Redacted

From: Redacted
Sent: 23 November 2018 16:59
To: MS Marine Licensing
Cc: Redacted
Subject: MORAY WEST - New Documents and Additional Information Application Consultation - by 05/01/19

Dear Sir/Madam,

ELECTRICITY ACT 1989 (AS AMENDED)

MARINE (SCOTLAND) ACT 2010

MARINE AND COASTAL ACCESS ACT 2009

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 (AS AMENDED)

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 (AS AMENDED)

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

THE ELECTRICITY (APPLICATIONS FOR CONSENT) REGULATIONS 1990 (AS AMENDED)

CONSERVATION (NATURAL HABITATS &c.) REGULATIONS 1994 (AS AMENDED)

CONSERVATION OF OFFSHORE MARINE HABITATS AND SPECIES REGULATIONS

On 8th June 2018 Moray Offshore Windfarm (West) Limited ("the Applicant") submitted an application to the Scottish Ministers in accordance with the above legislation to construct and operate the Moray West Offshore Wind Farm at a site approximately 22.5 km southeast of the Caithness coastline and associated Offshore Transmission Infrastructure ("the Applications").

Moray West has now submitted new documents and additional information in relation to:

- a request to reduce the development envelope originally requested under the Applications (for example reducing the maximum height of turbines);
- a request to vary the offshore wind farm site boundary to allow an additional option to locate some of the development within a new alternative area;
- information to support the Applications and information to support the above noted requested amendments including additional information and information to inform an Appropriate Assessment; and
- other amended application documents to support the requested boundary variation, including amended plans forming part of the Applications.

All the documents submitted can be viewed online at:
http://marine.gov.scot/data/moray-west-offshore-windfarm-additional-information

MS-LOT would appreciate any comments you may have on the new documents and additional information to be submitted to moray-west.representations@gov.scot by **5th January 2019.**

If you have any queries please do not hesitate to contact MS-LOT.

We would be grateful if you could please confirm receipt of this e-mail.

Best regards,

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Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Redacted

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From: Redacted
Sent: 02 April 2019 22:13
To: Redacted

Subject: RE: Moray West - Information Appropriate Assessment consultation (HRA) - by 02/04/2019

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Redacted

Thank you for consulting RSPB Scotland on the below noted additional information. In response we wish to refer to our previous correspondence submitted during consultations for this application as the content of these letters remains relevant.

This new information relating to great black backed gull (GBBG) is welcomed, following our recommendation that this receptor species and population is given further consideration. In summary we make the following points:

- The predicted counterfactual of population size ranges between 15% - 24%. The most pertinent issue is that if the East Caithness Cliffs SPA GBBG population sustains the level of predicted additional mortality from the Moray West and other two Moray Firth offshore wind projects, then it will be substantially smaller than it otherwise would be without the wind farms. In light of this we consider impacts predicted from Moray West and the other two Moray projects to be an adverse effect on integrity to the SPA.
- The assessment has not accounted for uncertainty, particularly in the collision risk modelling. This needs to be taken into account when considering the final PVA outputs.
- We query the parameters used in the population viability analysis. The values seem to have used number of eggs and then survival to the next age class rather than what we consider should be the correct value which is number of fledged young and subsequent survival. Whilst this may not make a large difference to the CPS it may overestimate the growth rate.

We have no further comment to make on the additional information received.

Regards,
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Redacted

Let's give nature a home in Scotland

giving nature a home

Scotland

Redacted

Subject: Moray West - Information Appropriate Assessment consultation (HRA) - by 02/04/2019

Dear Sir/Madam,

ELECTRICITY ACT 1989 (As Amended)
MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
CONSERVATION (NATURAL HABITATS &c.) REGULATIONS 1994
CONSERVATION OF OFFSHORE MARINE HABITATS AND SPECIES REGULATIONS 2017

On 8 June 2018 Moray Offshore Windfarm (West) Limited ("the Applicant") submitted an application to the Scottish Ministers in accordance with the above legislation to construct and operate the Moray West Offshore Wind Farm at a site approximately 22.5 km southeast of the Caithness coastline. Before determining the applications the Scottish Ministers will decide whether it is necessary to carry out an Appropriate Assessment under the above Regulations. To inform this decision, Moray West submitted a Report to Inform an Appropriate Assessment (RIAA) as part of the applications.

Moray West has now submitted information in addition to the information submitted on 23 August 2018 and the report previously submitted (available here) to the Scottish Ministers to inform an Appropriate Assessment (the further information is attached).

MS-LOT would appreciate any comments you may have on the extra information to be submitted to MS.MarineRenewables@gov.scot by 2nd April 2019

If you have any queries please do not hesitate to contact MS-LOT.

We would be grateful if you could please confirm receipt of this e-mail.

Best regards,

Redacted

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
nature.scot

Marine Scotland
Marine Laboratory
P. O. Box 101
375 Victoria Road
Aberdeen
AB11 9DB

Your Ref:

Our Ref:
CNS/REN/OFFSHORE
WIND /MORAY WEST

Date: 2nd April 2019

By email only: ms.marinerenewables@gov.scot

Dear Sir / Madam,

Moray West Offshore Wind Farm – additional information on great black-backed gull to inform the Habitat Regulations Appraisal

Application for consent under Section 36 of the Electricity Act 1989 (as amended) and Marine Licence under part 4 of the Marine (Scotland) Act 2010

Thank you for consulting SNH on the additional information on great black-backed gull in support of the application submitted in July 2018 for the Moray West offshore wind farm.

In our response of the 7th September 2018 and the 4th January 2019 we objected to the proposal due to an adverse effect on the site integrity for kittiwake as a qualifying interest of the East and North Caithness Cliffs Special Protection Areas (SPAs) in combination with the Moray East and Beatrice offshore wind farms.

In our response of the 4th January 2019 we also advised that the proposal could have an adverse effect on the site integrity for great black-backed gull as a qualifying interest of East Caithness Cliffs SPA. We requested further in-combination impact assessment / population modelling.

Key Advice

Natura

The additional information submitted by the developer to inform the Habitat Regulations Appraisal (HRA) for great black-backed gull has been helpful. We conclude that the proposal will have an adverse effect on site integrity for great black-backed gull as a qualifying interest of the East Caithness Cliffs SPA in combination with the Moray East and Beatrice offshore wind farms. Therefore, we object to the proposal.

The predicted great black-backed gull population with the wind farm is just 76-85% (depending on collision risk model option) of the size of the population in its absence (Counterfactual of Population Size). We consider that this is an adverse effect on the East Caithness Cliffs SPA population. The Counterfactual of Growth Rate and Centile for Impacted Population also indicate adverse changes. The current status of great black-backed gull at

East Caithness Cliffs SPA is unfavourable. The population is significantly smaller than it was at classification, despite increasing between 1999 and 2015.

We note the argument presented that there is no connectivity between the great black-backed gull colony at East Caithness Cliffs SPA and the development site. However, this is based on a single tracking study (Archibald *et al.* 2014)[1]. Although the data is high quality, it is limited in terms of number of birds tagged (11 individuals), number of days when data was collected (median length of deployment was 2 days, maximum was 5 days), and the period over which data was gathered (30th May to 19th June). Great black-backed gulls were observed within the development site both during the breeding and non-breeding season. The most likely origin for birds during the breeding season is the nearest colony, which is East Caithness Cliffs SPA. Therefore, we consider connectivity is likely.

Our advice regarding kittiwake remains unchanged since our response of the 4th January 2019. In our view the proposal will have an adverse effect on site integrity for kittiwake as a qualifying interest of the East and North Caithness Cliffs SPAs in combination with the Moray East and Beatrice offshore wind farms. There are now predicted impacts to all breeding kittiwake SPAs on the British mainland east coast as a result of offshore wind projects.

If Marine Scotland is minded to recommend approval of this application to Scottish Ministers, we advise preconstruction monitoring to understand the movements of adult great black-backed gulls recorded in the Moray West development site during the breeding season. Monitoring should involve tagging and ringing great black-backed gulls within the wind farm area at sea to establish colony origin, and to help inform any requirements for monitoring during the operational phase. We welcome the opportunity to provide further advice on this.

We hope this advice is of assistance. If further information or advice is required please contact R in the first instance.

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[1] Archibald., K., Evans, D. and Votier, S. (2014). East Caithness Cliffs SPA gull Tracking Report 2014. Environment & Sustainability Institute, University of Exeter.

Redacted
MS_Renewables@gov.scot

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Licensing Operations Team
Marine Scotland
375 Victoria Road
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MORAY WEST - INFORMATION APPROPRIATE ASSESSMENT CONSULTATION

Marine Scotland Science has reviewed the submitted information and has provided the following comments.

MSS have reviewed the information to inform an Appropriate Assessment submitted by Moray West assessing potential for impact on great black-backed gull as a qualifying feature of East Caithness Cliffs SPA. MSS also reviewed the consultation responses on this submitted by SNH (dated 2nd April 2019) and RSPB Scotland (dated 2nd April 2019).

The information document from the Developer outlines the in combination numbers of collisions for great black-backed gull calculated for the three Moray Developments, collision estimates for all UK North Sea developments for the non-breeding season, apportions impacts to the East Caithness Cliffs SPA, and then models the potential population level effects of these impacts on the SPA.

MSS here provided advice on the methodology followed, where alternative options for assessment are presented MSS suggest which may be most appropriate for HRA assessment, and provide comments on the responses from SNH and RSPB Scotland.

Collision risk modelling (CRM)

Collision estimates are presented for the three Moray Firth Developments, with those for Moray West presented following Band (2012) option 2 and those for Moray East and Beatrice wind farms presented both following options 1 and 3 ('basic' and 'extended' respectively). Option 3 using generic flight height distributions (from Johnston et al. 2014)[1] is more realistic than option 1 as it takes account of the variation in collision risk across the rotor swept height (i.e. the collision risk height zone) and was advised for use in PVA for herring gull in the 2017 Forth and Tay Scoping Opinions.[2] The avoidance rate and nocturnal activity rates follow standard guidance.

Moray West propose several refinements in the CRM results table (Table 1.2), refinements 1-3 are related to collision estimates, while refinements 4-7 are related to apportioning (see relevant sections below). The refinements are all accepted by MSS for the Moray West application.
Refinement 1 is to update the construction scenario for Moray East to the planned design (outlined in the Moray East Design Specification and Layout Plan). This will provide a more realistic in combination assessment for the Moray Firth projects.

[1] Johnston, A. , Cook, A. S., Wright, L. J., Humphreys, E. M. and Burton, N. H. (2014), Modelling flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. J Appl Ecol, 51: 31-41. doi:10.1111/1365-2664.12191
[2] Marine Scotland 2017. Scoping Opinion for Seagreen. Section 9.4.7. https://www2.gov.scot/Resource/0052/00524860.pdf

Refinement 2 is to update flight speeds for Moray East and Beatrice wind farms to 9.8 ms^{-1} (this had already been done for Moray West) following recent flight speed measurements.[3] This refinement was previously accepted by SNH (4th January 2019 SNH consultation response to EIA Addendum). Refinement 3 is to account for the baseline bird survey data being derived from boat based observations that can lead to increased estimates for large gulls that may follow boats; the adjustment used follows an approach used in the Appropriate Assessments for Beatrice and Moray East wind farms.

Breeding season apportioning

Apportioning of collisions for each of the Moray Firth Developments to great black-backed gull from East Caithness Cliffs SPA follows SNH guidance.[4] This includes the two-step apportioning approach advised by SNH, whereby collisions are first apportioned to SPA and non-SPA colonies using Seabird 2000 colony counts, then apportioning between SPA sites using the most recent available population counts (refinement 5). Collisions should only be apportioned to breeding adults, as the citation populations for the SPA colonies includes only breeding adults. Moray West have accounted for this by adjusted of collision numbers to exclude sub-adult birds (refinement 4) and exclusion of non-breeding adults (sabbaticals, refinement 6).

Non-breeding season apportioning

Moray West have presented two methods for apportioning collisions during the non-breeding period:
1. Moray Firth regional level: Assuming that birds breeding in the Moray Firth remain within the Moray Firth region throughout the year, but with an influx of non-UK great black-backed gull during the non-breeding period (used for table 1.2, presented in Annex C worksheets 1 and 3 for CRM options 1 and 3 respectively). Following this approach for in combination assessment means that only the Moray Firth Developments are considered during the non-breeding period.
2. UK North Sea regional level: Apportioning to the biologically defined minimal population scale (BDMPS) region of UK North Sea waters.[5] This follows the approach used for other species by Moray West (presented in Annex C worksheets 2 and 4 respectively). Following this approach for in combination assessment means that wind farm developments throughout the UK North Sea are considered during the non-breeding period.

Moray West argue for following the first approach, citing evidence that great black-backed gull breeding in Scotland are generally sedentary, not migrating outwith their breeding regions. The first approach is more in line with what was advised in the Forth and Tay Scoping Opinions[6] for assessment of herring gull during the non-breeding period, where an appropriate regional population is first identified, then collisions are apportioned in proportion to the regional population composed of SPA colonies and non-SPA including birds originating from outwith the region (largely non-UK birds migrating into the North Sea). A similar approach to that earlier advised for herring gull is likely justified for great black-backed gull. Slightly more collisions are apportioned to great black-backed gull from East Caithness Cliffs SPA for the non-breeding period following the second approach, however this is likely unrealistic as many of these calculated collisions would be from southern UK North Sea wind farms which are likely outwith the usual non-breeding range for the gulls breeding in the Moray Firth area. MSS advise that the first approach is appropriate to use in assessment, as it is more biologically realistic.

Collision mortality apportioned to East Caithness Cliffs SPA

MSS advise that the most appropriate estimate for collision mortality during breeding is of 1.54 individuals for Moray West in isolation and of 2.43 individuals for Moray West in combination with Moray East and Beatrice wind farms (i.e. following refinements 1-6 with CRM option 3 for Moray East and Beatrice wind farms).

For the non-breeding period MSS recommend that the apportioning approach outlined by Moray West is used (i.e. apportioning at the Moray Firth regional level). For Moray West in isolation this leads to an estimate of 0.42

[3] Skov, H., Heinänen, S., Norman, T., Ward, R.M., Méndez-Roldán, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. 247 pp. Available at: https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/
[4] SNH 2018. Interim guidance on apportioning impacts from marine renewable developments to breeding seabird populations in special protection areas. Updated November 2018. https://www.nature.scot/interim-guidance-apportioning-impacts-marine-renewable-developments-breeding-seabird-populations
[5] Furness, R.W. 2015. Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.
[6] Marine Scotland 2017. Scoping Opinion for Seagreen. Section 9.5.5. https://www2.gov.scot/Resource/0052/00524860.pdf

collisions for the non-breeding period and of 0.94 for Moray West in combination with Moray East and Beatrice wind farms.

Annual mortality estimates would then be 1.96 for Moray West in isolation and 3.36 for Moray West in combination with Moray East and Beatrice wind farms (as summarised in table 1.4).

PVA modelling

PVA modelling has been performed for the great black-backed gull population of East Caithness Cliffs SPA (presented in Annex B) with PVA metrics presented for additional breeding adult annual mortality in increments from 1-6 birds (table 1.3) for the wind farm in operation over 25 years. The PVA modelling follows the approach advised in recent scoping opinions thus MSS are content with this.[7]

For annual mortality of 1.96 (rounded to 2 birds) for Moray West in isolation the ratio of impacted to unimpacted population size is 0.898 and the ratio of impacted to unimpacted growth rate is 0.996. For annual mortality of 3.36 (rounded to 3 birds) for Moray West in combination with Moray East and Beatrice wind farms the ratio of impacted to unimpacted population size is 0.851 and the ratio of impacted to unimpacted growth rate is 0.994.

SNH consultation response

SNH state that Moray West in combination with Moray East and Beatrice wind farms will have an adverse effect on site integrity for great black-backed gull as a qualifying interest of the East Caithness Cliffs SPA.

SNH do not advise on which CRM option is most appropriate, stating a range of the ratio of impacted to impacted population size from 0.76 following option 1 to 0.85 for option 3 modelling of CRM for Moray East and Beatrice wind farms. SNH do not advise on what level of impact may be acceptable; their advice does suggest that the general population history of the SPA has been taken into account in reaching their view, that is of a long-term decline though with a slight increase recorded for the last published population count.

SNH note the argument made by Moray West of no connectivity between the Development and East Caithness Cliffs SPA based on an earlier GPS tracking study of breeding gulls from the SPA.[8] In common with earlier consultation responses from SNH they assert that these data are insufficient to conclude no connectivity between the Development and the SPA. This view is shared by MSS (see earlier consultation response),[9] in the absence of data to explain the origin of birds observed in the development areas, the apportioning approach taken provides the best approach for the likely contribution of SPA colonies to birds observed at sea.

SNH provide suggestions for studies to inform on the origin of great black-backed gulls observed in the Development area during the breeding period. SNH suggest catching the great black-backed gulls at sea in the development area then tagging (presumably GPS and/or radio tags) and ringing. This approach would provide useful data on the origin of the birds observed at sea, however it is unclear how practicable it would be to perform such a study as it is likely to be challenging to catch the gulls at sea. Such a study could be complemented by a further GPS tagging study of gulls at East Caithness Cliffs SPA and potentially other Moray Firth colonies too. GPS devices and attachment methods have advanced since the original study,[8] so it is likely that gulls could be tracked for longer time periods than previously.

RSPB Scotland consultation response

RSPB Scotland conclude that Moray West in combination with Moray East and Beatrice wind farms would have an adverse effect on integrity of great black-backed gull as qualifying feature of East Caithness Cliffs SPA. This opinion is based on counterfactual of population size (also known as ratio of impacted to unimpacted population size). RSPB state that the range of this value is 15-24%, the stated values are the complement of the impacted to unimpacted population size metric, i.e. one minus the metric value representing the percentage reduction in population size for the impacted population compared to the unimpacted population.

RSPB note that the assessment has not accounted for uncertainty, specifically citing collision risk modelling (CRM). It is ambiguous what aspects of uncertainty RSPB are referring to and RPSB do not advise on how they

[7] Marine Scotland 2017. Scoping Opinion for Seagreen. Section 9.6. https://www2.gov.scot/Resource/0052/00524860.pdf

[8] Archibald., K., Evans, D. and Votier, S. (2014). East Caithness Cliffs SPA gull Tracking Report 2014. Environment & Sustainability Institute, University of Exeter.

[9] 5th September 2018 MSS advice to MS-LOT on application

consider that uncertainty would appropriately be included in the assessment. RSPB may have expected the recently developed stochastic CRM (sCRM) tool[10] to be used in the assessment. The original Moray West Application pre-dated the publication of the sCRM tool, thus the standard, non-stochastic, Band (2012) CRM was used by the applicant.

RSPB query how the PVA was run, specifically with respect to how productivity was modelled, stating that the PVA seems to have used number of eggs and then survival to the next age class rather than the number of fledged young. In the PVA annex (Annex B) Moray West state that productivity rates, (numbers of chicks fledged per pair), were modelled using values taken from Horswill and Robinson (2015),[11] and the expanded generic population model shows that productivity rates were applied prior to modelling survival between age classes. MSS have reviewed the PVA modelling approach used by Moray West (see PVA modelling above) and consider that it is appropriate and that the correct metric for productivity has been used.

Hopefully these comments are helpful to you. If you wish to discuss any matters further contact the MSS Renewables in-box at MS_Renewables@gov.scot

Yours sincerely

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Marine Scotland Science

[10] McGregor, R.M., King, S., Donovan, C.R., Caneco, B., and Webb, A. 2018. A Stochastic Collision Risk Model for Seabirds in Flight. Available online: https://www2.gov.scot/Topics/marine/marineenergy/mre/current/StochasticCRM

[11] Horswill, C. & Robinson, R.A. (2015). Review of seabird demographic rates and density dependence. JNCC Report No. 552. Joint Nature Conservation Committee, Peterborough.

Aberdeenshire COUNCIL

Our Ref: APP/2018/1730
Your Ref:

Ask for: Redacted
Direct Dial: Redacted

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

25 March 2019

Dear Sir,

ELECTRICITY ACT 1989 (As Amended); MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009; CONSERVATION (NATURAL HABITATS &c.) REGULATIONS 1994; CONSERVATION OF OFFSHORE MARINE HABITATS AND SPECIES REGULATIONS 2017

Proposal: Construct And Operate Moray West Offshore Wind Farm.
Address: Approximately 22.5km Southeast Of The Caithness Coastline, Moray Firth

Thank you for your consultation dated 19 March 2019 concerning additional information submitted alongside the above proposal. This consultation is further to previous submissions and responses and has been circulated in order to inform an Appropriate Assessment under the above legislation.

The submission relates predominantly to offshore impacts concerned with impacts upon great black-backed gulls and their habitat within the East Caithness Cliffs Special Protection Area (SPA). From an Aberdeenshire Council standpoint therefore, our comments and interest will be limited to any terrestrial impacts upon the Aberdeenshire area itself.

From reviewing the submission, the great black-backed gulls are recognised within the Aberdeenshire Area with a small colony identified, which in turn provides population figures for the wider analysis presented. However this species is not a qualifying interest for any designated sites within Aberdeenshire – in particular the Troup, Pennan and Lion's Head SPA and as such no adverse impacts are anticipated.

With this, as well as the limited identified impacts upon Aberdeenshire and the focus of the information on designations outwith the Aberdeenshire area, I can confirm that the submission does not give rise to any concerns from an Aberdeenshire Council perspective.

Aberdeenshire COUNCIL

We would however encourage you to liaise and consult with Scottish Natural Heritage and The Highland Council on this matter.

I trust the above response has addressed your enquiry. In the event that you wish to discuss any matters relating to this issue please contact the case officer on the number at the head of this letter.

Yours faithfully

Redacted