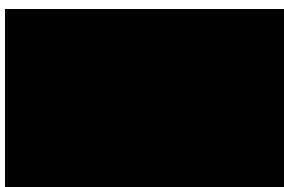


*Frequency diagram of output from UK windfarms in March 2012 (data from [www.bmreports.com](http://www.bmreports.com)).*

**Conclusions**

As concluded by the ASFB, we also consider that the environmental statement has failed to demonstrate that the development will not adversely affect the integrity of the SAC rivers on the East coast of Scotland. Where a Natura site is involved, the onus is on the developer to demonstrate no impact and in the absence of that the precautionary principle will apply. Under these circumstances, we do not consider that the proposed development is compatible with the requirements of the Habitats Directive or Scotland’s Marine Nature Conservation Strategy. On that basis, we have no alternative but to formally object to the proposed development, until adequate monitoring and mitigation strategies have been put in place.

Yours sincerely,



Fisheries Director

The 10 Metre and Under Association

[REDACTED]  
[REDACTED]  
Pittenweem

Fife  
[REDACTED]

Marine Scotland Licencing Operations Team  
PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

Dear Sirs,

**Applications for Consents and Licences for the Neart na Gaoithe Windfarm in the Firth of Forth.**

The 10 Metre and under Association represents fishermen who are either engaged in fishing on boats which are 10 metre overall length and below or on boats which are under 15 metres overall length operating in the non-sector. The majority of the membership prosecutes the fishing grounds of the Inner and Outer Forth using mobile and static gear and their livelihood depends on continuing access to these grounds.

In the current environment of relentless pursuit of renewable energy and conservation of our seas there must be recognition that the fishing industry is the life blood of our coastal communities, part of our national heritage and contributes hugely to our tourism industry also. It is therefore imperative that a balanced approach is taken in assessing the cumulative effects of granting licences to wind farm developers.

It must be appreciated that Mainstream Renewable Power have had considerable resources at their disposal to prepare their application which has taken several months, while this association relies on fishermen and their representatives giving up their time to read through and try to understand the application document. It has been impossible in the time scale allowed for this association to peruse the application in its entirety and have therefore concentrated on the Commercial Fisheries chapter 16 and associated appendix.

It is a matter of concern that the application does not acknowledge that the highest percentage of the fishing in the area affected by the wind farm sites is prosecuted by vessels under 15m in length for which it is claimed there is no data. All vessels with a shellfish entitlement are required to submit SHELL1 landing declarations and vessels landing nephrops are required to submit NEP1 weekly. In addition boats landing hand line mackerel are required to submit MACK1 to the fisheries office and this data is available from Marine Scotland. The blatant disregard of this information demonstrates the lengths the developers will go to undermine the importance of the local fishery and casts doubt on the veracity of the entire application.

We welcome the proposal to establish a regional working group to facilitate the future engagement of the fishing industry and the Forth and Tay Offshore Windfarm Developers Group (FTOWDG) and assert that this should be a condition of any licence being granted. It is also imperative that local fishermen or representatives of local associations are members of this group and that the development of collaborative mitigation measures and the definition of aspects of construction management plans are applicable throughout the life of the wind farms and not just at the development stage.

The statement at 16.4.1 regarding the potential of the wind farm and its associated infrastructure to constitute a physical obstacle to the continuation of normal fishing activities, resulting in possible impacts on navigational safety of fishing vessels as well as impacts such as displacement should not be underestimated. There is a very real risk that on grounds of health and safety all fishing will be banned from wind farm sites by successive operators as indicated in 16.4.3. The fact that the burial depth of the array cables is only specified to be 0- 1m (16.6.3) as opposed to 1-1.5m gives a clear indication that vessels operating trawl gear will not be allowed between turbines. The 'not significant' impact assessment of complete loss or restricted access to fishing grounds during operation and maintenance reference Table 16.14 is therefore not credible.

It is also a matter of concern that the impact on the fish population and fishermen during the construction phase are to be addressed in Construction and Environmental Management Plans which will not be considered until after the licence has been granted. Is this an indication that the developers know the impact is devastating and do not wish to divulge that fact until after the licence is granted? The greatest impact on the fish population and the fishermen is likely to occur during the construction and decommissioning phases and this information is of vital importance in assessing the suitability of the project before granting a licence. There should, at the very least, be conditions attached to any licence that post construction and decommissioning the seabed is at a reasonable and acceptable standard for fishing activities to be safely resumed. This would include an obligation to report any accidentally dropped objects and to remove all obstacles deposited during construction. The assessment of what constitutes a reasonable and acceptable standard of the seabed for fishing activities to be safely resumed and what are acceptable tolerance levels for the rectification of the seabed must be made by competent individuals with input from the fishing industry and continual assessment should be made during the lifetime of the wind farm. An industry standard of minimum burial depths for inter-array and export cables, or alternative methods of protection should be established and all developers should be obligated to adhere to that standard.

As more information emerges regarding the proposed cable routes and construction methods it is clear that there may be a greater impact on commercial fisheries in the area than that acknowledged in the environmental statement at table 16.8. It is inconceivable that blasting fishing grounds to install turbines will have a low or negligible effect on the marine habitat and therefore have minor significance. It is also unacceptable to state that an impact on a species would be negligible on the premise that the species are fairly widespread within the region especially for a species which is quota managed.

The loss of fishing grounds during the construction phase extends far beyond the wind farm sites with safety zones of 500m proposed around construction. This is of particular significance during the construction of the export cable which extends to 33km across important fishing grounds. There remains uncertainty over the type and number of export cables which may be required and therefore the environmental impact cannot be accurately assessed by the developers at this stage but it is likely to be greater than of moderate significance.

It must be recognised that while the impact on fishing grounds on a regional scale may be low the fishing grounds which can be accessed by vessels under 15 metres prosecuting a day fishery are far less extensive and therefore the impact is much higher. The local fishermen have little opportunity to migrate to other fishing grounds as they are constrained by the size of their boats and the weather. Each day lost fishing has a sizeable impact on their livelihood and that of the local economy.

This year already there has been a negative impact on the fishing grounds accessed by the Pittenweem fleet by displacement of vessels over 15 metres and the cumulative effect of such displacement could be catastrophic to the Pittenweem fleet. Furthermore the extra distance some vessels may have to steam to reach the fishing grounds could in some instances make the trip unviable and therefore there must be some mitigation.

There is evidence that crabs and lobsters are moving further offshore in search of cooler water and this could be compounded by the heating effect from the cable operation, a predicted adverse impact 16.6.2.1. There seems to be high uncertainty about the impact on species from the operation and maintenance of wind farm sites despite the existence of operational wind farms around the UK coast. It would appear that there is reluctance amongst developers to share the data regarding impact on species which should be viewed with suspicion. All developers and successive operators should be made to make continual assessments of the impact on the fish and shellfish populations and to share that information with the fishing industry and other interested parties.

If the Environmental Impact Assessment is found to be flawed and there is a greater impact on the fishing industry, as identified and agreed with the Fishing Industry Representatives, then financial compensation must be considered. An example might be the reimbursement of extra fuel costs incurred in circumnavigating wind farm and associated construction sites.

Finally when assessing the Neart na Gaoithe licence application it is important to consider the cumulative effect of the proximity of the Inch Cape and Firth of Forth Round 3 Zone 2 wind farm sites and their associated export cable routes along with the existing restricted areas and the development of the network of Nature Conservation MPA's in Scotland. There is a real danger that large areas of Scotland's accessible fishing grounds will be lost to the inshore fleet and that will threaten the economy of the coastal communities. If the Scottish Government is to be believed that the fishing industry is vital to sustain Scotland's future economy then there has to be a fishing fleet and seas in which to fish.

Yours faithfully



Secretary/Treasurer

Marine Scotland Licencing Operations Team  
PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

Dear Sirs,

**Applications for Consents and Licences for the Neart na Gaoithe Windfarm in the Firth of Forth.**

The Scotland East Inshore Fisheries Group (SEIFG) represents fishermen who fish commercially in the area between the Scottish/English border in the South and North Esk River near Montrose in the North. The majority of the membership prosecutes these fishing grounds using mobile and static gear and their livelihood depends on continuing access to these grounds.

While we welcome the opportunity to comment it must be appreciated that Mainstream Renewable Power (MRP) have had considerable resources at their disposal to prepare their application which has taken several months, while this group relies on fishermen and their representatives giving up their time to read through and try to understand the application document. It has been impossible in the time scale allowed for this group to peruse the application in its entirety and have therefore concentrated on the Commercial Fisheries chapter 16 and associated appendix.

The SEIFG, on behalf of its members, has to take the position that it is opposed to the development of offshore wind farms until it can be proved that they will not adversely affect the fishing industry. However, given the political and increasing public demand for renewable energy we recognise that the fishing industry will have to co-exist with offshore renewables as it has with the oil and gas sector.

The executive committee of SEIFG have over the last three years invited representatives of the Forth and Tay Wind Developer Group (FTWDG) to attend meetings to keep the SEIFG informed of the various stages of the wind farm proposals and to hear the concerns of the fishermen. There was a high level of concern regarding the number of renewable projects which were proposed for the SEIFG area and the major points raised were as follows:

- General and real concern about loss of fishing grounds
- General concern about a lack of consultation with Fishermen's Associations
- General concern about snagging danger from unburied cables

At these meetings it was stressed that there were large gaps in the data being used to assess the level of fishing activity within the proposed sites as VMS data only related to vessels over 15 metres in length. It is therefore disappointing that the application does not acknowledge that the highest percentage of the fishing in the area affected by the windfarm sites is prosecuted by vessels under 15m in length, for which it is claimed there is no data, when this had been pointed out to the FTWDG of which MRP was a member. This group would not want Marine Scotland to condone the developer's attempts to undermine the importance of the inshore fishery and questions whether reliance can be placed on the assessed low level of fishing activity in the area and the summary of predicted impacts contained in the application.

The SEIFG would like to see instigated a comprehensive fisheries assessment to establish the true baseline data approved by Marine Scotland, followed by a continuous monitoring programme to assess the effects of the development on fishing activity in the area. There should also be a condition of the licence that there is a recognised method of assessing the loss of fishing revenue due to displacement of the fleet and the strategies in place to alleviate such losses.

It must be recognised that while the impact on fishing grounds on a regional scale may be low the fishing grounds which can be accessed by vessels under 15 metres prosecuting a day fishery are far less extensive and therefore the impact is much higher. The inshore fishermen have little opportunity to migrate to other fishing grounds as they are constrained by the size of their boats and the weather. Each day lost fishing has a sizeable impact on their livelihood and that of the local economy. Statistical losses are expressed as a % of national landings; actual losses can be 100% of the earnings of a small boat fisherman.

It is acknowledged that there will be a loss of fishing grounds during the construction phase extending beyond the wind farm sites with safety zones of 500m proposed around construction. This is of particular significance during the construction of the export cable which extends to 33km across important fishing grounds and which is estimated to take several months. Although the safety zones are to be established on a 'rolling' basis the resumption of commercial fishing within the site will only occur once post-construction surveys are undertaken to ensure the seabed is at a reasonable and acceptable standard. It is imperative that the health and safety criteria for the safety of commercial fishing activity within wind farm sites be established and considered in all environmental impact assessments. If commercial fishing activity were not able to resume within the wind farm sites the displacement effect would increase beyond minor significance and mitigation measures would need to be a condition of any licence being granted.

The proposal to establish a regional working group to facilitate the future engagement of the fishing industry and the Forth and Tay Offshore Windfarm Developers Group (FTOWDG) is welcomed and assert that this should be a condition of any licence being granted. It is also imperative that local fishermen or representatives of local associations are members of this group and that the development of collaborative mitigation measures and the definition of aspects of construction management plans are applicable throughout the life of the wind farms and not just at the development stage.

There seems to be a lack of information about the impact on species from the operation and maintenance of wind farm sites although there are many operational wind farms around the UK coast. It would appear that there is reluctance amongst developers to share the data regarding impact on species which is unhelpful. All developers and successive operators should be made to make continual assessments of the impact on the fish and shellfish populations and to share that information with the fishing industry and other interested parties.

The greatest impact on the fish population and the fishermen is likely to occur during the construction and decommissioning phases and this information is of vital importance in assessing the suitability of the project before granting a licence. There should, at the very least, be conditions attached to any licence that post construction and decommissioning the seabed is at a reasonable and acceptable standard for fishing activities both mobile and static to be safely resumed. This would include an obligation to report any accidentally dropped objects and to remove all obstacles deposited during construction. The assessment of what constitutes a reasonable and acceptable standard of the seabed for fishing activities to be safely resumed and what are acceptable tolerance levels for the rectification of the seabed must be made by competent individuals with input from the fishing industry and continual assessment should be made during the lifetime of the wind farm. An industry standard of minimum burial depths for inter-array and export cables, or alternative methods of protection should be established and all developers should be obligated to adhere to that standard.

Finally when assessing the Neart na Gaoithe licence application it is important to consider the cumulative effect of the proximity of the Inch Cape and Firth of Forth Round 3 Zone 2 wind farm sites and their associated export cable routes along with the existing restricted areas and the development of the network of Nature Conservation MPA's in Scotland. There is a real danger that large areas of Scotland's accessible fishing grounds, both currently fished and areas with potential for establishing new fisheries will be lost to the inshore fleet and that will threaten the economy of the coastal communities. It is therefore imperative that a balanced approach is taken in assessing the cumulative effects of granting licences to wind farm developers.

Yours faithfully

  
For and on behalf of South East Inshore Fisheries Group



## Tait A (Adrian) (MARLAB)

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**From:** Ferguson V (Val)  
**Sent:** 03 August 2012 15:29  
**To:** MS Marine Licensing  
**Subject:** ref 018/OW/MainS-10 - Neart na Gaoithe Offshore windfarm

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**Categories:** Yellow Category

Adrian,

Thanks for sight of this application – I have no comments to make.

*Val Ferguson*

*Ports and Harbours Branch*

*Area 2G North*

*Victoria Quay*

*Edinburgh*

*EH6 6QQ*

*0131 244 7878*

[val.ferguson@transportscotland.gsi.gov.uk](mailto:val.ferguson@transportscotland.gsi.gov.uk)



**WDCS Scottish Dolphin Centre**

Spey Bay, Moray  
Scotland

Phone 44 (0) 131 661 7722  
078 3449 8275

[\[REDACTED\]@wdcs.org](mailto:[REDACTED]@wdcs.org)

[www.wdcs.org](http://www.wdcs.org)

Adrian Tait  
Licensing Casework Manager  
Marine Scotland – Licensing Operations Team  
Marine Laboratory  
375 Victoria Road  
Aberdeen AB11 9DB  
[Ms.marinelicensing@scotland.gsi.gov.uk](mailto:Ms.marinelicensing@scotland.gsi.gov.uk)

14<sup>th</sup> September 2012

Dear Adrian

**WDCS comment on Neart na Gaoithe Environmental Statement**

Neart na Gaoithe Offshore Wind Farm is located to the northeast of the Firth of Forth, 15.5 km east of Fife Ness. The proposed wind farm will comprise between 75 and 125 turbines, and will have a maximum site capacity of 450 MW. Construction is anticipated to commence in 2015 and continue into late 2016, with the wind farm being operational and exporting energy to the National Grid from late 2016. Neart na Gaoithe is adjacent to Inch Cape (approximately 180 turbines; 1GW) and Firth of Forth Round 3 (three phases, totalling 3.5GW).

**Summary**

WDCS have significant outstanding concerns relating to the proposed development, particularly with regard to the uncertainty surrounding the potential negative effects on harbour seals and bottlenose dolphins and the integrity of the Firth of Tay and Eden Estuary Special Area of Conservation (SAC) and the Moray Firth SAC respectively.

We recognise that further mitigation measures are being investigated. However, without a commitment to effective mitigation from the impacts of pile driving particularly, we do not consider that the proposed development is compatible with the requirements of the Habitats Directive and WDCS has no choice but to object to this application. The reasons are provided below.

## **General comments**

We have a general point about how difficult it was to read the paperwork associated with this consultation because of the landscape layout. The documentation was fine to read on A3 paper, but when ESs are distributed by CD then it makes reading, and therefore responding, more difficult and time consuming.

WDCS acknowledges the number and scope of baseline studies and reviews that were conducted by Mainstream and FTOWDG to gain a clear understanding of the species usage of the area and potential impacts on marine mammals, particularly Natura 2000 species.

These comments focus on the marine mammal sections.

## **Chapter 5 Project Description**

We understand the need for the Rochdale envelope approach (Section 5.4). However without understanding the detailed design of a number of aspects of the wind farm it is very difficult for us to comment to a great level of detail. In particular, the lack of details of the construction techniques, vessels and methods that will be used during construction and decommissioning of the Project make substantive comment on suitable, effective mitigation measures very difficult. A lack of clarity can affect our ability to make an accurate assessment of the environmental information, particularly in this case where the development is within the range of seals and bottlenose dolphins protected by Special Areas of Conservation (SACs).

## **Chapter 11 Nature Conservation**

Section 11.6.4.2 – both minke whale and white-beaked dolphins are listed as Priority Marine Features and as drivers in the Scottish MPA Project.

## **Chapter 13 Marine Mammals**

We note that SNH advised use of static PAM (Table 13.5) but the developers chose to use towed acoustics. The report by Gordon (2012) states that the acoustic results demonstrated greater acoustic detections at the beginning and end of the day and so a greater number of detections might have occurred at night (as in Todd et al., 2009). As a result, static acoustic data might have been more useful in providing more accurate (and potentially higher) density estimates of harbour porpoise as these devices record porpoise clicks 24 hours a day and for several months at a time.

SEPA recommended use of construction methods that minimise impacts on marine mammals including novel noise restriction methods (Table 13.5). Section 13.11 on Mitigation and Residual Impacts does not make a commitment to deal with this recommendation, or indeed to use any substantive mitigation measure to reduce noise levels.

## **Cumulative and In-Combination Impact Assessment Approach**

Section 13.6.3 Cumulative and In-Combination Impact Assessment Approach includes a number of other industrial projects, including the Montrose Tidal Project. WDCS has no confidence based on the Montrose Tidal Project Environmental Assessment that the project will not have a significant impact on the Scottish east coast harbour seal population. As a result, WDCS, along with Advocates

for Animals, British Divers Marine Life Rescue (BDMLR) and International Animal Rescue (IAR) have objected to the development. Should the Montrose Tidal Project be consented and should any physical or displacement impacts occur, we would anticipate that appropriate decisions would subsequently have to be taken for other regional developments to ensure the protection of the harbour seal population.

### **Baseline research**

No sea state information is provided in the baseline marine mammal reports. If surveying has been conducted in conditions that are poor for observing less animals will be observed. As a result we cannot agree with Section 13.8.2.3 that the area is not thought to be of significant importance to white-beaked dolphins.

### **Seasonal sensitivities**

Section 13.8.10 (Figure 13.29) identifies that March – May is a period of lower sensitivities for marine mammals. This is briefly considered further in the mitigation section (Section 13.11.3) but no commitments are made to organise activities that may cause significant impacts outside of these times. Adequate spatio-temporal restrictions are the most effective method to minimise impacts to marine mammals.

### **Harbour seal**

Section 13.8.8.1 (Table 13.20) provides the number of harbour seals in the southeast coast population as 437 at the latest count in 2007. This is a reduction of 42% since a decade before in 1997. The current population estimate from the east Scotland management area is 376 and 124 individuals were recorded in the Firth of Tay and Eden Estuary SAC.

WDCS are seriously concerned about the use of ducted propellers in a region where impacts have been demonstrated, particularly on juveniles and pregnant/lactating females, where this population is already undergoing such dramatic declines.

Table 13.32 calculates that 72 harbour seals could suffer PTS injury, a further 206 harbour seals could suffer Temporary Threshold Shift (TTS) - which can lead to PTS with repeated sound exposure - and a further 305 animals could suffer partial displacement or behavioural impacts.

Section 13.9.3.1 (Construction) does not include a critical piece of recent research where the likely effects of construction due to pile driving during installation of offshore wind farms have been demonstrated on a mixed population of harbour and grey seals on the east coast of the UK (Skeate et al., 2012). The significant decline in haul-out count of harbour seal at Scroby during 2004 corresponds exactly with wind farm construction. It remains unknown if some displaced individuals recolonised or if any recovery is caused by colonisation of further animals, which would imply disruption of original social structure. Pile driving and vessel activity were pin pointed as the most likely reasons. We note that this development at Scroby Sands consisted of only 30 turbines.

Paragraph 180 in Section 13.9.5.4 (Noise Modelling – Sound Exposure Levels) provides the distances at which Permanent Threshold Shift (PTS) could occur for cetaceans and pinnipeds. For seals, at 186 dB re 1µPa, PTS injury could be inflicted at 8.2 km.

Section 13.10.3.20 (paragraph 378) states the potential for cumulative PTS to occur over a radius of 31.6km. This means that as soon as a harbour seal within a radius of about 32km gets into the water from its haul out site, it has the potential to be injured. **WDCS disagrees with the assessment that the significance of this impact is moderate as a result of only a medium magnitude of effect** (Table 13.58). **We believe that the potential injury and disturbance is considerable, is likely to be highly significant and should be considered a major impact.**

Sparling et al. (2012a) maps show traveling routes out from haul-out sites demonstrating that Neart na Gaoithe is used little for foraging by harbour seals. However, drawing a radius that encapsulates the zone of PTS encompasses a large percentage of the seals route from the haul out sites within the Firth of Tay and Eden Estuary SAC. Sparling et al. (2012a) states that NnG covers “*important travel routes for seals*”.

Sparling et al. (2012a) concludes that particular difficulties include “*The locally declining harbour seal population – the PBR ... is just 3 individuals. **Any further disturbance or displacement may be unacceptable for this population.**” And further concludes that “*There is difficulty in a) predicting individual effects of piling noise on seals because of a severe lack of empirical data on the physical and behavioural effects of impulsive noise on seals. This makes b) predicting the consequences of the individual of any impact difficult (in terms of foraging success and ultimately reproductive success and survival) and then, given these difficulties c) linking predicted individual level impacts to population level consequences. **At every step in this process there are large uncertainties and it will be necessary to make assumptions and extrapolations.***”*

Skeate et al. (2012) further notes that “*Where impacts are likely, we call for intensive individual-based research perhaps coupled with a rigorous experimental protocol. However, we anticipate that cause and effect upon seals will remain difficult to establish as a result of the influence of other factors (e.g. Edrén et al., 2004; Teilmann et al., 2006) and ambiguity of interpreting complex movement and haul-out patterns especially where these occur some way from the wind farm (Tougaard et al., 2006; Brasseur et al., 2008, 2010; Lindeboom et al., 2011). As pile-driving is likely to be the most damaging component of offshore wind farm development, we suggest the most effective means of protecting seals and reducing the need for demanding monitoring is for the industry to use alternatives to pile-driven monopiles (e.g. gravity-base designs) and/or develop more effective means of mitigating noise (e.g. bubble-curtains – Würsig et al., 2000).*”

We note that some of the mitigation measures documented in Section 13.10.2.2 (Paragraph 210), such as use of marine mammal observers or passive acoustic monitoring, are not mitigation measures until such techniques are used to inform shut- down of activities.

### **Bottlenose dolphins**

We do not agree with Section 13.10.3.10 (Table 13.47) that piling be considered of minor significance to bottlenose dolphins, however, we do agree that potential cumulative impacts could be moderate or major (Table 13.50).

## **Environmental Management Plan**

WDCS requests to be consulted on the detail of the Environmental Management Plan, which is mentioned in Section 13.10.2.2 (Paragraph 210).

## **Section 13.11 Mitigation and Residual Impacts**

WDCS supports soft start (Section 13.11.1.3 Soft Start,) but whilst it is a common-sense measure, it is not a proven mitigation measure. It is not adequate to ensure the protection of marine mammals from injury, including PTS. Nor do WDCS consider soft start to be industry best practise.

In general, if/when animals are seen within a predetermined radius of activities, whilst should encompass the area within which injury can occur, activities should be shut down. If this radius cannot be seen and therefore cannot be effectively monitored then alternative and proven mitigation measures (such as bubble curtains) should be sought.

The use of Marine Mammal Observers (MMOs) (Section 13.11.1.5) and Passive Acoustic Monitoring (PAM) (Section 13.11.1.6) are not in themselves mitigation measures. They are management measures that are useful to inform mitigation measures. For example, if a marine mammal is observed or heard within a certain radius of operations then the activity might be halted, which would then mitigate the impact.

Acoustic Deterrents (Section 13.11.2) introduce noise into the marine environment and this is an important consideration.

## **Chapter 25 Mitigation Measures**

WDCS do not consider soft start to be industry best practise (Section 25.4.2.1) for the reasons identified above.

## **Noise Impact Assessment – Seals and Bottlenose Dolphins**

The data presented in Sparling et al. (2012b) are very worrying. Whilst low numbers of injury (PTS) were predicted, these might fall above the PBR that has been set by Scottish Government for harbour seals in this management area. The high number of seals and bottlenose dolphins that were predicted to exhibit behavioural responses is also a concern. Sparling et al. (2012b) suggests that this should be a focus for the “*design of appropriate mitigation*”.

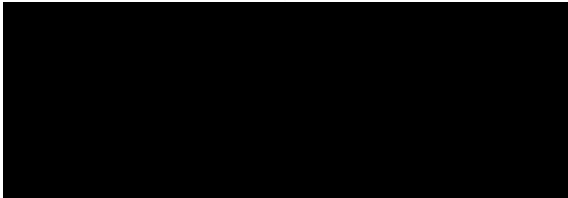
Sparling et al. (2012b) further concludes that “*The biggest uncertainties probably relate to the nature and extent of species-specific behavioural responses to piling noise and the onset of auditory injury in marine mammals in relation to specific temporal nature of the exposure to piling*”.

## **Conclusion**

WDCS have significant outstanding concerns relating to the proposed development, particularly with regard to the uncertainty surrounding the potential negative effects on harbour seals and bottlenose dolphins and the integrity of the Firth of Tay and Eden Estuary and Moray Firth SACs respectively.

We recognise that further mitigation measures are being investigated. However, without a commitment to effective mitigation from the impacts of pile driving particularly, we do not consider that the proposed development is compatible with the requirements of the Habitats Directive and WDCS has no choice but to object to this application. Should Marine Scotland be minded to offer consent, our recommendations for license conditions are provided in the Annex, as requested.

Yours sincerely



Head of Policy for Scotland

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## **ANNEX**

### **Recommendations for license conditions**

1. Ducted propellers should not be allowed, unless they are guarded or potential impacts can be effectively mitigated in some other way, especially for harbour seals.
2. Given the risk of collisions and the uncertainty surrounding the modelling work undertaken, in-field monitoring should be required to ground-truth the theoretical data provided in the collision modelling calculations. This should include: effectiveness of video monitoring should be investigated, and used; as well as modelling of the tidal currents to determine the trajectory of dead bodies to understand the likelihood of them resulting on local beaches and frequent beach patrols for stranded animals conducting beach surveillance (particularly during spring tides as highlighted in SRSL report) should be a requirement.
3. Monitoring of this harbour seal population should be sufficient to detect further declines due to all aspects of construction and operation of this development. The use of soft start is not considered to be a deterrent to curious seals that may approach during pile driving activities.
4. Appropriate scientific monitoring should be undertaken for bottlenose dolphins during and post construction, including the abundance estimate and passive acoustic monitoring work that has been identified in the “Further work” section of Quick and Cheney (2011).
5. Bottlenose dolphin photo-identification work in the region should be continued throughout the construction and post-construction period.
6. An EPS licence should be required and adequate monitoring efforts to understand the extent of disturbance throughout the development.
7. WDCCS requests involvement in the relevant components of the Environmental Management Plan.

### **Recommendations for Marine Scotland**

The cumulative impacts on cetaceans cannot be adequately considered until all east coast marine renewable energy applications are submitted (including Inch Cape and Forth Array in the immediate vicinity, but also MORL in the wider east coast). Consideration of Neart na Gaoithe, Inch Cape and Forth Array together would enable opportunity for full consideration of appropriately consenting or rejecting of the least damaging/greatest capacity proposals over the most damaging/lowest capacity.

Should other regional developments (including Montrose Tidal Project) be consented and should any physical or displacement impacts occur, we would anticipate that appropriate decisions would subsequently have to be taken for other regional developments to ensure the protection of Natura and European Protected Species species.



Consideration should be given to the adequacy of the current frequency of two years baseline survey data collection, as not enough data are collected in one or two days visual surveys per month to provide densities of most species encountered in order to determine impacts during construction and operation.

In order to promote quieter alternatives to pile driving, Marine Scotland should suitably scale the level of monitoring and mitigation required.