

FAO Redacted  
Marine Scotland Licensing Operations Team  
Scottish Government

Via Email

ABZ Ref: ABZ2754

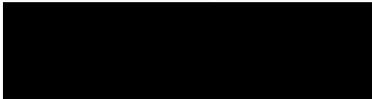
7<sup>th</sup> September 2018

Dear Reda

**Ref: APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 (AS AMENDED) AND MARINE LICENCES UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE INCH CAPE OFFSHORE WINDFARM (REVISED DESIGN), 15KM EAST OF THE ANGUS COASTLINE**

I write in relation to the above application. The proposed development has been examined from an aerodrome safeguarding perspective and does not conflict with safeguarding criteria. We, therefore, have no objection to this proposal.

Yours Sincerely



Kirsteen MacDonald

Safeguarding Manager  
Aberdeen Airport

Redacted  
[abzsafeguard@aiairport.com](mailto:abzsafeguard@aiairport.com)



# Redacted

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**From:** <sup>Red</sup> Redacted on behalf of radionetworkprotection@bt.com  
**Sent:** 23 August 2018 16:12  
**To:** Redacted MS LOT ICOL Representations  
**Cc:** andrew.blyth@redrockpower.co.uk; tom.Young@redrockpower.co.uk  
**Subject:** RE: Inch Cape Offshore Windfarm (Revised Design) - Consultation - BT Radio Network Protection - Response from ICOL

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Hi all,

Thanks for the information provided :-

Inch Cape centre:  
x= 549528.3396  
y= 6261416.2371

I am assuming the northing co-ordinates are y=626142 (6 figure grid) as you have provided a 7 figure ref.

Then central co-ordinates easting 549528 and northing 626142 are approx. 12km from our nearest Bt radio links, so no objection from BT to your offshore wind farm development proposal.

Kind Regards,  
**Paul Atkinson**  
**Fibre and Network Delivery**  
**Radio Frequency Allocation & Network Protection (BNJ553)**  
Openreach  
Tel: 0113 8074481  
Mobile Redacted  
Web: [www.openreach.co.uk](http://www.openreach.co.uk)  
**PLEASE ALWAYS RESPOND TO [radionetworkprotection@bt.com](mailto:radionetworkprotection@bt.com)**

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Registered office: 81 Newgate Street London EC1A 7AJ  
Registered in England no. 1800000

Redacted

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**From:** Redacted n behalf of radionetworkprotection@bt.com  
**Sent:** 23 August 2018 10:24  
**To:** Redacted MS LOT ICOL Representations  
**Subject:** RE: Inch Cape Offshore Windfarm (Revised Design) - Consultation - Response requested by 01/10/18

## **OUR REF; WID10833**

Dear Sir/Madam

Thank you for your email dated 21/08/2018.

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

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

Please can I ask , you send me a list of grid references for the turbine locations or alternatively please provide a central grid reference co-ordinate and a measured radius to encompass the offshore windfarm, I was unable to locate these in the documentation provided, however from the location map I have assumed a central co-ordinate of 379165-731428, would this be correct or even close to the windfarm. From these co-ordinates there are no BT radio signals for 10-15km.

Kind Regards,  
**Paul Atkinson**  
**Fibre and Network Delivery**  
**Radio Frequency Allocation & Network Protection (BNJ553)**  
Openreach  
Tel: 0113 8074481  
Mobile Redacted  
Web: [www.openreach.co.uk](http://www.openreach.co.uk)  
**PLEASE ALWAYS RESPOND TO [radionetworkprotection@bt.com](mailto:radionetworkprotection@bt.com)**

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**From:** Dunbar Fishermen <dunbarfishermen@gmail.com>  
**Sent:** 11 September 2018 14:20  
**To:** Redacted MS Marine Renewables; Redacted  
Redacted  
**Subject:** Inch cape wind farms

To whom it may concern

By preparing and putting cables in this will cause a lot of disruption to our fishing grounds , this will then result in a loss in the men/ ladies income .

We feel compensation is necessary but no one off payment will compensated our income loss as this will several years of distruption .

We would like to be kept in the loop of what is happening and work together to work out a fair deal for our loss

Many thanks dfa

Redacted

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Secretary

Dunbar Fishermen's Association

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Redacted

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**From:** Redacted  
**Sent:** 23 September 2018 15:11  
**To:** MS LOT ICOL Representations  
**Subject:** Windfarm submission

Dear Sir

I would just like to comment on the lack of importance you attach to the lobster population and fishermen along the East Lothian coast line that will be affected by the wind farm development. This is a local heritage and community issue along the coastline with no one voice or direct economic importance seems to be overshadowed by the politics and finance of the situation.

Yours aye

Jane McMinn BSc  
Director  
The Firth of Forth Lobster Hatchery Limited

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\*\*\*\*\*



By email: [MS.Marinelicensing@gov.scot](mailto:MS.Marinelicensing@gov.scot)

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

Longmore House  
Salisbury Place  
Edinburgh  
EH9 1SH

Enquiry Line: 0131-668-8716  
[HMConsultations@hes.scot](mailto:HMConsultations@hes.scot)

Our ref: AMN/16/TA  
Our case ID: 300020430

21 September 2018

Dear Redacted

[The Electricity Works \(Environmental Impact Assessment\) \(Scotland\) Regulations 2017](#)  
[The Marine Works \(Environmental Impact Assessment\) \(Scotland\) Regulations 2017](#)  
[Inch Cape Offshore Windfarm \(Revised Design\), 15km East of the Angus Coastline](#)

Thank you for your consultation which we received on 21 August 2018. We have reviewed the details provided and our comments here concentrate on our historic environment interests for scheduled monuments and their settings, category A listed buildings and their settings, World Heritage Sites, gardens and designed landscapes (GDL) appearing in the Inventory, Inventory battlefields and Historic Marine Protected Areas (Marine (Scotland) Act 2010). In this case, our advice also includes matters relating to marine archaeology outwith the scope of the terrestrial planning system.

You should also seek advice from the relevant local authority archaeology and conservation advisors for matters including unscheduled archaeology and category B and C-listed buildings.

### **Our Advice**

We are content that sufficient information has been provided in the EIA Report to come to a view on the proposals. We do not object to the proposed development. Our more detailed comments are given as an annex to this letter.

Our comments should be treated as a material consideration, and this advice should be taken into account in your decision making. Our view is that the proposals do not raise historic environment issues of national significance and therefore we do not object. Our decision not to object should not be taken as our support for the proposals. This application should be determined in accordance with national and local policy on development affecting the historic environment, together with related policy guidance.



HISTORIC  
ENVIRONMENT  
SCOTLAND

ÀRAINNEACHD  
EACHDRAIDHEIL  
ALBA

## Further Information

This response applies to the application currently proposed. An amended scheme may require another consultation with us.

Guidance about national policy can be found in our 'Managing Change in the Historic Environment' series available online at [www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/](http://www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/). Technical advice is available through our Technical Conservation website at [www.engineshed.org](http://www.engineshed.org).

Please contact us if you have any questions about this response. The officer managing this case is Ruth Cameron, who can be contacted by phone on 0131 668 8657 or by email on [Ruth.Cameron@hes.scot](mailto:Ruth.Cameron@hes.scot).

Yours sincerely

**Historic Environment Scotland**

## ANNEX

### Background

The proposed development consists of up to 72 wind turbines with maximum height to tip of 291m and associated offshore transmission works, located approximately 15 to 22 km east of the coastline of Angus. This represents a revision of the consented Inch Cape offshore wind farm, which consisted of a maximum number of 110 wind turbines, with height to tip of up to 215m.

Our predecessor body, Historic Scotland, did not object to the consented scheme, and identified no significant impacts on our historic environment interests. We have been consulted in the scoping process of this revised development, and agreed that the only new assessment required would be of impacts on the setting of terrestrial heritage assets.

### Our interests

We consider our key interest in this proposed development to be the setting of two category A listed buildings:

- Bell Rock Lighthouse ([LB 5197](#))
- Ladyloan, Bell Rock Lighthouse Signal Tower and Entrance Lodges ([LB 21230](#))

We have reviewed the assessment and supporting visualisations for these assets, and are content to agree with the findings that there will not be a significant impact on their settings. Our more detailed comments on the assessment and its methodology are given below.

### The EIA Report

We welcome the fact that the assessment refers to our Managing Change guidance series, and the Historic Environment Scotland Policy Statement. We are content that the methodology used is appropriate for our interests – we have some comments on this, which are given below.

#### *Methodology*

We note that table 13.9 sets out the sensitivity of heritage assets. The definitions given tie together the importance of an asset and the contribution of its setting – such that a nationally important asset must have a strong contribution from its setting to be considered of high sensitivity. This means that no value is available for a nationally important asset with a medium or low contribution for setting. This has the potential to make it unclear how sensitivity is assigned in such cases.

As general advice on assessment methodology, we consider that setting contributes to the overall cultural significance of an asset and that EIA assessment should focus on

identifying impacts which affect the cultural significance of assets. This would be in line with best practice guidance set out in the EIA Handbook for assessing cultural heritage impacts.

We are content that any alterations made to the methodology to take these comments into account would help only with the readability of the methodology and would not alter the conclusions of the assessment.

#### *Supporting information*

We welcome the inclusion of visualisations and wireframes to support the conclusions of the assessment. We note, however, that figure 13.1 appears to be captioned incorrectly, as the first diagram appears to show the view north and east towards the proposed Inch Cape development. It would also have been helpful to have this figure reproduced at a higher resolution. However, as we were able to refer to visualisations for previous iterations of the scheme for context, we are content that it has provided adequate information in this instance.

We note that the visualisations provided demonstrate the worst-case scenario as agreed with SNH, showing 40 turbines at a maximum height of 291m. We are content to agree that in this instance this demonstrates the greatest level of potential setting impacts, and therefore that this methodology is appropriate for our interests.

#### *Assessment*

##### **Bell Rock Lighthouse**

We welcome the level of information provided in identifying the setting of this heritage asset. We are content that the key elements which make a contribution to its cultural significance have been identified. We note the consideration that the current setting of the asset on a busy seaway, and the fact that the turbines will affect a relatively small arc of view within the open panoramic views available from the lighthouse. We also note that in light of the intervening distance, the proposed turbines are considered unlikely to compete with the lighthouse for prominence.

In light of these factors, we are content to agree that while the turbines will have some effect on the setting of the lighthouse, this will not be significant for our interests.

##### **Ladyloan, Bell Rock Lighthouse Signal Tower and Entrance Lodges**

We welcome the level of information provided in identifying the setting of this heritage asset. We are content that the key elements which make a contribution to its cultural significance have been identified. We are content to agree that the key visual element of its setting is the view towards the Bell Rock Lighthouse, in light of their historical functional relationship.



We consider that there is the potential for the proposed turbines to distract from this view to some extent. However, the distance between the signal tower and the lighthouse means that their relationship is not ordinarily appreciable with the naked eye. We therefore agree with the assessment that this view is very specifically focussed.

In light of these factors, we are content to agree that while the turbines will have some effect on the setting of the signal station, this will not be significant for our interests.

### **Mitigation**

We welcome the undertaking to produce a Written Scheme of Investigation and a Protocol for Archaeological Discoveries. We will be happy to comment on these, or any further details, as they are produced.

### **Summary**

We are content that sufficient information has been provided in the EIA Report to come to a view on the proposals. We do not object to the proposed development.

Historic Environment Scotland  
21 September 2018



Maritime &  
Coastguard  
Agency

Navigation Safety Branch  
Bay 2/25  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG

Redacted  
Marine Scotland LOT  
Aberdeen

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Tel: +44 (0) 203 8172426  
Mobile: Redacted  
E-mail: [Helen.Crossson@mcga.gov.uk](mailto:Helen.Crossson@mcga.gov.uk)

Your ref:  
Our ref:

1<sup>st</sup> October 2018

Dear Redacted

### **Inch Cape Offshore Windfarm Revised Design – Consultation**

Thank you for the opportunity to comment on the application for consent under Section 36 of the Electricity Act and the Marine Licences under Part 4 of the Marine (Scotland) Act 2010 for the Inch Cape Offshore Windfarm.

The MCA's remit for Offshore Renewable Energy Installations (OREIs) is to ensure that the safety of navigation is preserved, and our Search and Rescue capability is maintained, whilst progress is made towards government targets for renewable energy.

Inch Cape Offshore Ltd has undertaken a detailed Navigation Risk Assessment (NRA) in accordance with MCA guidance (MGN 543 and its supporting annexes), and risk assessment methodology, and we are satisfied that all aspects of the NRA have been adequately addressed, including the traffic surveys.

The MCA participated in detailed discussion with the developers regarding the required traffic surveys updates. On this occasion, based on the understanding that there were no significant changes in traffic identified in the validation study which would result in a different significance ranking upon re-assessment, the MCA accepted the original Navigation Risk Assessment (NRA), an updated EIA, the traffic validation study and MGN 543 checklist, as an equivalent to a new NRA. These documents have been provided as per request. However, there are still aspects of the project that will need to be discussed beyond consent, and concerns which will need to be addressed and agreed with MCA, as follows:

#### **Layout Design**

The MCA has considered an initial layout design as shown in figure 15.1 (chapter 15 page 13 of 48), and there appears to be multiple lines of orientation with favourable spacings between the turbines. The turbine layout design will require MCA approval prior to construction to minimise the risks to surface vessels, including rescue boats, and search and rescue aircraft operating within the site.

MCA will seek to ensure all structures are aligned in straight rows and columns with a minimum of two lines of orientation. We are concerned about the scale of the development in combination with other windfarms in the area; Neart na Gaoithe, Seagreen and Seagreen Bravo and the turbine layout and orientation must be discussed and agreed with MCA at the earliest opportunity.

We understand that micro-siting is likely necessary and note the proposed <50m micro-siting.

### **Marking and Lighting**

MCA will seek to ensure the turbine numbering system follows a 'spreadsheet' principle and is consistent with other windfarms in the area. All lighting and marking arrangements will need to be agreed with MCA and the Northern Lighthouse Board, and in line with MGN 543.

All turbine aviation lights should be compatible with night vision imaging systems.

### **Emergency Response & Co-operation Plans**

A SAR checklist based on the requirements in MGN 543 Annex 5 will need to be completed in agreement with MCA before construction starts. This will include the requirement for an approved Emergency Response Co-operation Plan (ERCOP), which will be included as a formal condition of the consent.

### **Construction scenarios**

We would expect to see some form of linear progression of the construction programme avoiding disparate construction sites across the development area, and the consent needs to include the requirement for an agreed construction plan to be in place ahead of any works commencing.

### **Mooring Arrangements:**

We understand that floating wind turbines are not being considered as part of the design envelope.

### **Hydrographic Surveys**

MGN 543 Annex 2 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 and the UKHO. Further information can be found in the MGN 543 supporting documents titled 'Hydrographic Guidelines for Offshore Developers' and 'Post Construction Hydrographic Guidelines for Offshore Developers'. Both are available on our website at the following link: <https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping>.

### **Cable Routes**

Export cable routes, cable burial protection index and cable protection are issues that are yet to be fully developed. However due cognisance needs to address cable burial or protection and any consented cable protection works must ensure existing and future safe navigation is not compromised. The MCA would accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum.

### **Safety Zones**

The requirement and use of safety zones as detailed in the application is noted, and MCA will comment on the Safety Zone application once submitted, as a statutory consultee. Safety zones during the construction, maintenance and decommissioning phases are supported, however it should be noted that operational safety zones may have a maximum 50m radius from the individual turbines. A detailed justification would be required for a 50m operational safety zone, with significant evidence from the construction phase in addition to the baseline NRA required supporting the case.

In conclusion, the comments detailed above are to highlight areas of concern, and items to be addressed by the applicant in consultation with the MCA to ensure the risk to the safety of navigation and the impact on SAR capability remains low.

Yours sincerely

Helen Croxson  
Offshore Renewables Advisor  
Navigation Safety Branch

Pete Lawson  
Offshore Energy Liaison Officer  
HM Coastguard

cc. Peter Douglas, NLB



MINISTRY OF DEFENCE

# Defence Infrastructure Organisation

Estates - Safeguarding Department

Defence Infrastructure Organisation  
Kingston Road  
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[www.mod.uk/DIO](http://www.mod.uk/DIO)

1<sup>st</sup> October 2018

Your ref: 048/OW/RRP – 10

DIO ref. 10039940

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

Dear Sir/Madam,

## **Inch Cape Offshore Wind Farm**

### **Application for a Consent under Section 36 of the Electricity Act 1989 (As Amended) and Marine Licences under Part 4 of the Marine (Scotland) Act 2010 to construct and operate Inch Cape Offshore Windfarm (revised design)**

I write to confirm the safeguarding position of the Ministry of Defence (MOD) in relation to the above applications to construct and operate the Inch Cape Offshore wind farm.

This scheme will comprise of up to 72 wind turbines, up to 291m in height (to blade tip) that will be located in the North Sea approximately 15km east of the Angus coastline. In addition to the turbine structures there will be 2 offshore substation platforms, subsea cabling and other associated infrastructure.

The MOD has assessed the location and layout of the proposed development and has identified the following issues:

#### **Military Low Flying and Defence Maritime Interests**

The proposed development will not adversely affect MOD offshore Danger and Exercise Areas or defence maritime navigational interests.

However, the turbines and associated offshore platforms will affect military low flying training activities conducted in this area. As such it will be necessary for these structures to be fitted with appropriate aviation warning lighting to maintain the safety of military aviation.

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

The turbines will be between 37.3km and 51km from, detectable by, and will cause unacceptable interference to the primary surveillance ATC radar at Leuchars Station (formerly RAF Leuchars).

Wind turbines have been shown to have detrimental effects on the performance of Primary Surveillance Radars. These effects include the desensitisation of radar in the vicinity of the turbines, and the creation of "unwanted" aircraft returns which air traffic controllers must treat as aircraft returns. 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 "unwanted" returns 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 a turbine's radar return, making the tracking of both conflicting unknown aircraft and the controllers' own traffic much more difficult.

An operational assessment of this proposal has identified that the proposed wind farm will have a significant and detrimental effect on the provision of air traffic services at Leuchars Station

### **Air Defence (AD) Radar**

The proposed wind farm will be between 94.5km and 113.3km from the Remote Radar Head (RRH) at Buchan and 113.9km from the RRH at Brizlee Wood. When operational, the turbines will be detectable to and cause unacceptable interference to both radars.

Wind turbines have been shown to have detrimental effects on the operation of air defence radar. These 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 locality of the turbines would be reduced, hence turbine proliferation within a specific locality can result in unacceptable degradation of the radar's operational integrity. This would reduce the RAF's ability to detect and manage aircraft in United Kingdom sovereign airspace, thereby preventing it from effectively performing its primary function of Air Defence of the United Kingdom.

Therefore, at this stage, the MOD maintains a safeguarding objection to this application in its current form.

It should be noted that our radar assessments have been completed using the coordinates provided for the maximum extent of the offshore windfarm development area identified in this application. Once further details on the layout and dimensions of the proposed wind farm are available further technical and operational assessments can be completed to clarify the impact the development will have upon the MOD radars identified. We will gladly review more detailed plans and mitigation proposals that the applicant may wish to submit to us.

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

I trust this clarifies our position on this consultation. Please do not hesitate to contact me should you wish to consider these points further.

Yours sincerely

# Redacted

Jon Wilson

Senior Safeguarding Officer

Redacted

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**From:** NATS Safeguarding <NATSSafeguarding@nats.co.uk>  
**Sent:** 24 August 2018 16:05  
**To:** Redacted  
**Subject:** RE: Inch Cape Offshore Windfarm (Revised Design) - Consultation - Response requested by 01/10/18 [Our Ref: SG08578]

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 NATS (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 NATS 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

**NATS**

NATS Safeguarding

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**From:** Redacted  
**Sent:** 21 August 2018 11:31  
**To:** ICOL.Representations@gov.scot  
**Subject:** Inch Cape Offshore Windfarm (Revised Design) - Consultation - Response requested by 01/10/18

Dear Sir/Madam

**ELECTRICITY ACT 1989 (AS AMENDED)**

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)  
The Electricity (Applications for Consent) Regulations 1990

**MARINE (SCOTLAND) ACT 2010**

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 (AS AMENDED) AND MARINE LICENCES UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE INCH CAPE OFFSHORE WINDFARM (REVISED DESIGN), 15KM EAST OF THE ANGUS COASTLINE**

# Northern Lighthouse Board

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

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Your Ref: Email – Inch Cape OWF – S36 Consent  
Our Ref: AL/OPS/ML/O6\_01\_527

Marine Renewables  
Marine Scotland – Marine Planning & Policy  
Scottish Government  
Marine Laboratory  
375 Victoria Road  
ABERDEEN  
AB11 9DB

22 August 2018

## **ELECTRICITY ACT 1989 (AS AMENDED)**

**The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended)**

**The Electricity (Applications for Consent) Regulations 1990 (as amended)**

## **MARINE (SCOTLAND) ACT 2010 and MARINE & COASTAL ACCESS ACT 2009**

**The Marine Works (Environmental Impact Assessment) Regulations 2017 (as amended)**

**The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended)**

We are in receipt of correspondence dated 21 August 2018 requesting comments regarding the application submitted by **Inch Cape Offshore Windfarm Ltd** to construct and operate the Inch Cape Offshore Windfarm at a site approximately 15 km east of the Angus coastline.

We note that the marine licence application contains only the 'worst-case scenario' condition, utilising the maximum of 72 turbines, 2 Offshore Substation Platforms, 2 export cables with a landfall near Cockenzie, East Lothian, and an indicative field layout only. As such, it is not possible for our response to be detailed in nature. It is noted that within the EIA, reference is made to additional proposed offshore wind developments within the Firth of Forth area; 'Nearth na Gaoithe' and the 'Seagreen' Alpha and Bravo projects, and that there will be cumulative impacts to navigation of these developments all occurring within close proximity of each other.

Northern Lighthouse Board require the developer to establish a Navigational Safety Plan and a Lighting and Marking Plan. The latter should indicate proposed marking and lighting for the three phases of the windfarm life, namely the construction, operational and de-commissioning phases, to give the best possible indication to the mariner of the nature of the works being carried out.

The marking and lighting of the wind farm may require to be altered or amended to reflect future development of the adjacent 'Nearth na Gaoithe' and the 'Seagreen' sites in order to form a cohesive and effective marking plan for the area occupied by

**the safety of all**

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

turbines and sub-stations. The licence holder will be expected co-operate fully in this matter.

### Construction Phase

During the construction phase we would require that the site boundary shall be marked by a mixture of lit Cardinal Mark and lit Special Mark buoys, to be agreed with Northern Lighthouse Board. These 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 and be fitted with a topmark and radar reflector. The light range on these buoys shall be 5 Nautical Miles. AIS Aids to Navigation (AtoN) should be fitted to Cardinal Marks.

### Operational Phase

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, and should have a nominal range of not less than 5 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 Significant Peripheral Structures (SPS) 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.
- AIS Aids to Navigation (AtoN) should be fitted to a limited number of turbines, indicating the name and location of the turbine. A radio licence will be required from OFCOM to establish these AtoN.
- 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 and AIS AtoN should have an availability of not less than 97% (IALA Category 3) over a rolling three year period.
- Where aviation anti-collision lights are installed, these should be synchronised lights flashing Morse character 'W'. A derogation from the requirement for fixed red lights should be obtained from the Civil Aviation Authority.
- It may also be necessary to mark the landfall site of the export cable routes. We would then require that Cable Marker Boards should be positioned as near as possible to the shoreline so as to mark the points at which the cable comes 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 structures shall be mounted at least 4 metres above ground level.

### Decommissioning Phase

When the site 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.

### General

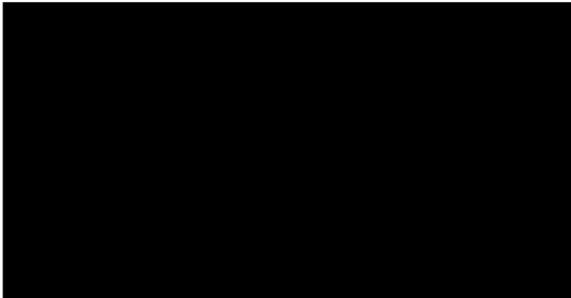
All navigational marking and lighting of the site or its associated marine infrastructure will require the Statutory Sanction of the Northern Lighthouse Board prior to deployment.

We would require that Notice(s) 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 require that the turbine installation locations, cable routes and cable landing points should be communicated to the United Kingdom Hydrographic Office in order that all relevant charts and publications can be correctly updated.

We note that a comprehensive contingency plan will be required, detailing the emergency response to all possible catastrophic failure and collision scenarios.

Please advise if we can be of any further assistance, or you require clarification of any of the above.



# Redacted

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**From:** Redacted  
**Sent:** 20 September 2018 10:22  
**To:** MS LOT ICOL Representations  
**Subject:** Inch Cape objection

In response to your email regarding Inch Cape . Port Seton Fishermen would like to make an objection. The concerns they have is the route where the cables will be layed, and the amount of disruption before and after the cable laying along with how much ground they will lose to work on and for how long .

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f.a.o. Marine Scotland Licensing Operations Team  
Scottish Government  
Marine Laboratory  
375 Victoria Road  
ABERDEEN AB11 9DB

**BY EMAIL**

27<sup>th</sup> September 2018

Dear Sir / Madam

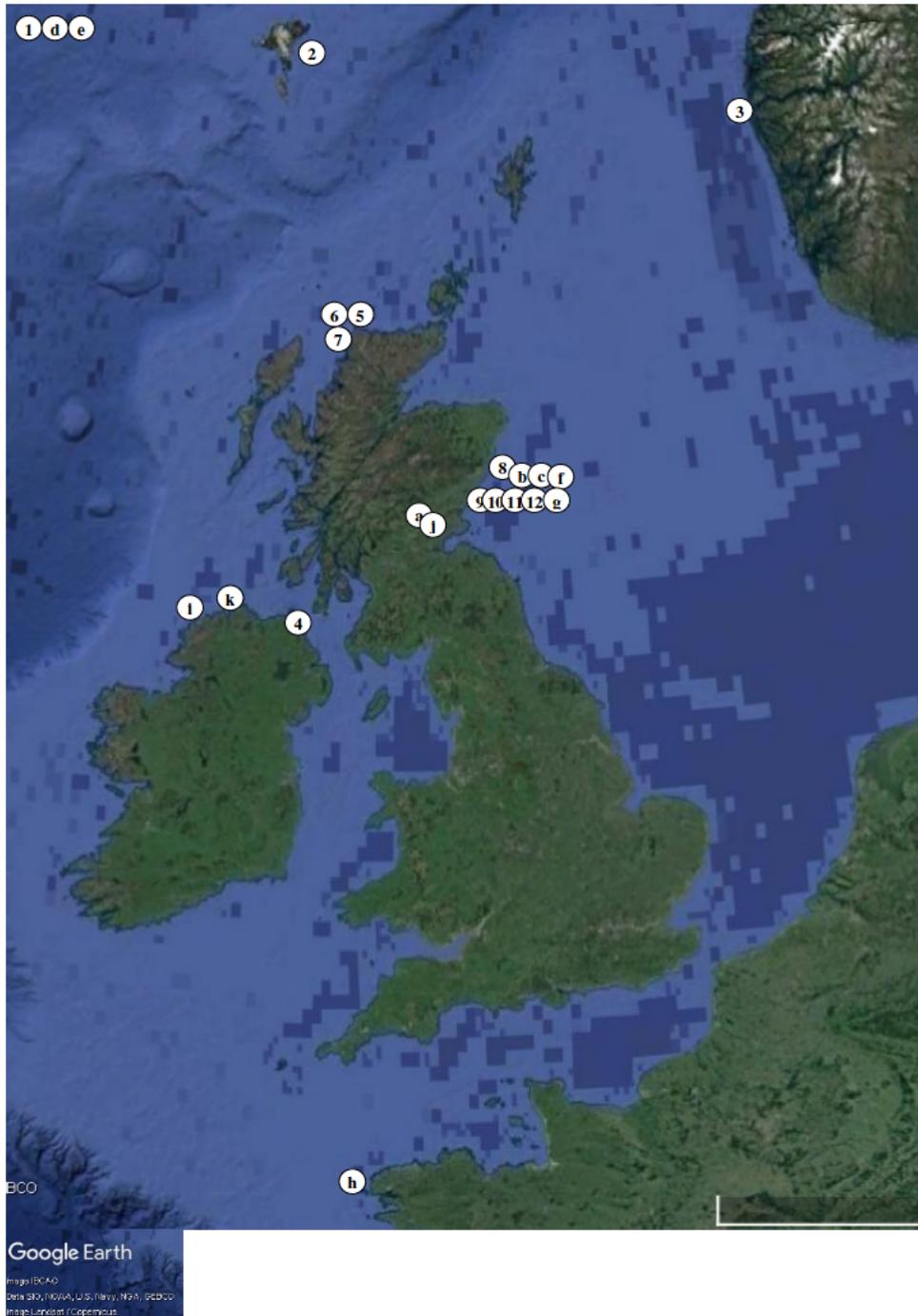
**INCH CAPE OFFSHORE WINDFARM (REVISED DESIGN)**

I write in response to the Scottish Government's consultation on the Inch Cape Offshore Windfarm in respect of the application for consent under Section 36 of the Electricity Act 1989 [The Electricity Works {Environmental Impact Assessment}{Scotland} Regulations 2017 and The Electricity {Applications for Consent} Regulations 1990] and the Marine (Scotland) Act 2010 [The Marine Works{Environmental Impact Assessment}{Scotland} Regulations 2017.

The application for this development has not taken into account the fact that a large number of East coast Salmon travel across the North Sea in line with south Northumberland, and then travel northwards up the east coast to reach their Scottish natal rivers. This has been proven to be the case by tagging studies (Malcolm et al, 2010).

This development will have a more far-reaching effect on rivers further away from the site than the developers have considered. The map below shows the recaptures of Tweed fish at sea, which shows that they have been caught in the Montrose and Aberdeen areas close to the proposed wind farm locations, through which they would have to travel if they then took a straight course to Tweed.

**Fig 2G.1:** Captures at sea of salmon that either returned to or came from the Tweed (excluding the N. E. England net fisheries)



*Numbers shown are fish tagged as adults on the coast that later turned up in the R. Tweed; Letters shown are fish tagged as parr or smolts in the Tweed and were later caught at sea*

Salmon passing through the area of the proposed development are already vulnerable to predation from the large seal populations on the east coast. New information has shown that the bases of wind turbines act as artificial reefs, attracting both Gray and Harbour seals to hunt around them (*Russell et al, 2014*). Marine wind turbines are therefore now known to alter the foraging pattern of seals and attract them in to areas that they would otherwise have just passed through. The influence of underwater structures on the predation during the offshore migration of Salmon has not therefore been fully considered. The diagram taken from this

paper, below, clearly shows wind turbine to attract seals.

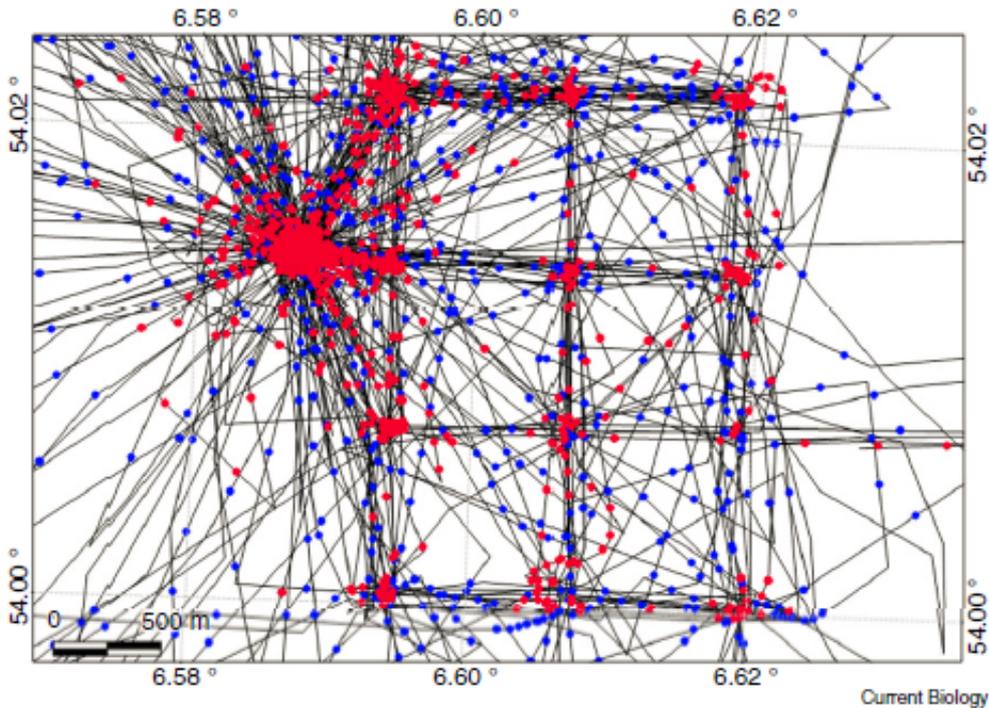


Figure 1. The tracks of a harbour seal around Alpha Ventus windfarm. Points show locations at 30 minute intervals; red indicates higher chances of foraging ( $p(\text{foraging}) > 0.5$ ) as predicted by our state-space model and blue higher chances of travelling. The individual appears to forage at all 12 turbines and the meteorological mast (constructed in 2003) to the west of the windfarm.

These authors also state: "*The finding that a proportion of seals adjust their behaviour to make use of anthropogenic structures raises questions regarding the attributes of these individuals and the ecological consequences of such behaviour.*" and "*The windfarms considered here were new, and prevalence of such behaviour may increase with time, especially if the artificial reefs are not yet fully established. Even at the levels of prevalence within our sample, this behaviour is likely to be displayed by a large number of individuals given that the population of Harbour Seals in the North Sea is estimated as 55,000 and 65,000 Gray Seals are estimated to haul out on the British coast of the North Sea alone.*"

Some compensatory support should therefore be given to those rivers that will suffer as a consequence of greater predation on their returning stocks, should further data support that this is indeed the case.

Yours faithfully

*F Hiatt*

F B L HIEATT  
CLERK TO THE COMMISSION

Direct Email: [fhieatt@rtc.org.uk](mailto:fhieatt@rtc.org.uk)

## REFERENCES

Malcolm, I., Godfrey, J. and Youngson, A.F. 2010. 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 Report, 1(14).

Russell, D.J.F. et al, 2014: Marine Mammals trace anthropogenic structures at sea. *Current Biology*, Vol 24 (14).

# Redacted

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**From:** Pauline McGrow <Pauline.McGrow@ryascotland.org.uk>  
**Sent:** 27 September 2018 16:01  
**To:** **Redacted**  
RE: Inch Cape Offshore Windfarm (Revised Design) - Consultation - Response requested by 01/10/18

Dear Redacted

I write to inform you that we have been through the revised documentation and RYA Scotland have no additional comments to make.

Kind Regards

Pauline

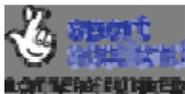
**Pauline McGrow**  
**Senior Administrator**  
**Tel: 0131 317 4611**

**Royal Yachting Association Scotland**  
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Date: 1st October 2018

LF000009-CST-OF-LTR-0010

The Scottish Government,  
Marine Scotland Licensing Operations Team  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB

Seagreen Wind Energy Limited  
C/o SSE Renewables  
1 Waterloo Street  
Glasgow  
G2 6AY

Attention: Marine Scotland Licensing Operations Team

Dear Sir/ Madam

**Subject: Seagreen Consultation Response to Inch Cape Consent Application and EIA Report.**

The Seagreen Alpha, Seagreen Bravo, Neart na Gaoithe and Inch Cape offshore wind farms were awarded consents by Scottish Ministers in October 2014. The consents were secured in November 2017 following an unsuccessful legal challenge to the consent award decision. Seagreen Offshore Wind Energy Limited (Seagreen) submitted applications for development consent for the optimised Seagreen Alpha and Seagreen Bravo offshore wind farms on 14 September 2018. The application was accepted on 20 September 2018. The revised applications allow the installation of a reduced number of larger, higher capacity wind turbines and the addition of a monopile foundation option.

Seagreen has undertaken a review of the Environmental Impact Assessment (EIA) Report submitted in support of the new consent application by Inch Cape Offshore Limited (ICOL) for the installation of up to 72 wind turbine generators (WTGs) up to a height of 291 metres and up to 250m rotor diameter. The EIA Report submitted by ICOL provides a cumulative assessment for each of their scoped in EIA topics with other plans and projects. These cumulative assessments consider different information sources depending on the EIA topic being considered, including, for Seagreen, consideration of the 2012 Offshore Environmental Statement (ES), the consented design envelope (2014), the Scoping Report of May 2017 and information shared in November 2017.

Seagreen wishes to draw to the attention of MS-LOT that the design envelopes for the optimised Seagreen projects has been refined and updated since Seagreen's Scoping Report of May 2017 and since information was shared in November 2017. The use of outdated parameters will introduce differences in the underlying data used to support some of the assessments of the Seagreen projects presented by ICOL, particularly for ornithology. This therefore has implications for the representation of the optimised Seagreen projects in the ICOL cumulative assessment.

In particular, Seagreen wishes to highlight that the collision mortality predicted by Inch Cape for the optimised Seagreen Projects exceeds Seagreen's own assessment outcomes. The Seagreen assessment, based on the optimised design, gives reduced collisions for Seagreen Alpha and Seagreen Bravo combined, compared to the 2014 consented design. This is not apparent in the Inch Cape assessment of Seagreen collisions.

It is noted that predicted mortalities from displacement completed by Seagreen incorporate the 2017 breeding season surveys in an updated baseline which differs from information used by ICOL. Seagreen also note that ICOL did not elect to use ornithology baseline data collected by them in 2017.

In addition, Seagreen wishes to highlight that the cumulative assessments for fish and marine mammals undertaken by ICOL rely on the 2014 consented design envelope for Seagreen and thus do not consider the use of monopiles as a foundation option which represents the cumulative worst case when considered concurrently with pin piles. It is also noted that Seagreen is excluded from the quantitative assessment of disturbance impacts on bottlenose dolphin, based on the outcomes of the 2014 consent and instead a qualitative assessment is provided. Therefore, Seagreen consider that the modelling assessment outcomes for the revised Inch Cape application will be inconsistent with Seagreen's own assessment and may underestimate the impacts of underwater noise, particularly on bottlenose dolphin.

The Seagreen EIA Report is based on the refined and updated design envelope and uses baseline data and methodologies agreed with MS-LOT and key consultees. It therefore presents a more representative assessment of the potential environmental impacts of the optimised Seagreen projects for consideration in any cumulative assessment for the Forth and Tay offshore wind farms by MS-LOT as part of its consent determination.

Yours sincerely,

# Redacted

Heather Donald  
Development and Consent Manager  
For and on behalf of  
Seagreen Wind Energy Limited

Our ref: PCS/160859  
Your ref:

If telephoning ask for:  
Alasdair Milne

29 August 2018

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

By email only to: Redacted

Dear Madam

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 (AS AMENDED) AND MARINE LICENCES UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE INCH CAPE OFFSHORE WINDFARM (REVISED DESIGN), 15KM EAST OF THE ANGUS COASTLINE**

Thank you for your consultation email of 21 August 2018.

**Advice for Marine Scotland**

- 1.1 We note that this consultation is in respect of the offshore components only of the revised Inch Cape Offshore Windfarm.
- 1.2 As we only now comment on proposals for works above MLWS which fall under the appropriate Town and Country Planning (Scotland) Act, we have no comments to make on the offshore element of this proposal.
- 1.3 Please refer to our standing advice on marine consultations within guidance document [SEPA standing advice for The Department of Energy and Climate Change and Marine Scotland on marine consultations](#).
- 1.4 If, after consulting this guidance, you consider that a particular part of this proposal is novel or raises a particular environmental issue relevant to our interests which is not addressed by the standing advice, then we would welcome the opportunity to be re-consulted. Please note that the site specific issue on which you are seeking our advice must be clearly indicated in the body of your consultation request.

If you have any queries relating to this letter, please contact me by telephone on 01786 452537 or e-mail at [planning.se@sepa.org.uk](mailto:planning.se@sepa.org.uk)

Yours faithfully

Alasdair Milne  
Senior Planning Officer  
Planning Service

### 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 this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar 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 or similar 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. For planning applications, 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 on our [website planning pages](#).*



Chairman  
Bob Downes

Chief Executive  
Terry A'Hearn

### Perth 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) • customer enquiries 03000 99 66 99



Our Ref: MM/dr-18/27

Your Ref:

10 September 2018

E-mail: [icol.representations@gov.scot](mailto:icol.representations@gov.scot)<sup>R</sup>

Scottish Fishermen's Federation  
24 Rubislaw Terrace  
Aberdeen, AB10 1XE  
Scotland UK

T: +44 (0) 1224 646944  
F: +44 (0) 1224 647058  
E: [sff@sff.co.uk](mailto:sff@sff.co.uk)

[www.sff.co.uk](http://www.sff.co.uk)

Dear Sir/Madam

### **Inchcape Offshore Windfarm revision consultation**

The Scottish Fishermen's Federation (SFF) is pleased to respond to this application on behalf of the 400 plus fishing vessels in membership of its constituent associations, The Anglo Scottish Fishermen's Association, Fife Fishermen's Association, Fishing Vessel Agents and Owners Association, Mallaig & North West Fishermen's Association, Orkney Fisheries Association, Scottish Pelagic Fishermen's Association, the Scottish White Fish Producer's Association and Shetland Fishermen's Association and would confirm we object to the application on the grounds noted below:

Firstly, quoting from 14.5.15 of the EIA:- in the case of the operational phase, it is expected that fishing activities will be able to be resumed to some degree within the development area, although it is recognised that certain fishing methods, by virtue of gear configuration and mode of deployment, may be restricted in their ability to operate as normal.

When taken together with the description in appendix 18A.12.7.3 (1 + 2), (which shows a remarkable lack of understanding of the different fishing sectors and the legislative framework in which they operate), conflicts with GP4, 13, 19 and 19, F1, 2 and 3 of Scotland's National Marine Plan (SNMP). This confliction must be mitigated through consent conditions and procedures to ensure fishing businesses survive. It also serves to demonstrate the strong need for proper monitoring of the main fisheries activities in the area, viz Scallops, Nephrops and Lobster despite Chapter 9 majoring on Cod, Herring, Sprat and Shad.

Referring to the export cable P8 of the non-technical summary and chapter 7.9 of the EIA claims to have considered potential conflicts. The SFF would contend that the consideration was dismissed despite fishers on many occasions showing proof of activity on charts and plotters to try and convince the developer to move the cable a short distance to minimise its impact on Nephrops grounds. This is contrary to GP4 17, 18 and 19, F1, 2 and 3 of SNMP.

Members:

Anglo Scottish Fishermen's Association Fife Fishermen's Association Fishing Vessel Agents & Owners Association (Scotland) Ltd  
Mallaig & North-West Fishermen's Association Ltd Orkney Fisheries Association Scottish Pelagic Fishermen's Association Ltd  
The Scottish White Fish Producers' Association Ltd Shetland Fishermen's Association

VAT Reg No: 605 096 748

Further to those comments it should be noted that the ICES square 41E7, surrounding the export cable has the most valuable landings value on the whole East Coast of Scotland, at £7.7 million, 53% of which is the above mentioned Nephrops. Given that this gives 8 ports over 80% of their income it is unthinkable that this fishery is not monitored to carefully identify the impact of the development going forward. As chapter 14 clearly shows that these concerns regarding Nephrops grounds and the export cable were noted extensively in consultation and public meetings, MS LOT must ensure a consent condition protects the fishery as best it can, particularly considering F1 and 2 of SNMP.

Page 26 of the NTS and figure 14.5 (in chapter 14.6.4) clearly acknowledge and illustrate the volume of scallop fishing in and around the development area. The figures show that the 2 ICES squares concerned have at times produced harvests of up to 40% of the entire East coast scallop. The SFF accepts that currently it is not at the level, but the scallop fishery is notoriously cyclical and when the cumulative impact of Inchcape and Seagreen is considered there is potentially a huge loss of earnings to the sector, so Scallops are another species that must be monitored as a consent condition to ensure compliance with GP4, 17 and 19 and F1, 2 and 3 of the SNMP.

The SFF further notes that ICES squares 41 E7 was the No 1 for lobster landings in Scotland and 42 E7 was No 4. As the bulk of the fleet fishing creels is of a smaller scale the possible problems caused by displacement, closure or vessel traffic are relatively high with 42 E7 landing over £1 million. This fishery must be monitored by consent condition and The Commercial Fisheries Working Group to ensure compliance with GP2, 3, 4, 17 and 18 and F1, 2 and 3.

Finally Squid landings from the area are in the top 10 on a national basis and so therefore must be mitigated for in a similar manner to Nephrops and Scallops.

The SFF notes in chapter 6 that the development has “down sized” primarily due to innovation in the sector, and accept that this potentially improves their interaction with the fishing industry. However chapter 7.6 referring to foundations, speaks of seabed removal, which should only be used as backfill or ballast, in order to increase the possibility of the seabed being returned to its natural state post decommissioning. This would be relevant to GP4, 17 and 18 and F1, 2 and 3 of SNMP.

Chapter 7 further discusses scour protection and inter array cables, both of which must be planned carefully to avoid negative impacts on fishing. Scour protection should be restricted to within the 50m safety zone and inter array cables must be buried with a preference for the Branch laying option. Cable protection of rock or mattress is not suitable for Scallop fishing so burial should be the preferred option.

These parameters are essential when considering chapter 14.8.2.125, referring to the width of various gears, where skippers will only deploy the gear on unaltered seabed or 126 where rock placement/mattresses can be seen as a barrier to both Nephrops and Scallop fishing. Again there is conflict with GP4, 13, 18, and 19, and F1, 2 and 3 of the SNMP.

Given that fishing activity faces up to 24 months of possible closures during construction, any further restriction caused by unburied cable, rock or mattress dumping must be avoided as per compliance with GP3 and 17, and F1, 2 and 3.

Chapter 8 describes the benefits of the development and SFF can see the wisdom of ensuring energy security for the future. However SNMP also provides for the need to consider food security particularly GP1 where fisheries as a food sector are noted for their importance in rural Scotland.

Furthermore chapter 16, Socio-Economics, whilst cherry picking SNMP to suit the purpose of the application, fails to properly address the worst case scenarios in displacement. Putting it simply, the £10.3 million first sale value of fish from 41& 42 E7 could be lost, impacting potentially 218 vessels (businesses) and costing 335 jobs. These figures should of course be extrapolated to include the onshore supply chain, often ascribed a multiplier of 4. This would lead to negative impacts of over £50 million and 1500 jobs, which would be a significant problem, in the relevant coastal fishing communities, conflicting with GP1, 2, 3, 4,17 and 18, and F1, 2 and 3.

Considering 14.5.20 and 7.10.3, experience teaches the SFF to demand consultation on the various construction, cable, vessel movement etc. plans in an attempt to ensure problems are identified before development activity occurs to comply with GP4, 17 and 18 and F1, 2 and 3.

Also, regarding decommissioning, 7.12, whilst the SFF can understand the difficulty in finalising the plan 25 years or 50 ahead of time, the work and discussion needs to happen long before that in order to avoid problems, to comply in particular with GP 17 and 18 and F3.

With reference to embedded mitigation, as in 14.5.2, the SFF considers it disingenuous to attempt to use this as the blueprint for fisheries, when in reality most of those measures are good practice, common sense and HSE requirements. The SFF expects to see, as per F3, a Commercial Fisheries Mitigation Strategy, that has some compliance ability to protect the long term existence of the fishing industry.

Finally the SFF understands that the Marine (Scotland) Act 2010 gives the context of Scotland's National Marine Plan and thus the policies quoted throughout this response and would highlight the application's use of such policies that suit their project, whilst not fully assessing or addressing the potential effects on fishing, both biologically and socio-economically thus in general not fulfilling their obligations under the SNMP.

Yours faithfully

Malcolm Morrison  
**Fisheries Policy Officer, Scottish Fishermen's Federation**

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

Our ref: Cns/Ren/Offshore Wind/Inch Cape

Your ref: Inch Cape Application (Revised Design)

Date: 28th September 2018

By email only:  
[ms.marinerenewables@gov.scot](mailto:ms.marinerenewables@gov.scot)

Dear Sir/Madam,

### **INCH CAPE OFFSHORE WIND FARM (REVISED DESIGN)**

#### **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 your consultation on the 21 August 2018 for the Inch Cape Offshore Wind Farm (revised design) (hereafter referred to as Inch Cape).

The proposal is based on a design envelope consisting of a maximum of 72 turbines up to 291m tall, two offshore substation platforms and two export cables coming ashore at a landfall point at Cockenzie in East Lothian. Our advice considers only those aspects seawards of the landfall, with onshore transmission works covered by a separate planning application.

SNH works in support of the government's vision for an energy sector that delivers secure, affordable and clean energy for Scotland<sup>1</sup>. We recognise and welcome the very significant contribution that this development would make to achieving Scotland's low carbon ambitions. We provide advice in the spirit of Scotland's National Marine Plan<sup>2</sup> which balances the promotion of sustainable development of offshore wind whilst protecting our biodiversity and taking account of seascapes, landscapes and visual impacts.

Our advice considers Inch Cape on its own merits as well as taking account of cumulative and in combination effects with other projects, particularly Neart Na Gaoithe offshore wind farm and Seagreen consented offshore wind farms. In our assessment of the landscape and visual impacts, we also address cumulative capacity issues with onshore wind farms.

We provide advice to help Marine Scotland undertake their appropriate assessment of the impacts on Natura interests, as the competent authority.

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<sup>1</sup> Scottish Government Energy Strategy 2017: <https://www.gov.scot/Publications/2017/12/5661/3>

<sup>2</sup> <https://www.gov.scot/Publications/2015/03/6517>

Scottish Natural Heritage, Battleby, Redgorton, Perth, PH1 3EW.

Tel: 01876 580236

e-mail: [tracey.begg@nature.scot](mailto:tracey.begg@nature.scot)

[www.nature.scot](http://www.nature.scot)



## KEY ADVICE

### Natura

We have reviewed the Environmental Impact Assessment (EIA) Report and Habitats Regulations Appraisal (HRA) Report.

We advise that the revised design (2018) Inch Cape offshore wind farm on its own will not cause an adverse effect on site integrity to any Special Protection Area (SPA). The effects of this revised design are less than the effects of the design consented in 2014. However, **in combination** with the consented Neart na Gaoithe and Seagreen offshore wind farms, **this proposal will have an adverse effect on the site integrity for:**

- **black-legged kittiwake, northern gannet and razorbill as qualifying interests of Forth Islands SPA**
- **black-legged kittiwake and razorbill as qualifying interests of the Fowlsheugh SPA**

**there could be an adverse effect on site integrity for:**

- **black-legged kittiwake as a qualifying interest of the St Abb's Head To Fast Castle SPA**

Therefore, **we object to the proposal**, whilst acknowledging the reduction in adverse effects compared to the currently consented proposal. The key impacts are collision risk and displacement.

We present our detailed ornithological advice in **Appendix A**.

### Seascape, landscape and visual impacts

The footprint extent and increased height of Inch Cape, in addition to Neart na Gaoithe, Seagreen and Kincardine offshore wind farms, contributes to widespread significant adverse cumulative effects on sensitive landscape, seascape and visual receptors on stretches of coastline from Aberdeenshire and Angus and into Fife.

The development site will be seen in conjunction with the Neart na Gaoithe and Seagreen Offshore Wind Farm developments as part of the wider Forth and Tay offshore wind cluster. Cumulatively, and in addition to the operational EOWDC to the north (Aberdeen Bay), these offshore wind farms will introduce significant effects in the regional context, further constraining the already limited onshore capacity for wind energy.

We present our detailed advice on seascape, landscape and visual impacts in **Appendix B**.

### Construction impacts

For a number of other key natural heritage interests, including marine mammals, the greatest impacts will arise during the construction phase of the development. These can be mitigated through conditions on any consent / licence. We provide our detailed advice on marine mammals in **Appendix C** and other receptors such as diadromous fish species, marine fish and shellfish and physical processes in **Appendix D**.

If Scottish Ministers consent this proposal, we wish to provide further advice on implementation of conditions required to mitigate impacts on natural heritage interests, including:

- the piling strategy,
- landfall construction for the export cable and
- other pre-construction, construction and operation related activities.

We hope this advice is of assistance. If further information or advice is required please contact [tracey.begg@nature.scot](mailto:tracey.begg@nature.scot), telephone: 01876 580236 in the first instance.

Yours sincerely

**Redacted**

**Nick Halfhide**  
Director of Sustainable Growth

## APPENDIX A

### SNH ADVICE ON ORNITHOLOGY

#### Summary of key effects

1. Our assessment, based on the information in the EIA Report and HRA Report, and on the worst case scenario, has concluded:
  - **An adverse impact on site integrity for black-legged kittiwake, northern gannet and razorbill as qualifying interests of the Forth Islands SPA** from Inch Cape **in combination** with the Neart na Gaoithe and Seagreen consented offshore wind farms. The key impact is collision risk (black-legged kittiwake, northern gannet) and displacement (razorbill).
  - **An adverse impact on site integrity for black-legged kittiwake and razorbill as qualifying interests of the Fowlsheugh SPA** from Inch Cape **in combination** with the Neart na Gaoithe and Seagreen consented offshore wind farms. The key impacts are collision risk (black-legged kittiwake) and displacement (razorbill).
  - **There could be an adverse impact on site integrity for black-legged kittiwake as a qualifying interest of the St Abb's Head To Fast Castle SPA** from Inch Cape **in combination** with the Neart na Gaoithe and Seagreen consented offshore wind farms. The key impact is collision risk.
  - **No adverse effect on the site integrity of any Special Protection Area – classified or proposed – from Inch Cape on its own.**
  - **No adverse effect on the site integrity of the following qualifying interests and SPAs from Inch Cape in combination with other wind farm proposals:**
    - Forth Islands SPA – herring gull, Atlantic puffin and common guillemot
    - Fowlsheugh SPA – herring gull and common guillemot
    - St Abb's Head to Fast Castle SPA – herring gull and common guillemot
    - Buchan Ness to Collieston Coast – common guillemot
  - **No adverse effect on site integrity of the Outer Firth of Forth and St Andrews Bay Complex pSPA** from Inch Cape in combination with other wind farm proposals.

#### Impact Assessment Methodology

2. We have reviewed the EIA and HRA reports taking into account the advice contained in the scoping opinion and pre-application discussions. We welcome the thorough ornithological assessment that is well presented, clear and logical and which takes full account of the scoping opinion. The applicant makes a strong case for using site specific flight height information in the collision risk modelling. They have also provided additional work exploring alternative methods of predicting displacement and barrier impacts which is useful and this has assisted in informing our advice.

We provide detailed comments on various aspects of the assessment work below.

#### **Collision Risk**

3. The approach to collision risk calculations follows the advice in the scoping opinion. We agree that the design using 40 turbines is the worst case scenario as this produces higher collision figures for kittiwake and gannet.

4. The description of the flight height data shows that it is of good quality and makes a compelling case for using it in the models. The flight height data assist in the determination of which Collision Risk Model (CRM) option to use. Option 2 CRM has been used by the applicants to inform the population modelling and Option 2 CRM outputs aid in comparison across the Forth and Tay developments.

### ***Displacement***

5. We base our advice on the outputs of the matrix approach. As requested by Marine Scotland, the applicants have made a comparison between the matrix outputs and the Searle Models. In addition they have also used a pre-published version of the Marine Scotland SeaBORD tool for measuring displacement effects.

### ***Population Viability Analysis Methods***

6. Our advice focusses on individual site and species populations. Although there are models for each of the relevant SPA populations, regional PVA outputs are simply the sum of the outputs for the SPA models. This approach ignores the proportion of birds (which may be small) that are not included in the SPA populations. Regional PVAs are therefore precautionary.
7. Counts of St Abb's Head National Nature Reserve (NNR) are more regular than counts of the rest of the St Abb's Head to Fast Castle SPA. Therefore the NNR has also been modelled separately. 95% of SPA population is within the NNR, so again this provides precautionary results and the modelled results are considerably improved.
8. The use of option 2 Band Collision Risk Model (CRM) outputs in PVAs is precautionary. Option 1 outputs would have produced smaller effects (for Inch Cape alone).

### **Conclusion**

#### ***Predicted impacts for 50 and 25 years***

9. The results for all metrics suggest small or moderate impacts from the development alone, but considerably greater impacts in combination, with generally the largest impacts on the Forth Islands and Fowlsheugh SPAs.
10. Comparison of predicted impacts over 50 years (the length of lease being applied for) and 25 years with Inch Cape as the focal (revised) design indicates that there is greater confidence in the assessment over the 25 year period, but the conclusion is essentially the same as when considering a 50 year period.
11. PVA models presented for cumulative / in combination impacts, taking into consideration outputs from Neart na Gaoithe (current Neart na Gaoithe application, revised design) suggest a very significant impact on populations.
12. The table below summarises in-combination model metrics for Inch Cape. The metrics are counterfactual of population size (CPS), counterfactual of population growth rate (CPG) and centile match of end point of the un-impacted population (Centile).

SPA	Bird interest	CPS		CPG	Centile	
		25 years	50 years		25 years	50 years
Forth Islands	Northern gannet	0.903	0.809	0.996	9	2
	Black-legged kittiwake	0.909	0.828	0.996	46	45
	Razorbill	0.933	0.868	0.997	43	42
Fowlsheugh	Black-legged kittiwake	0.896	0.808	0.996	44	42
	Razorbill	0.944	0.890	0.998	44	42
St Abb's Head To Fast Castle	Black-legged kittiwake	0.969	0.888	0.998	48	47

*Northern gannet – Forth Islands SPA*

13. PVA for **northern gannet collision at Forth Islands SPA** modelled with impacts from Inch Cape in combination with Neart na Gaoithe and Seagreen suggest a population size after 25 years of 90% of the un-impacted population. For 50 years the population is predicted to be 81% of the un-impacted population. **We conclude that Inch Cape in combination impacts for gannet collision will lead to an adverse effect on site integrity at the Forth Islands SPA.** This has been calculated based on the total number of collisions across all age classes (875 per annum). This prediction is despite the modelling indicating that the population is expected to increase with wind farm impacts.
14. Despite the predicted increase in numbers of gannets, due to the large predicted number of birds that the combination of developments will kill and the size of the effect on the population revealed by the CPS metric we consider this to be a very significant impact. The CPS and centile outputs from the Neart na Gaoithe application indicate bigger impacts than shown in the Inch Cape metrics, due to differences in the impact assessment methods and modelling each developer has undertaken.

*Black-legged kittiwake - Forth Islands SPA*

15. PVA for **black-legged kittiwake collision at Forth Islands SPA** modelled with impacts from Inch Cape in combination with Neart na Gaoithe and Seagreen suggest a population size after 25 years of 91% of the un-impacted population. For 50 years the population is predicted to be 83% of the un-impacted population. **We conclude that Inch Cape in combination impacts for kittiwake collision will lead to an adverse effect on site integrity at the Forth Islands SPA.** This has been calculated based on collisions by 37 adults and 6 sub-adults per annum. As this population is expected to decline steeply without wind farm impacts the significant additional impacts of the wind farms in combination are considered unacceptable. If collision and displacement are combined, the level of impact increases.
16. This population is expected to decline steeply even without wind farm impacts. We consider the additional effects of the wind farms in combination are very significant. The Neart na Gaoithe impact assessment suggests impacts in combination would be greater than depicted in the Inch Cape assessment due to differences in the impact assessment methods and modelling undertaken by Neart na Gaoithe.

### *Black-legged kittiwake - Fowlsheugh SPA*

17. PVA for black-legged kittiwake collision at Fowlsheugh SPA modelled with impacts from Inch Cape in combination with Neart na Gaoithe and Seagreen suggest a population size after 25 years of 90% of the un-impacted population. For 50 years the population is predicted to be 81% of the un-impacted population. We conclude that Inch Cape in combination impacts for kittiwake collision will lead to an adverse effect on site integrity at the Fowlsheugh SPA. This has been calculated based on collisions by 88 adults and 16 sub-adults per annum. The large decline in population associated with the metrics suggests adverse impact on site integrity from the in combination impacts. If collision and displacement are combined, the level of impact increases.
18. This population is also expected to decline steeply even without wind farm impacts. The Inch Cape in combination CPS and CPG metrics are substantially less than one and suggest adverse impact on site integrity for in combination impacts.

### *Black-legged kittiwake - St Abb's Head to Fast Castle SPA*

19. PVA for black-legged kittiwake collision at St Abb's Head to Fast Castle SPA modelled with impacts from Inch Cape in combination with Neart na Gaoithe and Seagreen suggest a population size after 25 years of 97% of the un-impacted population. For 50 years the population is predicted to be 89% of the un-impacted population. We are unable to conclude that Inch Cape in combination impacts for kittiwake collision will not have an adverse effect on site integrity at the St Abb's Head to Fast Castle SPA. This has been calculated based on collisions by 12 adults and 4 sub-adults per annum. If collision and displacement are combined, the level of impact increases.
20. This population is in strong decline, although modelling predicts that this will slow over time. If the site specific flight heights for modelling collisions had been used this would have reduced the impacts significantly. The in combination effects over the 25 and 50 year period means we are unable to conclude that there would not be an adverse effect on site integrity.

### *Auks*

21. All the PVA models presented for relevant auk species predict populations to increase, except for common guillemot at Fowlsheugh SPA – models predict a slight decline over the 50 year period.
22. PVA for razorbill displacement at Forth Islands SPA modelled with impacts from Inch Cape in combination with Neart na Gaoithe suggest a population size after 25 years of 93% of the un-impacted population. For 50 years the population is predicted to be 87% of the un-impacted population. We conclude that Inch Cape in combination impacts for razorbill displacement will lead to an adverse effect on site integrity at the Forth Islands SPA. This has been calculated based on a total estimated mortality of 18 breeding adults and 21 sub-adult birds per annum. Model outputs suggest cumulative / in combination impacts despite the fact that the population is likely to be increasing, taking into account the wind farm impacts.
23. For razorbill at Forth Islands SPA, displacement impacts estimated by either the 2014 Searle models or the proposed SeaBORD tool are much larger and more precautionary than those predicted by the matrix approach. The metrics suggest moderate cumulative / in combination impacts. This is despite the fact that PVA model outputs suggest that the population is likely to increase, even with the wind farm impacts. These are slightly worse than the values presented in the Neart na Gaoithe application.
24. PVA for razorbill displacement at Fowlsheugh SPA modelled with impacts from Inch Cape in combination with Seagreen suggest a population size after 25 years of 94% of the un-

impacted population. For 50 years the population is predicted to be 89% of the un-impacted population. We conclude that Inch Cape in combination impacts for razorbill displacement will lead to an adverse effect on site integrity at the Fowlsheugh SPA. This has been calculated based on a total estimated mortality of 19 breeding adults and 22 sub-adult birds per annum. We consider this is sufficiently large impact to result in adverse impact on site integrity.

25. For Atlantic puffin, the model predicts a strong population increase over the 50 year life of the wind farm. The values from the model indicate that there will be no adverse impact on site integrity on Atlantic puffin at Forth Islands and Fowlsheugh SPAs.
26. For all other species, other than those we provide advice on above, we are able to advise that there will be **no adverse effect on site integrity either from Inch Cape on its own or from in-combination effects with other projects.**

## **APPENDIX B**

### **SNH ADVICE ON SEASCAPE, LANDSCAPE AND VISUAL IMPACTS**

#### **Summary**

1. The key issue arises from the cumulative effect of Inch Cape in addition to the Neart na Gaoithe (and Seagreen) developments. Cumulatively, these developments contribute to widespread levels of significant adverse effects on sensitive landscape, seascape and visual receptors.
2. The large height and extent of Inch Cape will introduce significant adverse cumulative effects on landscape, seascape and visual receptors along a substantial proportion of coastline in South Aberdeenshire, Angus and Fife including both daytime and night-time impacts and would raise issues of national interest for SNH.
3. Viewers will see the development site in conjunction with the Neart na Gaoithe and Seagreen wind farm developments as part of the wider Forth and Tay offshore wind cluster. This advice complements the 2018 SNH landscape advice for the Neart na Gaoithe offshore proposal and the previous 2014 cumulative landscape advice for all three proposals – Inch Cape, Neart na Gaoithe and Seagreen.
4. The change in turbine layout and height of Inch Cape from up to 110 turbines of 215m tip height in the 2014 layout to 40 turbines of 291m in the worst case 2018 layout means that in several views, despite Inch Cape being more distant, from key viewpoints the turbines will appear similar in height to the Neart na Gaoithe revised design application. It is this aspect of the Inch Cape 2018 proposal that contributes to the increased magnitude of change and significance of effect.
5. Cumulatively the offshore developments (principally Inch Cape with Seagreen, Neart na Gaoithe and Kincardine) will introduce significant effects in this wider regional context, further constraining the already limited onshore capacity for wind energy, compounded by the operational European Offshore Wind Deployment Centre in Aberdeen Bay to the north. Furthermore in Aberdeenshire, particularly along the southern coast, from the lower Grampians through the agricultural heartlands extending to the coast, turbines are familiar features and contribute to a 'landscape with wind turbines' where existing cumulative impacts limit further capacity for development in the landscape character<sup>3</sup>.

#### **EIA Report**

##### **Project Scenarios**

6. The assessment undertaken by Inch Cape is based on a realistic worst case scenario of up to 40 turbines, 291m blade tip height (indicative hub height 166m and 250m diameter rotor), with lighting, associated substructures and seabed foundations, inter-array cables and up to two offshore substation platforms (OSPs). If consented, Inch Cape is likely to be a combination of the above parameters but not exceeding the extreme dimensions and numbers.

##### **Landscape, Seascape and Visual Impact**

7. Broadly speaking, we agree with the nature, extent and level of significant impacts identified by the applicant within the EIA Report. However in several instances (listed for viewpoints below) we consider that the magnitude of cumulative visual change with the addition of Inch Cape has been underestimated (see comments on viewpoints below). For the most part this does not change the overall assessment of significance of effect.

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<sup>3</sup> Strategic Landscape Capacity Assessment for Wind Energy in Aberdeenshire Ironside Farrar March 2014

However, it is important to recognise that the increased turbine height of Inch Cape does contribute to a greater severity of cumulative change.

#### *Impacts on Coastal and Landscape character*

8. The EIA Report identifies significant adverse effects for the following coastal character areas (CCAs):
  - SA3 Cove Bay to Milton Ness (*localised*)
  - SA4 Montrose Bay
  - SA5 Long Craig
  - SA6 Lunan Bay
  - SA7 Lang Craig to the Deil's Heid
  - SA8 Arbroath to Monifeith
  - SA11 St Andrews Bay
  - SA12 ST Andrews to Fife Ness
  - SA13 East Neuk of Fife
  
9. Reflecting the impacts on coastal character and the predicted spread of Inch Cape visibility, there are also effects on the following wider regional landscape character types (LCTs):
  - TAY12 Low Moorland Hills (*localised*)
  - TAY13 Dipslope Farmland
  - TAY15 Lowland Basins (*localised*)

#### *Impacts on Visual Receptors*

10. The EIA Report uses 26 representative viewpoints to assess the development (viewpoints incorporating both daytime and night-time photomontages).
11. Of the 26 viewpoints, the EIA Report predicts significant adverse effects at 13 locations. SNH identifies one additional viewpoint with significant adverse effects (see discussion below). These represent potential visual impacts from high sensitivity visual receptors ranging from Johnshaven in South Aberdeenshire (represented by VP 3) and south along the Angus coastline and for stretches of coastline between Tentsmuir, to St Andrews and around Fife Ness. The extent of the Aberdeenshire /Angus coastline for which views of the wind farm will be visible is 45km and 35km of the East Fife coastline.
12. We disagree with the conclusions of Chapter 12 SLVIA on the significance of adverse visual impacts at 6 of the 26 viewpoints which we advise are major significant and not Moderate / Major. The increased severity of significant impact is due to the greater magnitude of cumulative change resulting from the addition of larger turbines for Inch Cape, and clearly visible lighting<sup>4</sup> and rotation of blades. We consider that the EIA Report sometimes underestimates these impacts.

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<sup>4</sup> Appendix 12c Viewpoint Assessment only assesses in any detail the impact from turbine lighting, on the viewpoints for which nighttime photomontages have been produced (VP 6 Lunan, VP 10 Clifftop Path, Arbroath, VP 12 A92 Muirdrum and VP 14 Carnoustie). Extrapolation of the predicted impacts from these representative photomontages has not been extended to the assessment of visual impact on the wider visual amenity and receptors. It is considered this aspect could lead to an underestimation of the magnitude of change and significance of effect.

13. Agreed Major (significant) impacts in the EIA Report:

- VP 5 Montrose
- VP 6 Braehead of Lunan
- VP 10 Clifftop path north of Victoria Park (Arbroath)
- VP 11 Arbroath Signal Tower

14. Additional Major visual impacts <sup>5</sup>:

- VP 3 Beach Road Kirkton, St Cyrus (representative of views from St Cyrus NNR, strong natural, wildness qualities)
- VP14 Carnoustie (increased cumulative impact of larger Inch Cape turbines/differences in design, lighting and blade rotation clearly visible)
- VP 19 Tentsmuir (strong qualities of seclusion and naturalness, and increased cumulative impacts of larger turbines)
- VP 18 St Andrews, East Scores (increased cumulative impacts from larger turbines)
- VP 23 Fife Ness (increased cumulative impacts from larger turbines, lighting and blade rotation clearly visible)
- VP 24 Isle of May (strong 'frontier/wild' qualities with increased cumulative impacts from larger turbines, lighting and blade rotation clearly visible)

15. Agreed Moderate /Major (significant) impacts in the EIA Report:

- VP 2 A92 North of Inverbervie
- VP 9 Minor Road south of Cairnconnon Hill
- VP 12 A92 East of Muidrum

16. Additional Moderate/Major impacts:

- VP 21 Kingsbarns (increased cumulative effects and visibility of blade rotation and lighting).

17. We also advise significant adverse effects:

- along the NCN Route 1 from South Aberdeenshire into Angus
- along the East Coast main rail route between Montrose and Carnoustie
- along the A92 (Coastal Tourist Route) from both the cumulative effects of the offshore wind farms including Inch Cape, and the combination of marine and terrestrial wind energy development. This takes account of the Kincardine floating wind farm, which contributes to cumulative sequential impacts.
- along the Fife Coastal Path – especially between Anstruther East, Fife Ness and St Andrews and across the Firth of Tay.

Travellers on these routes, particularly the coastal A92 will experience frequent and sequential views of wind farm development, both marine and terrestrial. This is especially pronounced between Stonehaven and Montrose and further south in the vicinity of Dundee. Viewed in combination and in sequence, the landscape character in southern Aberdeenshire from the lower Grampians through the agricultural heartlands extending to the coast, turbines are familiar features and contribute to a 'landscape with wind turbines' where existing cumulative impacts limit further capacity for development in the landscape character appraised<sup>6</sup>. The introduction of offshore developments will further add to this

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<sup>5</sup> Assessed within Chapter 12 SLVIA as Moderate/Major – increased significance of impact provided in our advice due to heightened magnitude of cumulative change from the larger turbines. Lighting and rotation will be clearly visible.

<sup>6</sup> Strategic Landscape Capacity Assessment for Wind Energy in Aberdeenshire Ironside Farrar March 2014

change to the landscape and coastal character and constraining capacity for further onshore wind energy.

18. We also advise that with the operational EOWDC offshore wind farm, introduces large scale turbines which contribute to significant adverse cumulative effects across the central and northern coast of Aberdeen City and Shire. Due to its location it was agreed that it should lie outside of the scope of the study area for Inch Cape, however in a wider regional strategic context, these turbines do contribute significantly to an increased presence and experience of turbines in the eastern Aberdeenshire landscape and coast as a whole.

## APPENDIX C

### SNH ADVICE ON MARINE MAMMALS

#### Appraisal of EIA and HRA Reports

1. We provide the following advice on our appraisal of the impact assessment for marine mammals.

#### *Use of acoustic deterrent devices (ADDs) and noise modelling*

2. The applicant does not propose to use ADDs as mitigation against the risk of permanent threshold shift (PTS) injury, thereby leaving soft start as the only mitigation. In the scoping opinion, Ministers advised the applicant not to assess ADDs as embedded mitigation, but to carry out the initial assessment without the ADDs and then to consider their use as additional mitigation.
3. We consider that submission of a Piling Strategy to MS-LOT for approval prior to the commencement of piling could mitigate the residual risk of PTS. The predicted cumulative PTS effect zones are large and this is of concern. However, it is currently unclear what the realistic worst case scenario for concurrent piling across relevant developments will be. This will depend on the construction timelines of other offshore wind farms. Experiences from build out of other Scottish offshore wind farms will help inform development of the Piling Strategy and further discussion through the Forth and Tay Regional Advisory Group (FTRAG) can inform an appropriate Piling Strategy that will mitigate cumulative impacts.
4. The Piling Strategy should include further details of piling methods and timing, and the cumulative impact of any expected concurrent piling at different locations. It should also set out any measures to mitigate and manage the effects of pile installation.
5. We welcome inclusion of the additional analyses presented for underwater noise modelling using the 1% Conversion factor (CF) as well as for 0.5%. We remain of the view that a 1% CF is preferable to 0.5%. We consider that there is a range of appropriate conversion factors, and advise that the chosen conversion factor should reflect an appropriate degree of precaution, bearing in mind the current levels of uncertainty.
6. The contour maps for low frequency cetaceans, high frequency cetaceans and seals indicate that the cumulative PTS effect zones are larger for 1% than for 0.5%, especially for low frequency cetaceans. Despite predicting effects on larger numbers of individual animals, the percentage of the reference population affected is still small. **We therefore agree with the conclusion that the magnitude of impact is low and the significance of effect from PTS is minor for all species and all scenarios.**
7. Similarly, the predicted number of animals disturbed by piling is higher with 1% than 0.5% for all species and all scenarios. In all cases the impact is minor. We agree with this conclusion.
8. We accept that there is no requirement to re-run the population modelling (iPCoD) for bottlenose dolphins with the 1% conversion factor, due to numbers being only slightly higher (e.g. 8 animals rather than 6). We agree that this difference would be unlikely to change the outcome of the modelling.

#### *Realistic cumulative blasting schedule.*

9. We note that the population modelling for bottlenose dolphins using iPCoD has been re-run using a revised blasting schedule for Aberdeen Harbour Expansion Project of 16 bouts of blasting (32 blasts) instead of three bouts (6 blasts). Although this may not

be accurate, it is probably a more representative schedule. The re-modelling suggests that this change does not affect the predicted population-level impacts.

### *EPS licensing*

10. The applicant states that they will conduct an EPS Risk Assessment for construction of the development to determine whether an EPS licence will be required in relation to the potential for disturbance. **We advise that an EPS licence for disturbance is likely to be required for both piling and geophysical surveys.**
11. In addition, given that the applicant predicts large effect zones of cumulative PTS for minke whale, **we advise that an EPS licence for injury may be required.** Appropriate mitigation in a Piling Strategy would avoid this need.

### **Conclusion**

#### **Bottlenose dolphin**

12. Based on the information in the EIA and HRA Report, we advise that there will be **no adverse effect on site integrity for bottlenose dolphin as a qualifying interest of the Moray Firth Special Area of Conservation (SAC)**, subject to conditions on any consent / licences.
13. We also advise that there will be **no impact on the favourable conservation status (FCS) for bottlenose dolphins as an EPS**, subject to conditions on any consent / licences relating to construction aspects including piling.

#### **Harbour seal**

14. Based on the information in the EIA and HRA Report, we advise that there will be **no adverse effect on site integrity for harbour seal as a qualifying interest of the Firth of Tay and Eden Estuary SAC**, subject to conditions on any consent / licences. Both alone and in combination with other developments, there was no significant long term effect on the population trajectory of harbour seals.

#### **Grey seal**

15. Based on the information in the EIA and HRA Report, we advise that there will be **no adverse effect on site integrity for grey seal as qualifying interests of the Isle of May SAC and Berwickshire and North Northumberland Coast SAC** subject to conditions on any consent / licences relating to construction aspects including piling. Both alone and in combination with other developments, there is no predicted significant long term effect on the population trajectory of grey seals.

#### **Harbour porpoise**

16. We advise that there will be **no impact on the FCS** for harbour porpoise as an EPS, subject to conditions on any consent / licences relating to construction aspects including piling.

#### **Minke Whale**

17. We advise that there will be **no impact on the FCS** for minke whale as an EPS, subject to conditions on any consent / licences.

#### **Other cetaceans**

18. We agree with the conclusion that there will be disturbance to cetaceans and therefore a European Protected Species (EPS) licence will be required. We advise that it is unlikely that there will be impact on the FCS for any of the cetacean species.

## **APPENDIX D**

### **SNH ADVICE ON OTHER NATURAL HERITAGE INTERESTS CONSIDERED IN THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

#### **PHYSICAL PROCESSES**

1. Further to the agreed conclusion that physical processes would not require further consideration at scoping, we highlight physical / coastal processes, notably potential erosion in the vicinity of cable landfall referred to in the recent Dynamic Coast project (published 2017), that should be given some consideration to future-proof the development.
2. At the western end of the landfall corridor and further west there was significant erosional retreat of the Preston Links coast between the 1980s and 2011. Susceptibility to erosion is largely due to the land consisting of unconsolidated infill. The Dynamic Coast research outputs project that erosion will be ongoing in this vicinity in the future.
3. There are several methods for the placement of the export cable in the vicinity of the landfall. These include trenching and the use of horizontal directional drilling (HDD). Due to potential erosion, there is a risk of a trenched cable becoming re-exposed leading to longer term issues. This risk can be mitigated and the ability to future-proof the development retained through:
  - the use of HDD rather than trenching;
  - the choice of location of HDD entry and exit points that fully allow for potential coastal change;
  - or if trenching is preferred, it should only be used if there is satisfactory mitigation in place for cable re-exposure, either through sufficient burial depth to avoid modelled intertidal erosion or through realistic plans for re-burial.
4. We consider this can be addressed through post-consent conditions and the requirement for a Cable Laying Strategy.

#### **FISH (INCLUDING DIADROMOUS FISH) AND SHELLFISH**

5. The most significant potential impacts on diadromous fish arise from noise, EMF and sediment from Inch Cape alone and potentially cumulatively with other wind farm developments proposed for the Forth area.

#### *Noise*

6. The EIA Report presents the results of underwater noise modelling, and subsequent embedded mitigation. We welcome and support the proposed mitigation and consent conditions proposed by Inch Cape including the submission of the following plans for approval:
  - A Piling Strategy
  - A Construction Programme.
  - A Project Environmental Management Plan.
7. These plans would enable the construction of the wind farm to avoid or minimise further impacts on both diadromous and marine fish species, through the inclusion of a soft start to piling to enable fish to move away from the vicinity of the piling operations.

### *Electro Magnetic Field (EMF) Impacts from Cables*

8. The EIA Report assesses the research and evidence connected with EMF and the potential impacts to fish species. It further states the intention by the applicant to bury cables to a suitable depth for the majority of the export cable route. We welcome this and advise the Cable Laying Strategy should include it in order to minimise the effects of EMF in the water column.

### *Priority Marine Features (PMFs)*

9. Some PMFs will be present within the development site and export cable corridor, including herring, cod and sandeels. The EIA Report consideration for these species has included the extent and distribution of these species and the potential impacts - habitat loss, underwater noise and vibration.
10. The embedded mitigation measures for soft start during piling to be used, with lower hammer energies used at the beginning of the piling sequence, is welcomed to allow fish to move from the area of operation. We also note the discussion paper on particle motion that has taken this topic as far as current research allows.

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

30 September 2018

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

Dear Sir/Madam,

## **ELECTRICITY ACT 1989**

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017  
The Electricity (Applications for Consent) Regulations 1990

## **MARINE (SCOTLAND) ACT 2010**

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017

## **RESPONSE TO 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 TO CONSTRUCT AND OPERATE INCHCAPE OFFSHORE WINDFARM (REVISED DESIGN)**

The Tay District Salmon Fisheries Board has significant concerns regarding the proposed development. It is clear that major uncertainties exist with regard to potential negative effects on Atlantic salmon and sea trout in the area.

Salmon migrating out of and returning to the River Tay are to an as yet unquantified extent likely to migrate through the proposed windfarm site and more certainly likely to swim in some proximity to the site and those of the other windfarms proposed in the area.

It is possible that sea trout may also pass through the wind farm site. Owing to the almost complete lack of information on their marine movements, we must just assume they must at least be present for some of the time within or in relative proximity to the site. Indeed, it may even be that sea trout could spend a significant amount of time in the area as a feeding ground. It is often assumed that sea trout do not make long migrations in the same way as salmon and may actively feed in such coastal areas. Part of their feeding behaviour may entail repeated dives to the sea bed as described by recent research in Denmark (Kristensen *et al.* 2018).

The supporting documentation with the application is of the view that, from the limited information available, the proposal is likely to have a limited impact on salmon. While we appreciate that the outstanding uncertainties in this matter might not be strong enough grounds for an outright objection to the scheme and a previous consent has already been granted, we consider it essential that a number of conditions should be attached to any consent.

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

1. Monitoring of diadromous fish should again be a condition of any consent.

In particular we suggest the opportunity should be taken to understand issues such as

- 1.1 The effect of piling noise on migrating salmon and sea trout, for example does it cause them to display avoidance behaviour and at what distance?
- 1.2 Do electromagnetic fields affect the behaviour of salmon and sea trout passing through the wind farm area or close to it?
- 1.3 If there a risk of increased predation on salmon and sea trout by species such as grey and common seals attracted to wind farm structures?

We are keen to work constructively with both the developers and Marine Scotland to identify appropriate monitoring programmes. We are also keen to re-engage with the Forth and Tay Regional Advisory Group if and when it resumes.

2. A requirement for mitigation if found to be necessary.

Should monitoring work reveal unforeseen negative consequences of this project on salmon or sea trout, then it should be a condition of any consent that appropriate additional mitigation should be put in place. If the issue(s) cannot be addressed directly, this may take the form of funding compensatory activities in the affected catchments to reduce and mitigate any detriment to the Atlantic salmon and sea trout populations. There should be a requirement for a formal mitigation agreement between the developer and relevant DSFBs.

3. We support the mitigation proposals made and consider that, if consented, these should be included as formal conditions of consent.

### **Formal objection**

On the basis of the above, we formally object to the proposed development, until adequate monitoring and mitigation strategies have been put in place.

Yours sincerely,

# Redacted

Dr David Summers  
Fisheries Director

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

## **Reference**

Kristensen M.L., Righton D., Villar-Guerra D., Baktoft H and Aarestrup K. (2018) Temperature and depth preferences of adult sea trout *Salmo trutta* l. during the marine migration phase. *Marine Ecology Progress Series* 599, 209-224.



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

Your ref:

Our ref:  
TS00181

Date:  
12/09/2018

[MS.MarineRenewables@gov.scot](mailto:MS.MarineRenewables@gov.scot)

Dear Sirs,

**MARINE (SCOTLAND) ACT 2010 THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 (AS AMENDED)**

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY A AMENDED) AND MARINE LICENCES UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE INCH CAPE OFFSHORE WINDFARM (REVISED DESIGN), 15KM EAST OF THE ANGUS COASTLINE**

With reference to your recent correspondence on the above development, we acknowledge receipt of the Environmental Impact Assessment report (EIA) prepared by Red Rock Power Limited in support of the above development.

This information has been passed to SYSTRA Limited for review in their capacity as Term Consultants to Transport Scotland – Trunk Road and Bus Operations (TRBO). Based on the review undertaken, we would provide the following comments.

**Proposed Development**

Further to consent being granted in 2014 for a Section 36 and Marine License application for the construction and operation of up to 213 turbines at Inch Cape Offshore Wind Farm and their associated transmission works, Inch Cape Offshore Limited (ICOL) has submitted a revised project design that the 2014 consent does not allow for, but which will give ICOL the opportunity to utilise new turbine technology. The revised scheme includes a maximum of 72 turbines with a rotor diameter of up to 291m. The wind farm is located in the North Sea approximately 15 to 22km off the Angus coastline. The nearest trunk roads to the development site are the A92(T) and the A90(T).

We note that ICOL will only construct either the Inch Cape 2014 consented wind farm or, if consented, the Wind Farm that the current application relates to, but not both. We note that ICOL planning permission for the onshore transmission works element of the project is subject to a separate application.

## Construction and Delivery

The EIA indicates that a range of Wind Turbine Generator (WTG) suppliers and models are being considered, with selection being dependent on the continued design and progress of the Development. As such, no decisions have been made as to the nature of the foundations and substructures to be installed and the ports and vessels to be used in construction. Additionally, the method of installation has yet to be decided, however, we note that the individual component parts of the WTG (two or three blades, nacelle with hub and a number of tower sections) may be delivered from the factory to an onshore facility or directly to the offshore site. Alternatively, some or all of the components may be pre-assembled at the onshore location.

We note that, in addition to the turbine components, foundations and substructures are required. Again, the type and construction methodology have yet to be decided, with various options put forward within the EIA. The document indicates that these will be fabricated at an onshore location and then transported directly to the Development Area either by being towed, using a 'feeder' vessel or using the installation vessel itself.

No indication is given as to how any of these components or structures are to get from the factory to the port before being loaded onto the delivery vessels. It is possible that much of this activity may be undertaken outwith the UK but the EIA is not clear on this. The EIA does state, however, that, in the unlikely event that abnormal loads are required during the construction phase, information will be provided in a Traffic and Transport Plan.

We are satisfied that there is unlikely to be any significant traffic and associated environmental effects on the trunk road related with the construction of the windfarm. However, given the methodology options identified above, Transport Scotland considers that it is possible that Abnormal Loads movement may be required on the trunk road network. We would, therefore, advise that an assessment of the route to site will require to be provided if the trunk road is to be used for such movements.

Consequently, we can confirm that we have no objection to the development in terms of environmental impacts on the trunk road network. We would, however, request that the following conditions be attached to any consent that may be issued.

Condition 1: Prior to commencement of deliveries to site, a Construction Traffic Management Plan including swept path analysis must be submitted to and approved by Transport Scotland to ensure that abnormal loads can be transported along the trunk road network safely. The complete report shall detail any accommodation measures required including the temporary removal of street furniture, junction widening, traffic management etc. and show that the transportation will not have any detrimental effect on structures within the route path.

### Reason

To minimise interference and maintain the safety and free flow of traffic on the Trunk Road.

I trust that the above is satisfactory and should you wish to discuss any issues raised in greater detail, please do not hesitate to contact Alan DeVenny at SYSTRA's Glasgow Office on 0141 343 9636.

Yours faithfully

# Redacted

**John McDonald**

**Transport Scotland  
Trunk Road and Bus Operations**

cc Alan DeVenny – SYSTRA Ltd.

# Redacted

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**From:** Fiona Read <fiona.read@whales.org>  
**Sent:** 04 October 2018 14:06  
**To:** Redacted ); MS LOT ICOL Representations  
**Cc:** Sarah Dolman  
**Subject:** RE: Inch Cape Offshore Windfarm (Revised Design) - Consultation

Dear Redacted

Thank you for including WDC in the Inch Cape Offshore Windfarm Consultation.

WDC has invested considerable effort engaging with the marine renewable industry and responding to consultations surrounding offshore renewable developments since the inception of the industry. Our primary request has been to reduce noise outputs during construction of developments. Despite advances in technologies in other parts of Europe, noise reduction technologies have yet to be implemented at any scale on offshore developments in Scotland or in the UK.

We wanted to bring this noise reduction report by WWF to your attention in case you were not aware of it:  
[http://assets.wwf.org.uk/downloads/a\\_positive\\_future\\_for\\_porpoises\\_and\\_renewables\\_\\_\\_wwf\\_2016.pdf](http://assets.wwf.org.uk/downloads/a_positive_future_for_porpoises_and_renewables___wwf_2016.pdf)

As a result of reduced staff capacity, we are having to re-evaluate our work load and although we are interested to be kept in the loop, we do not consider it to be beneficial to continue to engage in detail at this time.

Best wishes,

Fiona

**Fiona Read**  
Policy officer  
*End Bycatch*

Telephone: Redacted  
[whales.org](http://whales.org)



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**From:** Redacted  
**Sent:** 21 August 2018 11:31  
**To:** MS LOT ICOL Representations <[ICOL.Representations@gov.scot](mailto:ICOL.Representations@gov.scot)>  
**Subject:** Inch Cape Offshore Windfarm (Revised Design)

Dear Sir/Madam

## **ELECTRICITY ACT 1989 (AS AMENDED)**

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)  
The Electricity (Applications for Consent) Regulations 1990

## **MARINE (SCOTLAND) ACT 2010**

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)

## **APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 (AS AMENDED) AND MARINE LICENCES UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 TO CONSTRUCT AND OPERATE INCH CAPE OFFSHORE WINDFARM (REVISED DESIGN), 15KM EAST OF THE ANGUS COASTLINE**

On 15<sup>th</sup> August 2018, Inch Cape Offshore Limited ("the Applicant") submitted an application to the Scottish Ministers, in accordance with the above legislation, to construct and operate the Inch Cape Offshore Windfarm

Redacted

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

9<sup>th</sup> October 2018

Dear Redacted

**APPLICATION FOR CONSENT TO CONSTRUCT AND OPERATE INCH CAPE OFFSHORE WINDFARM  
(REVISED DESIGN), 15KM EAST OF THE ANGUS COASTLINE**

RSPB Scotland welcome the invitation to review and comment upon the above noted application. In comparison with the original 2014 consented project, the revised design represents a considerable reduction in predicted impacts on internationally important seabird populations. This is a positive progression brought about by technological advances in turbine design. Nevertheless, the revised design in-combination with the other updated Forth and Tay projects are estimated to cause some 1,850+ bird deaths per annum. Impacts from other UK east coast projects are additional and amount to a further 1,500+ mortalities from turbine collision on the regional seabird populations per year. Combined these impacts are estimated to have population scale effects that are significant in EIA terms and constitute an adverse effect on integrity on relevant Special Protection Areas (SPAs). **For these reasons, RSPB Scotland object to the Inch Cape 'revised design' offshore wind farm application.**

The application shows the enormity of the risks to our internationally renowned seabird populations by this and other projects. There is a clear and increasingly important need for offshore wind projects to invest in our natural marine environment and particularly in seabirds. RSPB Scotland has been calling for this investment for some time to help avoid creating a new environmental crisis whilst trying to solve the one of climate change. It is therefore notable and disappointing that there is a complete lack of ambition within the application to do anything to address the huge impacts and the challenges they present.

Further detailed reasons supporting our objection are provided in the below annex.

Yours sincerely,

{SENT BY EMAIL}

Charles Nathan  
Senior Conservation Planner

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Edinburgh  
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## ANNEX: RSPB SCOTLAND DETAILED RESPONSE TO INCH CAPE OFFSHORE WIND FARM APPLICATION OCTOBER 2018

### 1.0 Species Summary

**Black-legged Kittiwake:** Kittiwake was recently transferred from “Least Concern” to “Vulnerable” on the IUCN Red List of Threatened Species as the global population has seen a decline of 40% since the 1970’s. In Scotland, which hosts 70% of the UK’s breeding kittiwake, a long-term downward trend has been recorded over the last 30 years. The in-combination assessment of all Firth of Forth projects (Inch Cape new design and 2014 designs of Neart na Gaoithe and Seagreen) amount to 286 kittiwake deaths per annum during the breeding season. This results in the estimated regional breeding population being 17.5% smaller in 50 years time as a result of the Firth of Forth wind farms. A significant impact in EIA terms, especially when the regional breeding population is expected to continue to decline. For the EIA, the additional breeding season impacts from other small scale or demonstration offshore wind projects (amounting to 54 adult deaths per breeding season) are not included in the above summary, neither are the potential non-breeding period impacts from other offshore wind farms in UK/ North Sea waters, which would be additive. The total annual mortality (i.e. impacts during breeding and non-breeding periods) in the Firth of Forth for Inch Cape revised design and NnG/ Seagreen 2014 designs is 547 collisions plus 66 displacement mortalities (see Tables 11C.12, which excludes passage impacts and 11D.15).

- **Forth Islands SPA:** The latest kittiwake population count of 2016/17 is approximately 45% smaller than that cited at designation in 1990. The latest assessed condition is ‘unfavourable declining.’ The predicted in-combination impacted population is ~22% smaller in 50 years’ time than it otherwise would be without the Firth of Forth and other relevant UK North Sea and Channel wind farms. Calculated using worst case scenario (proposal + 2014 designs). A predicted ~50 adult mortalities from collision and displacement across all seasons is attributed to the Forth Islands SPA. This scale of impact on a population in unfavourable condition amounts to an adverse effect on integrity.
- **Fowlsheugh SPA:** The kittiwake population counted in 2015 is approximately 74% smaller than that cited at designation in 1992. Following dramatic declines over the past 20-30 years, the population has stabilised in the last two counts for 2012 and 2015. Despite the trends the latest assessed condition from 1999 is favourable maintained for this species. The predicted in-combination impacted population is ~22% smaller in 50 years’ time than it otherwise would be without the Firth of Forth and other relevant UK North Sea and Channel wind farms. Calculated using worst case scenario (proposal + 2014 designs). This scale of impact on a population in unfavourable condition amounts to an adverse effect on integrity.
- **St Abb’s Head to Fast Castle SPA:** The kittiwake population at St. Abbs has seen a long term decline of 84% since 1987 (SNH count of 2016) and is assessed as being in unfavourable condition (2014). The predicted in-combination impacted population is ~11.2% smaller in 50 years’ time than it otherwise would be without the Firth of Forth and other relevant UK North Sea and Channel wind farms. Calculated using worst case scenario (proposal + 2014 designs)

**Gannet:** The in-combination assessment estimates that in 25 years and 50 years' time the gannet population at Firth of Forth SPA to be 10% or 19% smaller respectively than it would be without the wind farms. Calculated using worst case scenario (proposal + 2014 designs). The total predicted collision impacts are 875 gannet mortalities per year from Inch Cape and the other Forth and Tay projects and other relevant UK North Sea and Channel wind farms (see Table 4.4, page 47 of HRA report). This impact is significant and any conclusions on effects to the integrity of the SPA need to be taken in the knowledge that 20% fewer gannets will occur regardless of whether the population increases or decreases over the 50 year timeframe.

**Auks:** Displacement impacts from the Firth of Forth developments on guillemot, razorbill and puffin combined amount to a predicted 820+ mortalities per annum. On a population level these additional deaths are estimated to cause the following effects:

- **Guillemot:**  
Forth Islands SPA: population being 3.2% and 6.4% smaller after 25 and 50 years operation respectively.  
Fowlsheugh SPA: population being 2.6% and 5.2% smaller after 25 and 50 years operation respectively.  
Total of 353 mortalities per annum.
- **Razorbill:**  
Forth Islands SPA: population being 6.7% and 13.2% smaller after 25 and 50 years operation respectively.  
Fowlsheugh SPA: population being 5.6% and 11% smaller after 25 and 50 years operation respectively.  
Total 224 mortalities per annum.
- **Puffin:**  
Forth Islands SPA: population being 2.5% and 4.8% smaller after 25 and 50 years operation respectively.  
Total 251 mortalities per breeding season.

There is a lack of empirical data to inform the displacement assessment and the estimated effects should be treated with caution. All the auk populations at these SPAs are experiencing relatively stable or increasing trends, however the scale of impact, especially for razorbill, are concerning.

## 2.0 Other technical points

### **In-combination/ Cumulative Impacts**

The EIA omits assessment of the impacts to seabirds during the non-breeding season. The EIA therefore omits a full assessment on the non-SPA bird colonies which show connectivity with the projects. Individuals from these colonies are at risk throughout the year, not just during the breeding season. The assessment illustrates a large proportion of the collision impacts are apportioned to non-SPA individuals. This omission should be addressed to complete the EIA.

### **HRA Tests**

For kittiwake at Forth Islands SPA the conclusion on no adverse effects on integrity is unsound in its logic. Firstly the conclusion states the above impacts '*...will effectively not contribute to accelerating the rate of the ongoing population decline.*' This statement is the exact opposite of reality – the impacts will accelerate the decline as clearly illustrated in the PVA outputs of Table 4.13, page 65 of the HRA. Secondly the conclusion states '*... nor will they (the impacts) prevent population increase should environmental conditions become more favourable.*' This may be true, however the impacts will hinder the rate of any future population increases and could significantly reduce the rate of recovery. Such a scenario would adversely affect the SPA conservation objectives.

### **2.1 Collision Risk Modelling**

The estimates of flight altitude recorded at the site for kittiwake and gannet are considerably lower than those described in the literature (Johnstone et al., corrigendum, 2014) and inadequate reasoning is provided to account for this discrepancy. It is claimed that it is because the site is further north than most of the sites included in Johnstone et al., corrigendum, 2014, but this is not entirely accurate, as more Northern sites are included. The flight heights recorded are in fact lower than those recorded in a number of other Scottish windfarms. The other justification given is that the discrepancy is so large that it cannot simply be an error, which argues that because a mistake is large it cannot be a mistake. We do not accept this argument. We would prefer that a biologically meaningful argument is made for why these recorded heights are so different from those recorded elsewhere, or we would have to conclude that it was because of an incompetent survey. We acknowledge that the problems with height estimates will not be a concern if Option 2 is used.