RYA Scotland

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13 August 2018

Redacted

Marine Scotland Licensing Operations Team,
Scottish Government, Marine Laboratory,
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Redacted

Dear Redacted

MORAY WEST OFFSHORE WIND FARM

I have read the relevant parts of the documentation, particularly chapter 12, relating to the consent application for the above wind farm. I have been in discussion with the developers over their plans and we have no objections to them. I note that the layout is to be agreed post consent as part of the Development Specification and Layout Plan and would wish to make comments at that stage.

In section 12.7.1, it is stated that recreational activity over the site is very low based on one AIS record per three days. However, only about 20% of vessels in this area transmit an AIS signal so a better estimate would be five in three days or nearly two a day, which is hardly very low. Passing through a wind farm is not a problem for recreational craft given reasonable weather conditions. The EIA mentions the prevailing wind. However, the Meteorological Office wind roses for Wick and Aberdeen airports, unlike most others, do not show a consistent prevailing wind direction with winds from west through to south east being almost equally likely.

It is not known what the cumulative effect would be of Moray East, BOWL and Moray West on recreational boat navigation and whether some recreational craft may choose to cross the Moray Firth using a different route. Although, as is pointed out in chapter 12, the AIS tracks on the RYA UK Coastal Atlas of Recreational Boating do not extend as far as the Moray Firth wind farms, it can be inferred that the most used routes across the Firth are from Rattray Head to Wick and to a lesser extend from Whitehills to Wick, and vice versa. However, the sequence of building the wind farms may provide an opportunity to monitor the impacts of BOWL and then Moray East on routing of recreational craft which may help predict the impacts of Moray West.

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Licensing Operations Team
Marine Renewables
Marine Scotland

By email to: MS.MarineRenewables@gov.scot

Your ref: Moray West Offshore Windfarm
Our ref:

21 August 2018

Dear Licensing Operations Team

Application for Consent under section 36 of the Electricity Act for the Proposed Moray West Offshore Windfarm

Thank you for the opportunity to comment on the application for consent for the Moray West Offshore Windfarm, as detailed in your email of 10 July 2018.

The MCA's remit for Offshore Renewables energy developments 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. This includes maintaining our obligations under The United Nations Convention of the Law of the Sea. As such we have the following comments to make:

MGN Checklist
A completed MGN 543 Checklist has been provided as part of the Navigation Risk Assessment, and MCA is content that all recommendations have been addressed.

Our main concern going forward is the proximity of the Moray West Offshore Windfarm (OWF) to the Moray East development, and the Beatrice OWF to the north, and the effect the potentially different layout designs will have on the safety of navigation and our search and rescue capability. The Moray East site is at a more advanced stage of development, and therefore the confirmed layout for Moray East will have an impact and provide constraints on what the MCA would accept for Moray West.

We note from the initial proposals that there is no designated navigational corridor or sufficient air space between Moray East and West sites to allow SAR helicopters to safely manoeuvre outside the turbine boundaries when conducting SAR operations. The site would be considered as one whole development and the applicant would need to liaise with the Moray East developers to ensure consistency across both sites, with regards to the layout, numbering, and lighting and marking. Therefore, consideration must be given to either lines of orientation that allow a continuous passage of vessels and/or SAR helicopters through the sites, or for sufficient air space in between Moray West and East.

The indicative layout appears to show two, if not three, lines of orientation however given the proximity to Moray East (which impacts the Moray West layout) and a resultant lane length of greater than 10nm, a helicopter refuge area is likely required. This should be sufficient air space to allow SAR helicopters to safely manoeuvre outside the turbine boundaries when conducting SAR operations.

The turbine layout design must be discussed with the MCA at the earliest opportunity and will require 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. Multiple lines of orientation provide alternative options, and developers should plan for at least two lines of orientation unless there is clear evidence that fewer are acceptable. We would expect no outliers, and no option for curved boundaries.

Emergency Response Co-operation Plans

Moray West shall agree a SAR checklist with the MCA which outlines all the requirements relevant to the development as outlined in MGN 543 Annex 5. Part of this checklist will be the provision of an Emergency Response Cooperation Plan (ERCoP). A template is available on the MCA website at www.gov.uk, and an approved ERCOP will need to be in place prior to construction works commencing.

During SAR discussions, particular consideration will need to be given to the implications of the site size and location. Attention should be paid to the level of radar surveillance, AIS and shore-based VHF radio coverage and give due consideration for appropriate mitigation such as radar, AIS receivers and in-field, Marine Band VHF radio communications aerial(s) (VHF voice with Digital Selective Calling (DSC)) that can cover the entire wind farm sites and their surrounding areas.

Moray West will be required to conduct a radio survey prior to any construction activity taking place.

Aviation Lighting

The MCA require all aviation lighting to be visible 360° and compatible with night vision imaging systems, as detailed in CAP 764. Further information and specifications will be updated in our MGN shortly. There are lights available on the market that offer this capability therefore it is requested that Moray West comply.

Survey Data

MGN 543 Annex 2 Paragraph 6 requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager. This information has yet to be submitted.

Cable Routes

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

We note that the Beatrice OWF cables run through the Moray West site, and this will need to be addressed in the cable burial plans.

Safety Zones
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.

Cumulative Impacts The cumulative impact assessment in section 12.8 provides a comprehensive overview. Traffic in the area will be displaced by the development and the effects therefore need to be carefully monitored.

Liaison with local MCA Marine Office
The developers should be reminded that their contractors and subcontractors must have the required certification for all vessel operations, and early engagement with the local Marine Office should be undertaken where necessary to ensure there are no issues with regards to survey and inspections, towage, and safety requirements.

Yours sincerely,

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Fordyce, Sandend & District Community Council

Marine Scotland LOT Consultation Report
Marine Licence Project: Moray West Offshore Transmission Infrastructure

FSDCC representing the local community in the vicinity of the proposed Offshore Transmission Infrastructure landfall area, is pleased to respond to Scottish Ministers regarding the Moray West OWF proposals.

The CC has no comments in respect of the Offshore Windfarm site and its electricity generation infrastructure.

The objectives of the CC in determining the OfTi landfall proposal is to ensure that the installation activities and the completed works are not detrimental to the local environment during construction, the intended operational life of the scheme, or post decommissioning.

The key tests are therefore the potential for impact on the following:-

- The natural beauty of the landscape.
- Protection of the foreshore features that characterise the landfall area.
- The historical and archaeological features of the landscape.
- Change to the coastal morphodynamics of the bay and consequential effects on:-
  Sea defence integrity (man-made and natural)
  Flood risk to land and property
  Coastal erosion
- Social consequences

We have noted that the OfTi landfall area was updated by the developer at a late stage of the application documentation process. The reconfiguration of the landfall area removing the beach zone at Sandend is welcomed by the CC and reflects the dialogue which has taken place between the CC, the local community, its governmental representatives local and national and the developer.

The EIA Report has been read and considered in the context of the revised OfTi landfall area. This requires careful assessment, as many detailed aspects of the EIA are no longer relevant as it is clear the developer's original intention was to use Sandend Beach as the landing area.
Ref: EIA Vol 4
Technical Appendix 6.1 5.4-5.5
Technical Appendix 6.3 5 Changes at the Landfall

1. Land & Seascape
The revised landfall area is not well described in the EIA, we therefore provide the following informative to provide scale and site specific details.

Sandend Bay is a trapezoidal shaped embayment located between two promontories, Garron Point in the West and West Head in the East. The seaward opening of the bay is 1,800m wide and the beach head at MHWS is 600m wide. The inland median axis distance between the beach head and the seaward promontories is 1,200m.

The developer has now restricted the proposed OfTi landfall area to the East side of the bay nominally a 1,700m long coastline from the East end of the beach to West Head. The whole of the landfall area is therefore within the Cullen to Stakeness SSSI.

The coastal morphology consists of coastal slopes and rocky cliff faces, with a dry cove called Red Haven protected by a shingle berm. A small beach known locally as Dunnedeich is located to the South of Red Haven cove.

A characteristic of the coastal slope areas is that the foreshore is mainly formed from rock outcrops and raised reefs extending seaward 30 to 100m from MHWS. The coastal slope and cliff top heights vary from 20m to 35m AOD. (OS 1:25,000 map contours)

The inaccessible cliff areas occupy approx. 65% of the landfall area extending from the North corner of Red Haven cove to West Head.

It therefore follows that only 35% of the landfall coastline equating to 600 m is available for a conventional buried cable landing method at the shore line.

This is further limited by there being only two beach access points in the residual landing area at Red Haven (shingle beach 200m wide) and Dunnedeich (sandy beach 60m wide).

The "near shore" (0m LAT to -5mLAT) and shoreline approaches to both beaches are dominated by large expanses of rocky reefs nominally 1 to 3m higher than MLWS forming a margin between the narrow beaches and the sandy expanse of the bay.

The natural landscape beyond MHWS and behind the two beaches are vegetated coastal slopes. The land at Red Haven includes a nominally semi-circular cove formed of undulating vegetated ground behind the steep shingle beach bounded by very steep vegetated coastal slopes with exposed rock outcrops.

The natural beauty of the coastal landscape around Sandend Bay, particularly on the East side is characterised at the interface of the land and sea by the varied types of foreshore. The cliffs, rocky reefs, outcrops of varied rock types and boulder formations, in combination with the shingle and sand beaches create a varied coastal fringe which is not present with such variety in a confined area elsewhere along the South Moray Coast.

The village of Sandend located on the West side of the bay has historical vulnerabilities to flood risk due its close proximity to the sea and sea front levels of only 3-4m AOD. The village largely built in the early 19th century has no protection by design. Only the construction of the harbour in the early 20th century afforded protection to the village, however this does not protect all areas, particularly properties at the North end of the village and to the South of the village, along the West side of the bay.

Similar flood and erosion vulnerabilities exist to the sand dunes behind the beach and in the SW corner of the bay where there is very little or no protection to the area West of Scattery Burn exposing a caravan site and adjacent properties to flood risk from the sea and land.

2. Historical and Archaeological Features

Red Haven is the location of the earliest settlement at Sandend. The remains of old stone buildings known locally as "The Salmon Bothy" still exist at the edge of the shingle shoreline. The remains are less than 5m distance from the MHWS line.
The Southern part of the cove has been extensively quarried for building materials, the depth of the old workings now backfilled is unknown. Other localised hollows exist behind the shingle beach at the South end.

On the North end of Dunnedeich beach a small derelict stone cottage sits on a small promontory. The remains are less than 3m distance from the MHWS line. On the slope behind the cottage two lime kilns exist. These historical features are recorded, Canmore ID *290436* refers.

Behind the Dunnedeich beach an old fort existed and is recorded by Aberdeenshire CC. It is believed no archaeological investigations as yet have been undertaken at the site.

These features are located above MHWS, however we request MSLOT consider their locations and historical and archaeological importance in the approval of any future Cable Plan should the scheme progress further.

3. Change to Coastal Morphodynamics

The hydrodynamic and sea-bed characteristics of Sandend Bay are discussed in the EIA sections referred to above. We believe the analysis presented does not adequately consider the coastal morphodynamics of the Sandend embayment.

The report identifies that future studies post consent are required to fully inform the cable routings within the bay in terms of achieving the desired burial depth and the susceptibility of the installed cables to long term change.

Sandend Bay is a wave-dominated coastal embayment due to the wide swell entry width which is funnelled to a beach 3x narrower than the entrance. The longitudinal sea bed profile along the axis of the bay from MHWS to LAT-11m at the entry point varies little at a grade of 1:90 ±10% (Admiralty SNC Data) and therefore precipitates sea bed sediment movement over what is considered to be from wave observations a predominantly plane sea bed surface.

The visual evidence of sediment transport in the inter-tidal area year on year, is well known to Sandend residents and those who use or visit the beach on a regular basis. Significant changes occur in beach levels ≥2m which are propagated by a combination of tidal, meteorological conditions and the influence of two watercourses which discharge over the beach. The significant and obvious change in beach profile is observed in the area up to 120m below MHWS.

Significant changes occur when storm events combine with high spring tides and the high influx of surface run-off flood water discharge into the bay at the East and West ends of the beach from the Fordyce and Scattery Burns. When these conditions occur suspended sediment concentrations are significant and sediment transport in the shallow waters of the bay are clearly visible by colour change on the sea surface. Depending on the duration of storm events and the resultant churn of SSC by wave energy and direction, the movement of SSC can be observed over long periods of time before final deposition occurs signified by the disappearance of sea surface indicators.

It is clear that mobility of SSC within the bay by observation of the sediment cloud does extend into deeper water beyond the position of MLWS. The effects and distribution of deposition in the near shore and inshore areas is therefore difficult to quantify but must clearly result in localised changes to sea bed levels in this zone.

Anecdotal evidence presented by local surfers with many years' experience at Sandend indicated there is a measurable change in wave dynamics post storm events due to the redistribution of sea bed sediments in the inshore area and lower margins of the nearshore area.

We therefore believe through local site knowledge, that the developer although acknowledging the likelihood of storm effects on the sea bed profile, has underestimated the magnitude and frequency of hydrodynamic effects on beach morphology in the landfall area that could adversely affect the available cover to achieve and maintain cable burial depths at installation and post installation.

The EIA report is deficient in critical information to proof that the intended cable burial depth up to 3m is achievable in the inshore and near shore areas where the rock head depth is unknown. This information is critical to determining the viability of Sandend Bay as a suitable cable landing site.

The developer states that cable protection methods will not be used near to the landfall area. However the term "near to" is subjective and not defined in the report, consequently the areas of the cable routing which are prohibited from surface cable protection are unknown.

The developer states that if the cables are buried at "sufficient depth" below the level of natural sea bed mobility there is no potential for hydrodynamic or morphological change. Theoretically we agree with this hypothesis. The issue here is that without extensive repeated bathymetry surveys of the bay over a long period of time covering several annual periods of meteorological induced morphological change the extent of "natural sea bed mobility" is impossible to quantify.

It therefore follows that the developer has recognised that the potential for morphological change in the embayment does exist and that there is potential for this to be disturbed by the proposed works. With no evidence base put forward by the developer to quantify the magnitude of sea bed mobility and available burial depth to the rock head, we do not believe the developer can demonstrate that cables can be installed within the embayment without risk of detrimental change to the coastal morphodynamics.

The developer states that normally exposed rocks within the area of the SSSI will not be cut. The term "normally exposed" is subjective and not defined in the report. If this is taken as exposed at MLWS "normally exposed during the tide cycle" then we do not see an opportunity for cable landings to take place at any location in the defined landfall area.

This is due to the presence of rock shelfs or rock outcrops at all the accessible areas in the probable offshore cable approach direction to the landfall site. It would also be the case that cables laid in a box cut trough through a reef, would require cable protection and stabilisation within the trough. The potential areas are all very high wave energy zones in the storm condition, consequently a protection method that could sustain this action without using additional supplementary casings or concrete filling is doubtful. The detrimental aesthetic impact of such protection measures should not be considered acceptable in the unique coastal fringe of the landfall area.

If it were possible to find cable landing locations for both cable circuits acceptable to Scottish Natural Heritage in terms of a SSSI impact assessment the difficulty of bringing cables up the near vertical coastal slopes to exit the foreshore environment would need to be resolved by the developer as part of the Onshore Ti application.

We therefore take the view that no completed cable installation should be permitted above the original sea bed surface level. Consequently no cable protection measures in any form should be permitted in the embayment unless the finished surface levels are the same as original levels. This should be applied from LAT -12m to MHWS +1m.

The objective of this zero tolerance approach to cable burial is to provide the maximum preservation of the existing morphology in the bay and minimise the risks of adverse outcomes of the proposed works through the use of any form of cable protection causing detrimental change to the wave regime in the bay. Any change could lead to increased flood risk, damage existing flood protection structures or affect the natural coastal structures protecting the environs of the bay.

MSLOT should note that annual localised flooding already occurs every winter season at Sandend village when storm events occur. This is the reason why we place emphasis on the potential for detrimental future change through the developer's proposals.

Consequently we believe a key assessment of the proposed scheme should be; does any of the proposed cable installation methods have the potential to increase flood risk over and above that which will otherwise occur in the future by sea level rise due to climate change.

We therefore believe that having consulted with SEPA; MSLOT as the determining authority should consider the risk of flooding from the sea as part of its role in assessing the EIA, and consider a multi-agency approach in determining the potential impact of the proposed scheme on land and property due to the potential for a change in the flood risk to the village and surrounding areas as a consequence of the works.

The developer has indicated that in areas of engineering difficulty the technique of Horizontal Directional Drilling (HDD) would be employed to install the two cable circuits underground between an onshore location and a sub tidal location within the bay.

This technique could eliminate all the issues associated with conventional cable burial within the bay as discussed above. If HDD was used to install cables from an onshore location behind the coastal slopes to a sea bed location beyond the extremity of the embayment, at say LAT -12 to -15m a distance of approximately 1000m would be required. The CC would fully support this approach subject to some conditions associated with the drill sites which we would address in the onshore planning application.

The viability of this technique is entirely dependent on the local geology through which the drilling tales place. The developer has not presented any evidence of test borehole data to support the proposition that this technique is suitable at the landfall location.

The CC has received two independent reports from qualified and experienced geologists who have studied the available geological record data and considered the suitability of the site for HDD.

Both geologists independently concluded that the complex local Dalradian geology, comprises metamorphic rocks that are highly faulted and folded, formed from multiple rock types, from schists to indurated quartzite's, which are highly fractured in places. The formation is dominated by rocks with extreme hardness but includes some softer rock bands. This complex geological structure is considered to be very difficult to drill successfully.

The drilling is compromised by the necessity to drill at an angle to deal with the height difference between the drill site at a distance behind the cliff top and the required depth under the sea bed.

Technical difficulties would be expected due to the number of transitions between rock types and fractured horizons which may be intercepted at a wide range of drilling angles. The requirement for a nominal 800mm diameter casing hole may also be difficult to achieve with a potential high risk of failure during the pilot-hole drilling and enlargement reaming process.

It should also be noted that there is little or no geological information available in the near or inshore area of the potential drilling routes offshore.

We conclude that although HDD presents a favourable opportunity as a less disruptive methodology to install the transmission cables in the bay which will satisfy our zero tolerance approach to cable burial and associated risks. By not presenting any proving test drilling data to demonstrate that this technique is a viable proposition considering the complex local geology and associated known difficulties, a serious omission in the EIA by the developer has occurred.

We therefore believe that the technical assessment of the "Change at the Landfall" has not demonstrated a sufficiently robust analysis to show that two transmission cable circuits can be brought ashore by any of the suggested methods; either through physical obstructions in the foreshore areas, engineering difficulties on the on-shore environment due to coastal slopes, geological difficulties of the drilling environment and without the use of cable protection methods in the bay.

4. Social Considerations

Surfing

Sandend Bay is considered the best surfing beach on the South Moray Coast. The characteristics of the nearshore bathymetry, the funnel effects of the embayment shape, sea bed morphology and its geographical position outside the Moray Firth swell shadow are the reasons why it delivers good surfing waves. It had previously been inferred by the developer that the loss of surfing quality at Sandend Bay as a consequence of the OfTi landfall works is unimportant as surfers can use the other beaches on the Moray Coast.

A South Moray Coast Surfing Beach Analysis has been undertaken to show what opportunities for surfing along the coast exist between Lossiemouth in the West and Fraserborugh in the East. Eleven coastal areas or beaches have been studied. The assessment was undertaken by a Senior Member of the Scottish Surf Federation.

The basis of the analysis was to compare all the other sites with Sandend in terms of seven technical surfing criteria or hazards and two others, access and facilities. The colour coded table is reported at the end of this Report.

The analysis supports the anecdotal evidence that Sandend does deliver the best surfing opportunities available in comparison with all the other beaches on the South Moray Coast. The nearest beach offering the closest equivalent performance is Fraserborugh beach 40 miles from Sandend. This demonstrates the importance of Sandend Bay as a surfing location regionally but also nationally.

As noted earlier local surfers are aware of changes in the hydrodynamics of the bay post storm events. These changes do return to a natural equilibrium in the bay over time, this can be weeks or many months depending on the nature, longevity and severity of metrological events.

As discussed earlier there is potential for permanent morphological change due to cable burial depth issues during installation, during the life of the project, or if they are left insitu post decommissioning. This will not only have the potential to affect flood risk but also permanent change to the hydrodynamics affecting the surfing potential of the beach to the detriment of a local and national resource.

We have consulted with a world renowned expert in the impact of marine & coastal development. Redacted in Physical Oceanography from the University of Plymouth who has been a part time research fellow with the Coastal Processes Research Group for several years.

Redact has commented on the experiences of cable landfalls in general on the beach environment as follows:

"Impacts on surfing break resources occur when offshore renewable energy development alters the hydrodynamic conditions (i.e. tidal flows, wave climate) and sedimentary environment conditions (i.e. sediment erosion, transport patterns and deposition) to such an extent that nearshore sedimentary bedforms (e.g. sand bars, beaches) change in the surf zone in such a way that they change the characteristics of the surfing waves that break there."

In respect of the Moray West proposals he comments further:-

"Therefore the developers cannot prove they won't ruin the beach if they trench the cables and install protective coverings which leaves the only option, if the cables are to be installed at Sandend, to use Horizontal Directional Drilling at a sufficient depth and distance to not impact the inshore and foreshore area. Sandend is one of the few beaches on the East coast of the UK that regularly delivers good surfing waves hence it is such a prized asset and needs protecting."

South Moray Coast Surfing Beach Analysis

cc	Swell Shadow	Wave size comparison to Sandend	Tide Affected	Currents	Sandbar Quality	Rocks/ Obstructions	Other Hazards	Beach Access	Public Toilets
Lossiemouth	**Yes** In the common N to NW swell direction	**Smaller**	**Yes**	**Yes** Especially near river	Often poor	Sea wall	Cold river water	Poor as long walk 500m from carpark to the sea over narrow footbridge	Yes
Spey Bay area	**Yes** In the common N to NW swell direction	**Smaller**	**Yes** Unsurfable at high tide due to steep shoreline	**Yes** Especially near river	Variable	Shingle beach unsuitable for all but expert surfers	Cold river water	Difficult due to shingle berms	Yes If Centre open
Buckie to Portknockie	Rocky outcrops block swell to any beaches	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	Dangerous rocks	N/A Unsurfable	N/A Unsurfable
Cullen	**Yes** In the common N to NW swell direction	**Smaller**	**Yes** Breaks onto rocks on Spring high tides	**Yes**	Often poor	Various rock outcrops	None	Poor 200 metre walk to the high tide surf area and nearly 1km to low tide surf area	Yes
Sunnyside	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	Unsurfable due to narrow beach, rock reefs and outcrops	Dangerous rocks	N/A Unsurfable	N/A Unsurfable
Sandend	**No** Receives swell from NW to NE	**Comparison Standard**	**No** Surfable at all tides states Safe for novices	Minimal Safe for novices	Good	Rocky margins at East and West sides 500m wide surf beach area	None	Very good 25m walk from carpark to the beach	Yes

South Moray Coast Surfing Beach Analysis

Location	Swell Shadow	Wave size comparison to Sandend	Tide Affected	Currents	Sandbar Quality	Rocks/ Obstructions	Other Hazards	Beach Access	Public Toilets
Portsoy to Whitehills	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	Too rocky to surf safely	Dangerous rocks	N/A Unsurfable	N/A Unsurfable
Banff Links	**No** Receives less swell than Sandend	**Smaller**	**Yes** Not surfable at all tide states	**Yes** Beach exposed to longshore drift	Poor	Rocky outcrops	None	75 metre walk to nearest surf area	No
Banff Bay	**No** Receives less swell than Sandend	**Smaller**	**Yes** Not surfable at high tide	**Yes** Especially near river	Often poor	Sea wall / harbour	Cold river water	Access Poor	No
Macduff to Fraserburgh town	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	N/A Unsurfable	Too rocky to surf safely	Dangerous rocks	N/A Unsurfable	N/A Unsurfable
Fraserburgh Beach	**No**	**Similar**	**Yes** Not surfable at all tide states	**Yes** Near West end	Good	Sea wall at W end	None	1 hour drive from Sandend not considered viable alternative	Yes

Key:

Very good to Excellent / Yes	
Acceptable to Good	
Dangerous to Poor / No	

Sandend Harbour

The 19th century harbour continues to operate as the recreational boating hub of the village. It is owned and operated by a charity the Sandend Harbour Trust. The harbour use is generally seasonal with all boats removed over the winter due to the limitations of storm protection to the harbour.

The impacts on the harbour due to the proposed development have the potential to be both physical and practical. The risks of change to the morphological and hydrodynamic process have the potential to silt up the harbour and approach channel through the sediment transport scenarios discussed in this report.

Further potential effects of the works are the risks associated with increased flooding and wave dynamics associated with sea bed change over the life of the project. These risks are centred on the structural integrity of the structures that form the harbour and protect parts of the village from increased wave damage and flooding.

Practical issues concern access to the Moray Firth and within the bay when marine works are being undertaken where exclusion zones may severely restrict Sandend vessel movements. If the project proceeds further a dialogue with the Harbour Trust and the developer is therefore recommended.

Visiting Vessels

Sandend Bay is a regular temporary anchor mooring location for yachts on passage through the Moray Firth or boats undertaking weekend sailings. Boats anchor at all times including overnight. Any prohibitions on anchoring in the bay would therefore place limitations or prevent the use the bay for this purpose. We would consider this an unacceptable loss of a maritime resource.

5. Opinion Summary

The Community Council have highlighted several very important deficiencies in the EIA Report.

In our opinion the current omission of a landfall geology assessment including test drillings, to inform the viability of HDD to install cables at a very complex geological site leads us to the conclusion that this solution is totally unproven at this stage.

If and until the HDD method is proven as a solution for areas of engineering difficulty, it is clear that the developer has very few options, if any available, to install cables between the foreshore and the land behind the cliffs or coastal slopes due in the main to the sites topography and the stated intention of the developer not to cut rocks normally visible within the SSSI.

Consequently a case can be made that at this stage the landfall cable methodology proposed in the EIA is fundamentally flawed.

Similarly measured knowledge of the morphodynamics of the embayment in the area below MLWS is unknown. Any change in sea bed morphology and the hydrodynamics of the embayment will without doubt have potential impacts on the propagation of waves within the embayment. The magnitude of change is unknown and we do not believe the developer has demonstrated in the EIA, any quantifiable analysis that shows the outcome of sea bed installation works, ongoing cable burial cover over 50 years, or indefinitely if an insitu option is the decommissioning method, will have zero or negligible change on the historical morphodynamics that exists today.

We therefore suggest MSLOT gives serious consideration to the adequacy and validity of the EIA in respect of the unproven OfTi landfall options. MSLOT must “determine with confidence” that a license can be granted and further site critical proposals dealt with through a future “cable plan” and “construction method statements” post consent.

Mountaineering Scotland

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By email to moray-west.representations@gov.scot

20th August 2018

Dear Sir/Madam

Pre-application Consultation for Moray West Offshore Windfarm

Mountaineering Scotland wishes to inform you of what we regard as an omission in the EIA for the transmission infrastructure associated with the proposed development. It concerns the Landfall Area for the Offshore Export Cable Corridor and the Onshore Planning Application Boundary.

There is a sea cliff at Redhythe Point which is a popular low to middle grade climbing venue with around 50 documented routes. This crag and associated area called "The Widow" is popular with beginners and used for instruction and courses, including use by Glenmore Lodge, the National Outdoor Training Centre.

The pre-application consultation process with local communities and other key stakeholders did not identify this popular climbing venue situated at the eastern edge of your area of search, and consequently did not identify any mitigation proposals for this area, unlike Sandend Beach which was removed from the Onshore Planning Boundary.

Mountaineering Scotland was alerted to this proposal only very recently, and subsequently contacted the developer with our concerns. A conversation with the representative of the developer assured us that the intended focus for development would be further west from this climbing venue at Redhythe Point. This was due to the topography of the coast and technical operational considerations for a transmission cable.

It would be our expectation, following on from the conversation and subsequent email confirming the points above, that this omission would be identified in any forthcoming planning application. Subsequently we would expect early engagement with the rock climbing community to discuss any potential direct or indirect impacts on the safety and security of the documented climbing routes through horizontal directional drilling construction techniques.

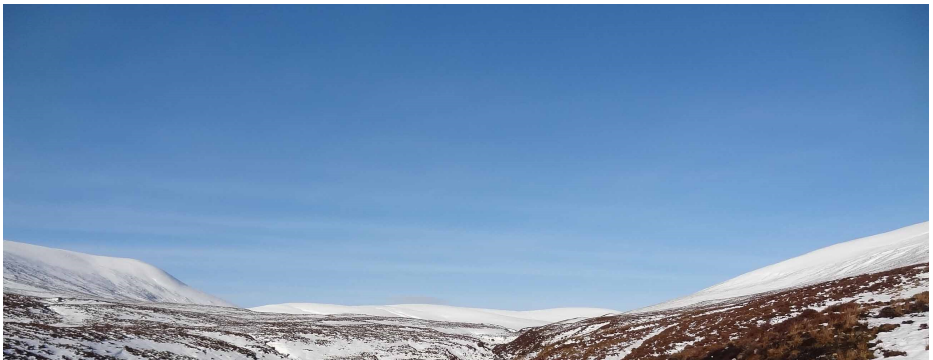
Mountaineering Scotland is a membership organisation with over 13,000 members and is the only recognised representative organisation for hill walkers, climbers, mountaineers and ski-tourers who live in Scotland or who enjoy Scotland's mountains, and acts to represent, support and promote Scottish mountaineering. Mountaineering Scotland also acts on behalf of the 80,000 members of the British Mountaineering Council (BMC) on matters related to landscape and access in Scotland,

and provides training and information to mountain users to promote safety, self-reliance and the enjoyment of our mountain environment.

We would be happy to be an initial point of contact for any future discussions about the climbing crag at Redhythe Point, and involve local knowledge and expert opinion where required to help in the assessment and mitigation of potential impacts.

Yours sincerely

Redacted



We further seek assurances from MSLOT that if in the fullness of time, should the HDD method or other factors in connection with the revised landfall area prove unsuitable, that the developer having previously excluded the Sandend Beach area, is not then permitted to claim a “best efforts” argument to seek to reinstate the beach as an alternative cable landing site.

Redacted

Fordyce, Sandend & District Community Council
30th August 2018

Defence Infrastructure Organisation

Redacted
Assistant Safeguarding Officer
Ministry of Defence
Safeguarding – Wind Energy
Kingston Road
Sutton Coldfield
West Midlands B75 7RL
United Kingdom

Redacted

Your Reference: Moray Offshore Wind Farm

k

Our Reference: DIO10036435

Redacted
Casework Manager
Marine Scotland Licensing and Operations Team

16th August 2018

Dear Redacte

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 and Marine and Coastal Access Act 2009 to construct and operate Moray West Offshore Wind Farm, approximately 22.5KM south east of the Caithness Coastline

Thank you for consulting the Ministry of Defence (MOD) about the above planning application in your communication dated 10th July 2018.

I am writing to advise you that the MOD objects to the proposal. Our assessment has been carried out on the basis that there will be up to 85 turbines a maximum of 285 metres in height from ground level to blade tip and located within the boundary outline indicated by the grid references below:

Turbine	Easting	Northing
0	346215	908884
1	328204	902286
2	328204	905456
3	328204	906265
4	328204	906701
5	328248	906747
6	328282	906783
7	328311	906815
8	328511	907032
9	328769	907320
10	329023	907614
11	329270	907912
12	329514	908215
13	329751	908521
14	329793	908577
15	329822	908614
16	330054	908924
17	330280	909239
18	330501	909557
19	330717	909880

20	330909	910178
21	331058	910371
22	331290	910682
23	331516	910996
24	331701	911262
25	331801	911407
26	332016	911728
27	332226	912055
28	332429	912385
29	332628	912718
30	332820	913055
31	333007	913394
32	333166	913696
33	333336	913747
34	333705	913863
35	334073	913986
36	334439	914115
37	334802	914250
38	335164	914392
39	335522	914540
40	335530	914543
41	335639	914589
42	335995	914743
43	336347	914904
44	336457	914955
45	336509	914975
46	336870	915116
47	337229	915265
48	337585	915419
49	337937	915580
50	338287	915747
51	338354	915780
52	338419	915811
53	338767	915984
54	339110	916163
55	339215	916220
56	339393	916316
57	339452	916348
58	339789	916538
59	340123	916735
60	340454	916937
61	340781	917146
62	341104	917359
63	341424	917579
64	341740	917804
65	342052	918034
66	342360	918270
67	342663	918511
68	342963	918758
69	343257	919009
70	343463	919189
71	343469	919195
72	343764	919446
73	344055	919703
74	344341	919965
75	344622	920232
76	344898	920503
77	345170	920779

78	345437	921061
79	345699	921347
80	345957	921637
81	346208	921931
82	346455	922230
83	346697	922534
84	346933	922842
85	347164	923153
86	347390	923469
87	347408	923497
88	347428	923524
89	347445	923548
90	347513	923632
91	347755	923936
92	347991	924243
93	348002	924258
94	348206	924421
95	348505	924668
96	348728	924859
97	349404	923891
98	349952	922874
99	350362	921904
100	350487	921515
101	350648	921017
102	350828	920169
103	350986	919306
104	351055	918099
105	351006	916957
106	350878	916156
107	350757	915543
108	350533	914672
109	350164	913727
110	349594	912543
111	348932	911516
112	348163	910588
113	347428	909846
114	346215	908884

Air Traffic Control (ATC) Radar

The turbines will be between 33.6 and 61.9 km from, detectable by, and will cause unacceptable interference to the ATC radar used by RAF Lossiemouth.

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, shadowing 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. 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 been conducted by an ATC subject Matter Expert (SME) who considered the position of the turbines weighed against a number of operational factors. Close examination of the proposal has indicated that the proposed turbines would have a significant and

detrimental effect on operations and on the provision of air traffic services at RAF Lossiemouth. MOD therefore objects to this development. In addition to the previous paragraph, reasons for this objection include, but are not limited to:

a. Restrictions the development would impose upon departure routes including Standard Instrument Departures (SIDS)
b. Restrictions the development would impose upon approach and arrival procedures
c. Restrictions the development would impose upon traffic patterns, in particular the Radar to Visual profile
d. Restrictions the development would impose upon LARS/ZONE traffic patterns
e. Restrictions the development would impose upon special tasks conducted by the Unit
f. Restrictions the development would impose upon aircraft operating areas
g. Restrictions the development would impose upon Tactical Aid to Navigation (TACAN) procedures
h. Restrictions the development would impose upon final approach routes
i. Restrictions the development would impose upon holding areas
j. Restrictions the development would impose upon instrument flight paths
k. The position of the development in relation to controlled airspace
l. The position of the development in relation to restricted/danger areas
m. The MOD's future airspace and operational requirements
n. The frequency of the provision of Traffic Service and Deconfliction Service in the vicinity of the proposed windfarm
o. Air traffic density in the vicinity of the proposed windfarm
p. Existing clutter or windfarms in the vicinity of the proposed windfarm
q. The type and characteristics of aircraft routinely using the airspace in the vicinity of the proposed windfarm
r. The performance of the radar
s. The complexity of the ATC task

The MOD has also assessed the effects of the proposed wind farm development upon the effective operation of its air defence radars. It has been confirmed that the proposed wind turbines are not expected to impact upon the operation of air defence radars. However, the MOD has recently identified that in certain conditions the performance of air defence radars may be adversely affected by the proposed wind farm when it is operational. Based upon the technical evidence currently available the MOD does not identify a need for any form of mitigatory measures to address this potential issue to be implemented in relation to the scheme for which consent is currently sought.

If the developer is able to overcome the issues stated above the issues stated above, the MOD will request that the turbines are fitted with aviation lighting in accordance with Article 219 of the Air Navigation Order.

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

I hope this adequately explains our position on the matter.

Redacted

Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

Our ref: PCS/160164
Your ref: Moray West Offshore

If telephoning ask for:
Redacted

20 August 2018

Marine Scotland
Marine Laboratory
PO Box101
375 Victoria Road
Aberdeen
AB11 9DB

By email only to: moray-west.representations@gov.scot

Dear Sir/Madam

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 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

Thank you for your consultation email which SEPA received on 10 July 2018. This response should be read in conjunction with our forthcoming response to the planning application APP/2018/1891 for the onshore elements of this proposal (PCS/160724).

Advice for the determining authority

We ask that the planning **condition** in Section 1 be attached to the consent. If this will not be applied, then please consider this representation as an **objection**. Please also note the advice provided below. We have also included further advice for the applicant in the attached appendix.

1. Decommissioning

1.1 It is recognised that a full decommissioning schedule, including a detailed plan and programme for the proposed decommissioning works will be submitted for consultation closer to the time of decommissioning (See Section 8 of the Moray Offshore Windfarm (West) Limited Decommissioning Programme). SEPA request that a copy of the Decommissioning Schedule and Plan are forwarded to it for review and comment. We request a **condition** is attached to any consent ensuring the decommissioning plan follows best practice at the time of preparation.

1.2 We note from Section 4.10.4 it is proposed to leave cables in situ once decommissioned as "there is no statutory requirement for removal of decommissioned cables" under current

Regulations. However, given Scotland is moving to a Circular Economy approach it is highly likely that when it comes to the decommissioning of the offshore infrastructure it will be a Regulatory requirement. Our preference would always be for any offshore infrastructure to be removed for reuse or recycling.

1.3 Further detailed advice for the applicant on decommissioning is included in the attached Appendix.

2. Flood risk

2.1 As specified in the Offshore Environmental Impact Assessment (EIA) a Planning Permission in Principle (PPP) will be required for the Onshore Transmission Infrastructure (i.e. landward of the Mean Low Water Springs). We confirm we have now formally been consulted on the EIA for these works and will provide further comments on flood risk through our duties outlined in the Town and Country (Scotland) Act 1997 within the timescale for this latest consultation.

2.2 SEPA has a duty to provide flood risk advice through the Town and Country (Scotland) Act 1997. As this legislation does not apply to this application we do not provide flood risk in this instance. For information, an approximate 1 in 200 year water level for the area is 3.0m Above Ordnance Datum based on extreme still water level calculations using the Coastal Flood Boundary Method. This does not take into account the potential effects of wave action, funnelling or local bathymetry at this location.

3. Coastal and estuarine water quality and pollution prevention

3.1 We will provide comments on coastal and estuarine water quality and pollution prevention via the separate consultation through our duties outlined in the Town and Country (Scotland) Act 1997.

4. Marine ecological interests

4.1 We will provide comments on any marine ecological interest relevant to us via the separate consultation through our duties outlined in the Town and Country (Scotland) Act 1997.

5. Coastal processes

5.1 We will provide comments on coastal process via the separate consultation through our duties outlined in the Town and Country (Scotland) Act 1997.

Regulatory advice for the applicant

6. Regulatory requirements

6.1 Details of regulatory requirements and good practice advice for the applicant can be found on the Regulations section of our website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the regulatory services team in your local SEPA office at: 28 Perimeter Road, Pinefield, Elgin IV30 6AF Tel: 01343 540884.

If you have any queries relating to this letter, please contact me by telephone on Redacted .

Yours sincerely

Redacted

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

APPENDIX - Detailed advice for the applicant

1. Decommissioning

1.1 The following comments and advice should be taken into consideration when developing the detailed decommissioning plan / programme.

a) Transfrontier Shipment of Wastes

Should the movement of waste outwith the UK be considered as part of the BP processes then you will need to comply with the requirements of the Transfrontier Shipment of Wastes Regulations. The following link provides a range of guidance (including: Details of the Regulations requirements; how and where the regulations apply and the fees and charges that apply to such movement).
http://www.sepa.org.uk/regulations/waste/transfrontier-shipment-of-waste/

b) Waste Management and Duty of Care with respect to wastes

General: Because of differences in legislation and / or approach to regulation between Scotland and the remainder of the UK, the following comments are made from a Scottish perspective and relate to materials or wastes arising from decommissioning activities that may be landed in Scotland, or that are landed elsewhere and subsequently transported to waste facilities in Scotland. It is however recognised that some of the comments may well be applicable to the remainder of the UK. You are strongly advised to make contact with the EA in those areas of England where wastes are likely to be landed, kept and treated, to discuss their regulatory requirements and needs.

Duty of Care with respect to Wastes: You should review the requirements of the Waste (Scotland)Regulations 2012 http://www.legislation.gov.uk/sdsi/2012/9780111016657/contents, as those Regulations which implement, in part, the Scottish Government's Zero Waste Plan, place a duty on the holders of waste, including producers, to take reasonable steps to increase the quantity and quality of recyclable materials. Similar requirements exist within the remainder of the UK and you are strongly advised to contact the Environment Agency (EA) with regard to their requirements should you intend to land, or transfer waste materials to England and Wales.

- For the correct definition and usage of waste terminology e.g. re-use, recycle, recover etc., you are directed to the Waste Framework Directive.
- Under the Duty of Care you must ensure that they demonstrate full compliance with the requirements of Section 34 of the Environmental Protection Act 1990 (EPA as amended).
- It is important that you recognise that your obligations under Section 34 of the EPA 1990 do not cease once the wastes, derived from the windfarm decommissioning activities, are transferred to a third party waste contractor, but rather are only discharged at final disposal of those wastes, or at that point when the waste is no longer so classified.
- The following link is to the 'Duty of Care: A Code of Practice'. This code explains the duties applicable to anyone producing, keeping, or treating controlled waste in Scotland. http://www.scotland.gov.uk/Resource/0040/00404095.pdf.
- Where you are proposing to conduct hazardous waste surveys, such surveys should be conducted offshore, rather than at the onshore receiving facility. In this way the onshore facility or transition point can ascertain ahead of receipt; if they are capable of receiving and

handling the materials and wastes; and have appropriate environmental and health & safety measures in place (e.g. are appropriately engineered to capture any leak and/or spillage). Only where it is not physically, or otherwise, possible to undertake such surveys offshore should onshore characterisation and survey be considered.

- One of the difficulties that may be experienced (dependant on the scale and number of decommissioning activities ongoing at the time wastes are brought ashore) is the availability of capacity for the receipt, storage, treatment and disposal of those wastes. Although there are a considerable number of licenced facilities in Scotland the majority have limitations on the type and volumes of wastes that can be received. To assist you in determining those disposal options currently available the following link details all of the Scottish waste reception, treatment and handling facilities currently licenced by SEPA. https://www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/waste-site-information/waste-sites-and-capacity-excel/
- Importantly you should ensure, and provide evidence, that there will be sufficient waste disposal capacity available for the forecast activity waste volumes.
- You will be required to demonstrate, to the satisfaction of SEPA that, you have complied fully with your Duty of Care obligations and can demonstrate the ultimate fate of all wastes and materials derived from your decommissioning activities.
- Unlike other wastes the options for disposal and/or recovery of marine growth may be limited. In particular many landfill sites may not wish to receive such waste if other decommissioning activities are bringing significant volumes of these wastes ashore at the same time. It also remains unclear if composting, or energy recovery via anaerobic digestion are viable options. You should ensure that the facility receiving the marine growth is equipped to deal with the material in a manner such that offensive odours are not generated as a result of its decay.

Active Waste Strategy & Plan:

- Ideally, an 'Active Waste Management Strategy and Plan' should be produced and adhered to. Such a strategy and plan will allow you to respond effectively to further information (e.g. waste surveys) that refines your knowledge of the waste types, characteristics, and volumes to be generated as a result of the decommissioning of the Windfarm infrastructure. SEPA would request that the said plan identify the locations of all disposal/reuse facilities for the Turbine generators, substation platforms, substructures, foundations, inter-array, OSP and export cables, wind turbine blades and towers and all other wastes such as scour protection and oil/lubricants, and that the plan is made available for comment by the various regulating bodies.
- Once items have been identified for being sold or reused by you, your broker, or decommissioning contractor, the details of those items should be included within the active waste management plan, as should details relating to those who have sold and received said items.
- The details to be included within the Active Waste Management Strategy and Plan (including the associated inventory) should be developed with SEPA and the EA (as needed).
- SEPA requests that it be informed of the appointment of waste contractors and sub-contractors, prior to first movement of wastes, so that the movement of any and all waste can be tracked.

Northern Lighthouse Board

CAPTAIN PHILLIP DAY
DIRECTOR OF MARINE OPERATIONS

84 George Street
Edinburgh EH2 3DA
Switchboard: 0131 473 3100
Fax: 0131 220 2093
Website: www.nlb.org.uk
Email: enquiries@nlb.org.uk

Your Ref: Email – Moray West – S36 Consent
Our Ref: AL/OPS/ML/O6_01_523

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

7 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 10 July 2018 requesting comments regarding the application submitted by **Moray Offshore Windfarm (West) Ltd** to construct and operate the Moray West Offshore Windfarm at a site approximately 22.5 km southeast of the Caithness coastline.

We note that the marine licence application does not define the number, size and location of turbines; as such our response is correspondingly general in nature. We also note that there will be cumulative impacts resulting from the proximity of the Beatrice and Moray East windfarms.

We 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 Beatrice and Moray East sites in order to form a continuation of a suitable marking of the area occupied by 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.

7 August 2018

MS-LOT

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

Redacted

From: Redacted
Sent: 18 July 2018 15:38
To: Redacted
Subject: Fwd: Recall: Moray West Offshore Wind Farm and Offshore Transmission Infrastructure Application [WF793430]

Follow Up Flag: Follow up
Flag Status: Completed

Dear Scottish,

A Windfarms Team member has replied to your coordination request, reference **WF793430** with the following response:

Dear Sir/Madam,

***Site Name**: Moray West Offshore Development (approx 27km SE of Burrigill, Wick, Highland)*

***Site Centre at NGR**: 341066 913471*

***Development Radius:** 10km**

***Hub Height**: 155m (above HAT) **Rotor Radius**: 125m*

*This proposal ***cleared*** with respect to radio link infrastructure operated by:*

The local electricity utility and Scotia Gas Networks

**** Please confirm turbine positions and dimensions when possible***

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

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

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

liable if subsequently problems arise that we have not predicted.

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

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

Regards

Wind Farm Team

The Joint Radio Company Limited
Delta House
175-177 Borough High Street
LONDON
SE1 1HR
United Kingdom

Redacted

We hope this response has sufficiently answered your query.
If not, please **do not send another email** as you will go back to the end of the mail queue, which is not what you or we need. Instead, **reply to this email keeping the subject line intact or login to your account** for access to your coordination requests and responses.

https://breeze.jrc.co.uk/tickets/view.php?auth=o1xladqaac4gaaaa2KWCHw2c1oVzuw%3D%3D

Redacted

From: Redacted
Sent: 28 August 2018 13:40
To: Redacted
Subject: Re: Questions re. Moray West

Thanks so much Redacted Developers - they're all the same !

Kind regards

Redacted

http://www.caithnesswindfarms.co.uk/

Member, World Council for Nature
www.wcfn.org

On 28/08/2018 12:20, Redacted wrote:

> Hi Redacted
>
> I have forwarded your email to the developer. They should get in touch with you soon.
>
> Best regards,
>
> Redacted

From: Redact Redacted
Sent: 24 August 2018 09:51
To: Redacted
Subject: Fwd: Questions re. Moray West

Hi Redacted

Thanks for calling, hope this reaches you. I often have to spell my name as well ! Could you reply to Redacted lease?

Kind regards

Redacted

-------- Forwarded Message --------

Subject: Questions re. Moray West

Date: Thu, 16 Aug 2018 16:30:58 +0100
Redacted

Dear Sirs

I telephoned earlier and left a message for someone to call me back but since I have so many questions perhaps an email is easier.

Having received an emailed alert from Highland Council concerning your application I was attempting to update my spreadsheet but could not find anywhere an indication of capacity for the windfarm. You claim 850,000 homes to be powered so presumably you have some idea. In the end, since at that stage I had not found your tel.no. (it's not on the Moray West website) I contacted 4C who told me it was estimated at 750MW. This does not appear in eplanning and could be somewhere in all your documents but I could not find it.

The main website http://www.morayoffshore.com/moray-west/the-project/ has a row of zeros at the bottom of that page where basic details should be. The Feedback link does nothing and there is no tel.no. I eventually found one at the bottom of the application form pages but no-one seems available.

I cannot find a map which includes Beatrice to show the whole picture. The best one is in Volume 3A Figures Part 1 of 6 https://wam.highland.gov.uk/wam/files/1D05586475517D33CE908DB93E9CF51F/pdf/18_03309_S36-EIA_-_VOL_3A_FIGURES_-_PART_1_OF_6-1554988.pdf which shows Moray East windfarms and Moray West but not Beatrice.

The visuals in the figures for Wick are solid black so nothing can be seen https://wam.highland.gov.uk/wam/files/239B9CBFB8C8E1BABE81F08F7CA481CF/pdf/18_03309_S36-EIA_-_VOL_3b_-_FIG_14.7.11g-o_-_VP_3_-_WICK-1555418.pdf .

According to the Application Form you will be advertising in the Banffshire Journal but not the John O'Groat Journal or Caithness Courier, the two main Caithness newspapers. Since Moray West is nearest to the Caithness coast and will be visible from there, may I ask why?

I look forward to your response.

Regards
Redacted

http://www.caithnesswindfarms.co.uk/

Member, World Council for Nature
www.wcfn.org

****
This e-mail (and any files or other attachments transmitted with it) is intended solely for the

Redacted

From: Redacted
Sent: 24 July 2018 10:30
To: MS Marine Renewables
Cc: MS-LOT Moray West Representations
Subject: RE: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm
Attachments: 00538041.pdf

Follow Up Flag: Follow up
Flag Status: Completed

RE: PROPOSED MORAY WEST OFFSHORE WIND FARM

OUR REF: WID10816, WID10642

Dear Sir/Madam,

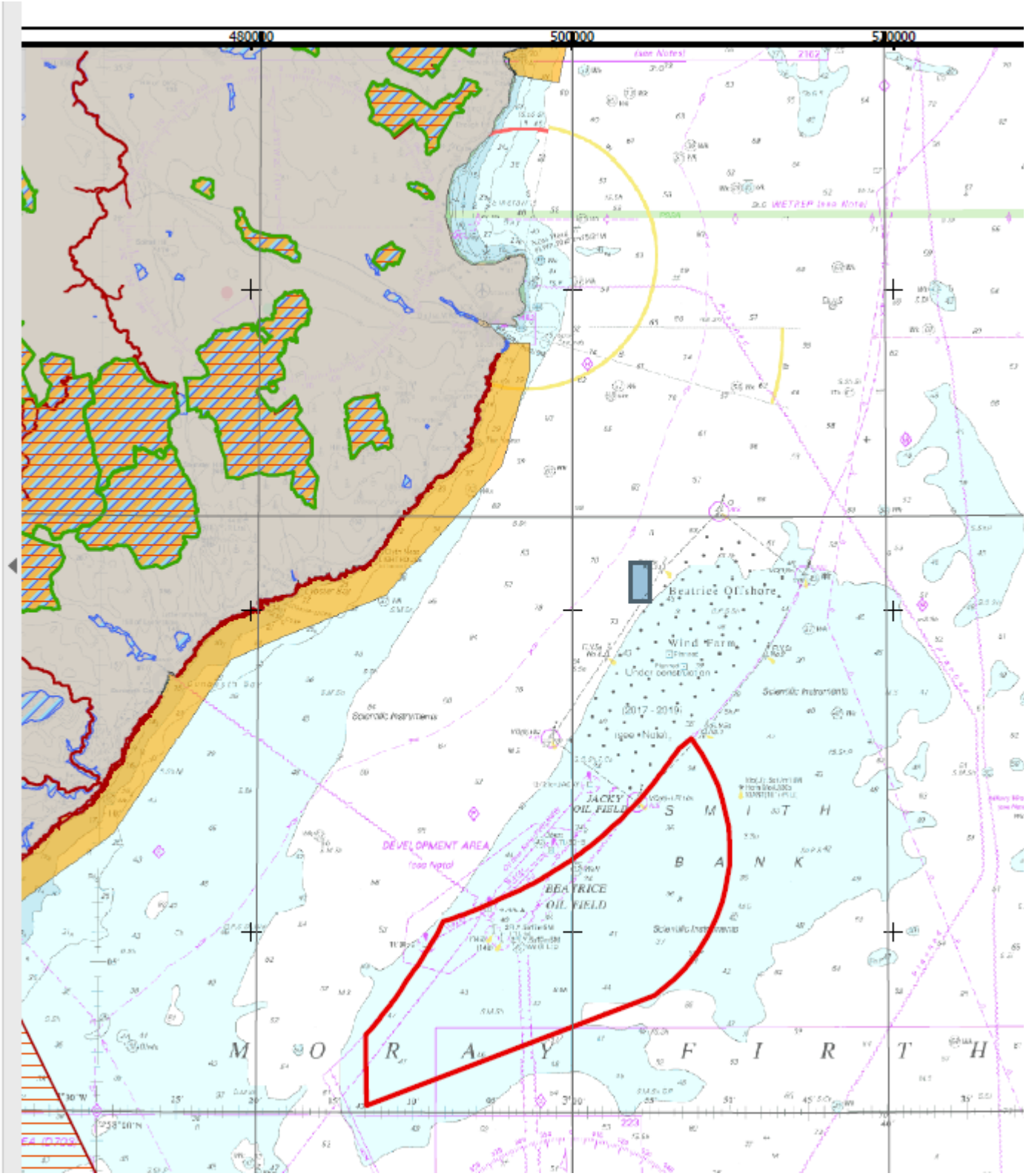
Thank you for your letter dated 10/07/2018.

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 networks.

Kind Regards,

Redacted
Fibre and Network Delivery
Radio Frequency Allocation & Network Protection (BNJ553)
Openreach
Tel: Redacted
Mobile Redacted
Web: www.openreach.co.uk
PLEASE ALWAYS RESPOND TO radionetworkprotection@bt.com



From: MS.MarineRenewables@gov.scot [mailto:MS.MarineRenewables@gov.scot]
Sent: 10 July 2018 13:11
To: MS.MarineRenewables@gov.scot
Cc: Redacted
Subject: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

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 (as amended)

MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
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 LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

On 8th June 2018 Moray Offshore Windfarm (West) Limited ("the Applicant") submitted an application to the Scottish Ministers in accordance with the above legislation to construct and operate the Moray West Offshore Wind Farm at a site approximately 22.5 km southeast of the Caithness coastline. This application is subject to an environmental impact assessment and as such the application is accompanied by an Environmental Impact Assessment Report ("EIA Report") which has been submitted by the Applicant. In addition, the Applicant has also provided an Habitats Regulations Appraisal ("HRA") Report.

The application documentation, including the EIA Report and HRA Report can be downloaded from:

http://www.gov.scot/Topics/marine/Licensing/marine/scoping/MORLWest

If you wish to submit any representations in response to the consultation regarding the above application please ensure they are submitted to the Scottish Ministers, in writing, to moray-west.representations@gov.scot no later than **21st August 2018**. It is expected that the consultation deadline will be met by all consultees. If you are unable to meet this deadline please contact MS-LOT on receipt of this e-mail. If you have not responded by the above date, MS-LOT will assume a 'nil return'.

Marine Scotland Licensing Operations Team ("MS-LOT") will make your representations publicly available. Personal information (such as names, signatures, home and email addresses) will be redacted before the representations are made public. If you have any queries or concerns about how your personal data will be handled please visit the MS-LOT website or contact MS-LOT at MS.MarineRenewables@gov.scot.

If you have requested a hard copy of the Application and not yet received it, please contact Redacted Redacted , Redacted at Moray West Offshore Wind Farm.

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

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

Yours faithfully,

Redac
ted

Redacted

Marine Scotland Licensing Operations Team

Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB
Direct Line: Redacted

Redacted

w: http://www.gov.scot/marinescotland

****
This e-mail (and any files or other attachments transmitted with it) is intended solely for the attention of the addressee(s). Unauthorised use, disclosure, storage, copying or distribution of any part of this e-mail is not permitted. If you are not the intended recipient please destroy the email, remove any copies from your system and inform the sender immediately by return.
Communications with the Scottish Government may be monitored or recorded in order to secure the effective operation of the system and for other lawful purposes. The views or opinions contained within this e-mail may not necessarily reflect those of the Scottish Government.

Tha am post-d seo (agus faidhle neo ceanglan còmhla ris) dhan neach neo luchd-ainmichte a-mhàin. Chan eil e ceadaichte a chleachdadh ann an dòigh sam bith, a' toirt a-steach còraichean, foillseachadh neo sgaoileadh, gun chead. Ma 's e is gun d'fhuair sibh seo gun fhiosd', bu choir cur às dhan phost-d agus lethbhreac sam bith air an t-siostam agaibh agus fios a leigeil chun neach a sgaoil am post-d gun dàil.
Dh'fhaodadh gum bi teachdaireachd sam bith bho Riaghaltas na h-Alba air a chlàradh neo air a sgrùdadh airson dearbhadh gu bheil an siostam ag obair gu h-èifeachdach neo airson adhbhar laghail eile.
Dh'fhaodadh nach eil beachdan anns a' phost-d seo co-ionann ri beachdan Riaghaltas na h-Alba.
****

Redacted

From: Redacted
Sent: 14 September 2018 13:52
To: Redacted
Subject: Moray West Offshore Windfarm application

Dear Redacted

Moray West Offshore Windfarm application

I am writing regarding the above application as a concerned homeowner in the historic village of Sandend.

To begin with, I should like to say I have taken the time to attend all the meetings and presentation evenings staged by MWOW to enable me to understand firsthand what is being proposed and how the applicants would plan to execute the works. At those meetings I have asked questions directly of the MWOW representatives to get an idea of how deeply they have investigated the project in preparation for their application to yourselves and, now separately, to Aberdeenshire Council in respect of the onshore aspect. I have also seen and read the Environmental report from MWOW which I obtained at one of the meetings and which I see is listed on the Marine Scotland website.

I will also say I am not a geological expert nor do I have specific knowledge or experience of marine drilling. I have however discussed the project with friends and neighbours around the village who do have such knowledge gleaned from their respective careers in the oil and associated industries and I have informed myself on a basic level of the issues which will be involved. I am also a sailor and use the harbour and surrounding sea areas when time permits so I do have knowledge of how the sea 'behaves' during normal natural conditions.

I was pleased to learn that following consultations with residents and at least 2 local MPs, MWOW has dropped the beach itself from their application. This is something they were resolutely determined not to do previously. However, due to the scope of the proposed sub-marine cable corridor which extends right across the bay and further west towards Cullen, my concern remains the impact which the laying of cables is likely to have on the sea bed and surrounding area which.

You may already be aware that certain areas around the bay including housing are already prone to flooding which will become worse over time with climate change as the MHWS level rises as it is predicted to do. Flooding could be further exacerbated by disruption or alteration in any way of the seabed as a result of laying cables, particularly closer to the village area which is still within the cable corridor on the plan, and yet this vital aspect does not appear to have been considered by MWOW in their environmental assessment. The further concern is the effect on wave patterns which providing top grade surfing conditions which I believe are some of the best in the UK.

Having asked the applicant's representatives during meetings for information on how they propose to address the potential problems, it is very apparent that they have little or no detailed information or data at present on how they can meet these challenges without undue impact on the sea area. All they appear to have is an outline plan and a range of options for the cable installation but cannot be more specific until they have undertaken more detailed underwater investigative work. For example, they say they cannot specify the sub-marine route of the cables until they have undertaken further survey work or indeed they are working on the installation itself. And yet they have seen fit to present Marine Scotland with a detailed Environmental Impact Assessment to support their application.

Speaking with neighbours who do have expertise in these matters, my understanding is that rock formations below MHWS in the immediate area where the cables would be landed are complex and likely to be very

difficult to drill through. I further understand the cables must be laid to a specific depth below the seabed whereas the difficulty of drilling may mean this cannot be achieved simply by trenching thereby leaving the need to create some form of permanent raised box or cover structure to increase the cable depth. I am aware of how disruption in one area of seabed can, and usually does, affect another area, e.g. the beach itself, with typical results as consequent beach erosion and/or additional silting. The risk of this happening should in my view be addressed by a requirement on the applicants not to place or construct any such structures on or above the seabed and instead to take steps to ensure the cables can be laid at sufficient depth by other means.

Additionally, I was told by MWOW that breaking or cutting of any rocks above MHWS will not be approved by Scottish Natural Heritage given that the area is registered as a SSSI. I understand this effectively means directional drilling is the only practical option. However, MWOW have not yet determined how or whether this is feasible within the confines imposed by the rock formations themselves, the geological structure of the cliff areas and the restrictions imposed by SNH. The yet to be taken core samples are, they say, key to this. As stated above whilst appreciating the land-side operation lies outside Marine Scotland's immediate remit, my view is this is so key to the whole project including compliance with sub-marine conditions, that it must be taken into account in the course of Marine Scotland's assessment. I understand Marine Scotland can consult with Aberdeenshire Council on this matter and trust this will result in a properly joined-up approach to the application.

On a personal level, I am in favour in principle of finding non-oil related sources of energy and wind, particularly offshore, is in my view a positive step towards that goal. However, all such projects must be kept in balance with the impacts they will have on what already exists which in this case is a beautiful unspoilt bay and beach as well as an area of land regarded as important enough to have SSSI status. In the context of the need for balance, I have deep concerns that in spite of all the assurances MWOW seem willing to give, the practical reality will be a long term detrimental impact on the bay and the beach. They would no doubt express great regret at this but once the damage is done, it is very hard and sometimes impossible to undo it. In light of this, I do not consider any risk at all of such impact to be acceptable in the context of such a pristine site, very few of which remain around our shores.

From a procedural perspective, I do not see how MWOW can present a fully formed case for Marine Scotland's consideration when, for example, they have still to undertake detailed investigative work in order to formulate a properly developed workplan. It seems to me that the Environmental Impact Assessment is not complete without this level of detail and therefore follows that application should not at this stage be regarded as competent.

In addition to the above, I would wholeheartedly support and agree with the very detailed comments submitted to Marine Scotland by the Fordyce, Sandend & District Community Council which I gather you have already received.

I would be most grateful if you would confirm safe receipt of this submission.

Kind regards

Redacted

Redacted

From: Redacted
Sent: 20 August 2018 12:07
To: MS-LOT Moray West Representations
Subject: Moray West Offshore Windfarm Application Response

Follow Up Flag: Follow up
Flag Status: Completed

To whom it may concern,

I note that Moray Offshore (West) Ltd. have defined the eastern limit where the cables might come ashore as being Redhythe Point. I wish to bring to your attention that Redhythe Point is a rock-climbing venue. The sea cliffs at Redhythe Point contain over sixty climbing routes, and others have been, or are currently being, established at The Widow, roughly 200m west of Redhythe Point. Full details of the climbing routes are provided in the relevant chapter in 'Northeast Outcrops', published by the Scottish Mountaineering Club, and on-line. This crag regularly attracts climbers to the area and is also used by Glenmore Lodge (the National Outdoor Training Center), and other organisations, for training and teaching purposes. It is one of only four rock-climbing venues on the Moray Firth coast.

The Environmental Impact Assessment (EIA) report, produced by Moray Offshore (West) Ltd., at: https://www.gov.scot/Resource/0053/00538033.pdf chapter 15 (page 1065/1283 of the pdf), considers the impact on Socio-economics, Recreation and Tourism; no reference is made here, or in the Other Human Activities chapter, or elsewhere, to climbing activity.

The company does, nonetheless, recognise in the EIA report the importance of Sandend beach to surfers. The surfing community voiced a vigorous opposition to the cables making landfall at Sandend beach. In a letter received from Mr Stewart Stevenson MSP, dated 28th June 2018, he advises that Sandend beach is no longer included in the company's plans. Whilst the extent to which the objections of the surfing community has influenced this decision could be debated, it is clear that their views have been taken into account. A decision by Moray Offshore (West) Ltd. to ensure the concerns of the climbing community were similarly accommodated would be welcome.

A list of all statutory and non-statutory stakeholders consulted during scoping and preparation of the EIA Report is provided in Table 5.3.1 (82/1283 of the pdf). At 15.3.1.1 the document states "Moray West has framed its assessment of potential effects on socio-economics and recreation and tourism activities through consultation with key stakeholders". Evidently, they did not sufficiently research who the interested parties might be; there is, in fact, no mention of the views of any climbing or walking organisations (there is a long-distance footpath) being sought. The EIA report does state that the company consulted Sport Scotland. Sport Scotland's response, however, is not noted in the report; in light of it being an umbrella organisation, it may be that they were unaware of climbing activity at Redhythe Point. That Glenmore Lodge, the National Outdoor Training Center (which is managed by Sport Scotland) were not aware of the situation, however, would suggest that Sport Scotland did not refer the matter to them. Neither Mountaineering Scotland, the National Governing body for climbing, nor the likes of the Ramblers Club are listed as having been consulted.

In Chapter 3 of the EIA report, 'Site Selection and Alternatives' (31/1283 on the pdf), and particularly 3.7.3 - 'Landfall Appraisal' (page 38/1283 of the pdf), it is clear that the preferred site for bringing the cables ashore is/was at Sandend bay. That location, as the report notes, is now discounted. The only two remaining possible locations are at Redhaven Beach (which the report notes is not regarded as wide enough); and the "coast between Redhaven beach and Redhythe Point". The report accurately notes that the cliffs are smaller towards Redhaven beach (and therefore more favourable). That location is, however, only about 750m - 1000m from the climbing areas. Given the company's own criteria for a landfall site (detailed in this chapter), it might appear unlikely that they will opt to bring the cables ashore through the actual climbing areas (the cliffs being too high). This was confirmed in an e-mail (copied below) I received from Redacted Moray West, in response to my bringing the issue to the attention of Redacted In his e-mail (copied in its entirety below) Mr Grant states that "viable locations have been identified through desk top studies. These are all focused on a stretch of the application boundary between Redhaven and Skedam Cliff.". It should be noted that The Widow is 500m from Skedam Cliff and Redhythe 700m.

Redacte advises that in order to bury the cables "the only solution open to us is to embed the cable using Horizontal Directional Drilling (HDD)". I am neither a geologist nor an engineer and am not in a position to know what the effect of 'horizontal directional drilling', or other construction activity, might have on the integrity of the cliffs; the danger of loose rock to climbers should be obvious. Mr Black of Mountaineering Scotland related in an e-mail to me that he had discussed the matter with R

Reda who assured him that, "there would be no changes to rockfaces by drilling". This problematic. It is not clear on what basis Redacte makes that claim; there does not appear to be information in the EIA report to substantiate his assertion. As far as can be seen, no assessment of the impact of Horizontal Direction Drilling, or other construction activity, on the surrounding vicinity has been made.

Irrespective of the fact, as Redacte advises, that the company will "not be allowed to make any material change" to the exposed Dalriadian rock face, due to the whole area being a SSSI, he provides no assurance that the integrity of the cliffs will be, or can be, maintained, or that falling rock will not present a danger to climbers. The mere fact that the company are 'not allowed' to damage the rock, does not provide any guarantee that damage, or danger, will not result from their actions.

In his e-mail, Redacte states, "strictly speaking the Point as shown on the UKclimbing.com website lies outwith our application area". There is currently no way of verifying this statement. Firstly, there are no maps provided in the company's literature which are of sufficient detail to be certain this is the case. Secondly, the map provided by UK Climbing is devoid of any detail by which such a comparison could be made. The climbing area further west of Redhythe, The Widow, would still be within the proposed landfall area, even if the area did not include Redhythe Point itself. Whether or not the climbing areas are to one side or another of an arbitrary line is irrelevant; such man-made designations are not recognised by mother nature. Exactly where construction will take place has yet to be determined, as, according to Mr Grant, the company has yet to undertake "ground investigations to confirm viable locations". Although it appears unlikely that the actual climbing areas will not be the landfall site, it cannot be stated with any certainty that these has been entirely discounted; in any case, I would contend that it is the close proximity of the climbing areas to the landfall site that is the concern (The Widow is 500m from Skedam Cliff and Redhythe 700m) which needs to be considered.

Redacte claims "There will certainly be no permanent loss of climbing areas". That can only be an assertion; there is no information in the EIA report upon which this statement is be based. I do not know if seismic activity will result from Horizontal Direction Drilling, and what its impact on the climbing areas might or might not be. The cliff collapsing would definitely result in the " permanent loss of climbing areas". I do not know if this, or any rock-fall (major or minor) is at all likely, I am not a geologist, but in terms of the EIA report, such a possibility has not been assessed.

Redacte assumes my "principle concerns relate to safety and access". There are two distinct aspects in relation to safety; firstly, that of anyone undertaking one of the climbing routes; and, secondly, safety during the approach to the climbing area. Accessing the footpath to the climbing areas is, in fact, a separate matter. Given that most climbers access the crag by the path from Portsoy (as described in the guidebook), that route might not actually be affected, if the location of the onshore work is further west at Skedam Cliff. The EIA report, however, details the need for a 500m exclusion zone during the construction and future maintenance phases. Again, depending on the exact location of the landfall site, it is possible that although the path to the climbing areas might not be affected, the actual cliffs (particularly The Widow) might fall within the exclusion zone.

Redacte claims he cannot "foresee that there will be any interference between our activities and those of the climbing community". It could be remarked that Redacte is surely blessed, having the gift of foresight, though it might be a concern if his foresight was somewhat myopic. The fact is that at present it cannot be said with any certainty that there will not be "any interference", principally because an assessment by the company of the impact on climbing activity has not been undertaken.

Redacte states " I believe all safety and access issues will be able to be managed in a means that provides adequate comfort to both parties.". Redacte may very well believe that "all safety issues [...] will be managed", but I would contend that belief (or hope or faith) is in itself irrelevant. In order for a safety management plan to be arrived at, an assessment first needs to be undertaken; it is clear that this does not feature, even tangentially, in the EIA report and it is, therefor, an area that has been neglected by Moray Offshore (West) Ltd. Furthermore, any such proposed safety management plan, in order to be effective, needs to be agreed with the climbing community, not imposed on it by the company. In the first instance, the climbing community needs to be given a similar consideration to that shown to the surfing community and be included in the EIA report. The company has not demonstrated that it has given consideration to the 'Potential Change / Impact' of its operation on the climbing areas or climbing activity (whether they are considered as 'Pathways' or 'Receptors'); has not described a relevant 'sensitivity criteria'; and has not arrived at an assessment of the 'magnitude of impact' that their project is likely to have. Irrespective of whether such an assessment might conclude that the impact is 'high' or 'no change' (or any point between), such an assessment needs to be agreed with the climbing community; only at that point can there be a meaningful discussion on how best to manage any shared understanding of whatever risks might exist.

In view of the above, I request that the progress of the application by Moray Offshore (West) Ltd. to undertake the onshore activity related to cables making landfall in the area defined by them in their EIA report is made subject to them undertaking an assessment, employing the methodology utilised in relation to other areas dealt with in the EIA report, of the impact of such work on the climbing areas and climbing

community; and, further to an assessment being undertaken, the company shares its assessment with the climbing community in order that a risk management plan can be agreed and implemented.

Redacted

Redacted

Moray West - Cable Landfall

16/08/18 - 11:25
Find Similar Emails

From:
Redacted

Dear Redacted

I have been passed your email to Redacted in order that I can comment on the concerns you have presented to him regarding the proposed landfall for the Moray West Wind Farm offshore transmission cable. I have also had similar concerns raised by Mountaineering Scotland and I therefore have CC'd them on this response to you so they are equally aware of our current aspirations.

As you note, the development area is described as being at Redhythe Point, although I would note that strictly speaking the Point as shown on the UKclimbing.com website lies outwith our application area. The term was used as the promontory is known as a whole as Redhythe and created a readily understandable location for the general public.

Your principle concerns relate to safety and access. As this is a planning permission in principle we do not have a full technical design, and thus do not know exactly how we will control access during construction. We are however aware of the significance of the coastal path to a broad range of users and would aim to maintain access as best we can throughout construction – this may result in minor diversions but should hopefully not extend to prolonged closures (i.e. only very short closures when movement of plant is occuring). As I explain below our activities are likely to be well set back from the coastline which will further reduce our likelihood for impacts on the coastal path.

In relation to safety and falling rock, it is important to note that the crags and cliffs from Sandend beach to Portsoy are a SSSI. A significant factor of this designation is the exposed Dalradian rock face, to which we will not be allowed to make any material change. On that basis the only solution open to us in the areas without topsoil cover is to embed the cable using Horizontal Directional Drilling (HDD).

An HDD solution would preclude large areas of the coast due to the volume of "overburden" lying on top of the cable. Excessive overburden leads to problems of thermal resistance in the cable and becomes a barrier to a viable solution. On that basis we can only foresee solutions at present that can be delivered in the lowest lying areas of the planning application boundary. To support that this conclusion we will shortly commence a campaign of ground investigations to confirm viable locations that have been identified through desk top studies. These are all focused on a stretch of the application boundary between Red Haven and Skedam Cliff.

Given this focus of our aspirations I do not foresee that there will be any interference between our activities and those of the climbing community. There will certainly be no permanent loss of climbing areas and I believe all safety and access issues will be able to be managed in a means that provides adequate comfort to both parties.

I trust you find this answer satisfies all your concerns but if you wish to discuss matters further please do call or send a follow up email.

Regards,

Reda
Redacted

5th Floor,
Atria One,
144 Morrison Street
Edinburgh, EH3 8EX
Redacted

Redacted

From: Redacted
Sent: 19 August 2018 22:07
To: MS-LOT Moray West Representations
Subject: Moray Offshore West proposal.

Follow Up Flag: Follow up
Flag Status: Completed

To whom it may concern,
I wish to bring to your attention the fact that the area in which Moray Offshore (West) Ltd. propose to make landfall for cables includes the climbing venue at Redhythe Point. I understand that the Environmental Impact Assessment undertaken by the company makes no reference to any potential risk to the integrity of the sea cliff as a result of construction work.; the risk to climbers visiting the climbing area due to changes in the structure of the rock; and the potential restrictions on access during the construction and future maintenance phases. It is unacceptable that the company has neglected to address these issues. I strongly recommend that any progress of the company's application is made subject to a full impact assessment being undertaken with respect to both the potential adverse impact on the sea cliffs and danger to climbers.

Redacted
19/08/2018
Redacted

Redacted

From: Redacted
Sent: 19 August 2018 22:49
To: MS-LOT Moray West Representations
Subject: Moray Offshore (West) Ltd: Environmental Impact Assessment

Follow Up Flag: Follow up
Flag Status: Completed

DATE 19 AUGUST 2018

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

FROM: Redacted
EMAIL: Redacted

I wish to bring to your attention the fact that the area in which Moray Offshore (West) Ltd. propose to make landfall for cables includes the climbing venue at Redhythe Point. I understand that the Environmental Impact Assessment undertaken by the company makes no reference to any potential risk to the integrity of the sea cliff as a result of construction work.; the risk to climbers visiting the climbing area due to changes in the structure of the rock; and the potential restrictions on access during the construction and future maintenance phases. It is unacceptable that the company has neglected to address these issues. I strongly recommend that any progress of the company's application is made subject to a full impact assessment being undertaken with respect to both the potential adverse impact on the sea cliffs and danger to climbers."

Redacted

FROM: Redacted

Redacted

From: Redacted
Sent: 07 August 2018 15:16
To: MS Marine Renewables
Cc: Redacted
Subject: RE: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm
Attachments: O6_01_523 - Moray West OWF - S36 Consent - Response.doc

Please find attached NLB response to this application.

Best wishes,

Reda
cted

Redacted

Northern Lighthouse Board

Redacted
Redacted

From: MS.MarineRenewables@gov.scot [mailto:MS.MarineRenewables@gov.scot]
Sent: 10 July 2018 13:10
To: MS.MarineRenewables@gov.scot
Cc: Redacted
Subject: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

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 (as amended)

MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
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 LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

On 8th June 2018 Moray Offshore Windfarm (West) Limited ("the Applicant") submitted an application to the Scottish Ministers in accordance with the above legislation to construct and operate the Moray West Offshore Wind Farm at a site approximately 22.5 km southeast of the Caithness coastline. This application is subject to an environmental impact assessment and as such the application is accompanied by an Environmental Impact Assessment Report ("EIA Report") which has been submitted by the Applicant. In addition, the Applicant has also provided an Habitats Regulations Appraisal ("HRA") Report.

The application documentation, including the EIA Report and HRA Report can be downloaded from:

http://www.gov.scot/Topics/marine/Licensing/marine/scoping/MORLWest

If you wish to submit any representations in response to the consultation regarding the above application please ensure they are submitted to the Scottish Ministers, in writing, to moray-west.representations@gov.scot no later than **21st August 2018**. It is expected that the consultation deadline will be met by all consultees. If you are unable to meet this deadline please contact MS-LOT on receipt of this e-mail. If you have not responded by the above date, MS-LOT will assume a 'nil return'.

Marine Scotland Licensing Operations Team ("MS-LOT") will make your representations publicly available. Personal information (such as names, signatures, home and email addresses) will be redacted before the representations are made public. If you have any queries or concerns about how your personal data will be handled please visit the MS-LOT website or contact MS-LOT at MS.MarineRenewables@gov.scot.

If you have requested a hard copy of the Application and not yet received it, please contact Redacted at Moray West Offshore Wind Farm.

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

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

Yours faithfully,

****
****
This email has been received from an external party and has been swept for the presence of computer viruses.
****
******

Redacted

From: Redacted
Sent: 16 July 2018 15:20
To: MS Marine Renewables
Subject: RE: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm [Our Ref: SG26535]
Attachments: SG26535 Moray West - TOPA.pdf

Follow Up Flag: Follow up
Flag Status: Completed

We refer to the application above. The proposed development has been examined by our technical safeguarding teams and conflicts with our safeguarding criteria.

Accordingly, NATS (En Route) plc objects to the proposal. The reasons for NATS's objection are outlined in the attached report TOPA **SG26535.**

We would like to take this opportunity to draw your attention to the legal obligation of local authorities to consult NATS before granting planning permission for a wind farm. The obligation to consult arises in respect of certain applications that would affect a technical site operated by or on behalf of NATS (such sites being identified by safeguarding plans that are issued to local planning authorities).

In the event that any recommendations made by NATS are not accepted, local authorities are obliged to follow the relevant directions within Planning Circular 2 2003 - Scottish Planning Series: Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) (Scotland) Direction 2003 or Annex 1 - The Town And Country Planning (Safeguarded Aerodromes, Technical Sites And Military Explosives Storage Areas) Direction 2002.

These directions require that the planning authority notify both NATS and the Civil Aviation Authority ("CAA") of their intention. As this further notification is intended to allow the CAA to consider whether further scrutiny is required, the notification should be provided prior to any granting of permission.

It should also be noted that the failure to consult NATS, or to take into account NATS's comments when determining a planning application, could cause serious safety risks for air traffic.

Should you have any queries please contact us using the details below.

Yours Faithfully

NATS Safeguarding

Redacted
Redacted

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk

**Please note: We have recently made some changes to our mailbox structure, I would be grateful if you could delete previous instances of our email address (e.g. in outlook email address auto-fill) and re-typing NATSSafeguarding@nats.co.uk to ensure that the correct inbox is picked up

---

From: MS.MarineRenewables@gov.scot [mailto:MS.MarineRenewables@gov.scot]
Sent: 10 July 2018 13:11
To: MS.MarineRenewables@gov.scot
Cc: Redacted
Subject: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

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 (as amended)

MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
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 LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

On 8th June 2018 Moray Offshore Windfarm (West) Limited ("the Applicant") submitted an application to the Scottish Ministers in accordance with the above legislation to construct and operate the Moray West Offshore Wind Farm at a site approximately 22.5 km southeast of the Caithness coastline. This application is subject to an environmental impact assessment and as such the application is accompanied by an Environmental Impact Assessment Report ("EIA Report") which has been submitted by the Applicant. In addition, the Applicant has also provided an Habitats Regulations Appraisal ("HRA") Report.

The application documentation, including the EIA Report and HRA Report can be downloaded from:

http://www.gov.scot/Topics/marine/Licensing/marine/scoping/MORLWest

If you wish to submit any representations in response to the consultation regarding the above application please ensure they are submitted to the Scottish Ministers, in writing, to moray-west.representations@gov.scot no later than **21st August 2018**. It is expected that the consultation deadline will be met by all consultees. If you are unable to meet this deadline please contact MS-LOT on receipt of this e-mail. If you have not responded by the above date, MS-LOT will assume a 'nil return'.

Marine Scotland Licensing Operations Team ("MS-LOT") will make your representations publicly available. Personal information (such as names, signatures, home and email addresses) will be redacted before the representations are made public. If you have any queries or concerns about how your personal data will be handled please visit the MS-LOT website or contact MS-LOT at MS.MarineRenewables@gov.scot.

If you have requested a hard copy of the Application and not yet received it, please contact Redacted at Moray West Offshore Wind Farm.

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

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

Yours faithfully,

Redac
ted

Marine Scotland Licensing Operations Team

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

w: http://www.gov.scot/marinescotland

marinescotland science

T: +44 (0)1224 876544 F: +44 (0)1224 295511
MS_Renewables@scotland.gsi.gov.uk.

The Scottish Government

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

31 August 2018

Dear Redacted

MORAY OFFSHORE WIND FARM (WEST) LTD - OFFSHORE EIA REPORT, AS SUBMITTED BY THE APPLICANT ON 08 JUNE 2018

Marine Scotland Science has reviewed the above document in relation to marine fish ecology, commercial fisheries, benthic ecology, diadromous fish and aquaculture. Please accept the comments below as an interim response with physical process, marine mammals and ornithology to follow in an updated and final version of this document, as agreed.

marine fish ecology
Overall MSS finds the chapter relating to marine fish ecology both comprehensive and well considered, and is broadly in agreement with the conclusions reached. There are however a few comments, as below.

Cod
The development area falls within the indicative cod spawning area (Coull *et al*, 1998) and cod were found to be present within baseline characterisation. Cod has therefore rightly been assessed against the relevant impact pathways.

Whilst it is accepted that the indicative spawning area, as presented in Coull et al (1998), is larger than the conservative area modelled for TTS, when considering displacement the EIA report states that *"The overall proportion of these habitats that are likely to be affected by underwater noise from piling operations within the Development would be expected to be small in the context of the widespread nature of these habitats in the southern North Sea."* Whilst MSS do not disagree with this statement in general, it is perhaps too simplistic an approach to apply to cod when it has been shown that between 67 and 97% of cod remained within 100 km of spawning areas throughout the year, suggesting resident spawning groups. The same study suggested that population processes may operate at a smaller spatial scale than the stock level, with spawning aggregations functioning as local populations within a metapopulation (Wright et al, 2006). Indeed, the EIA report finds that the cod population of the Moray Firth is genetically distinct from other North Sea populations.

When considering the behavioural effects of noise it is stated (section 8.7.1.58) that *"research has shown that spawning adults are unlikely to show displacement as their spawning activity takes precedence over any other behaviour due to the amount of energy put into the spawning process and its importance in successful recruitment."* Whilst MSS is aware of some research, particularly in relation to herring, there is no indication provided that this relates specifically to cod. It is well established that cod utilise underwater noise during their courting rituals. There does not appear to be any consideration as to the potential effects, if any, of TTS on the use of sound by cod, which could be particularly important should cod not show displacement due to noise. Whilst accepted that TTS is likely temporary effect, in order to minimise the likelihood of this occurring during the

spawning period, any opportunity within a piling strategy to minimise, or avoid, piling during peak spawning period (February – March) would be welcomed.

MSS suggest that post construction surveys to better understand the effects of offshore development on cod presence at the local level across the site should be considered.

Sandeels

As cited within the EIA report, sandeel populations are sensitive to sediment type within their habitat, preferring coarse to medium sands. When considering temporary habitat loss / habitat disturbance and long term habitat loss, the EIA report deems them to be of high vulnerability, medium recovery and of regional importance within the study area with an overall effect from long term habitat loss assessed as negligible to low and not significant in terms of EIA.

Whilst the report finds that the study area *"coincides with low intensity sandeel spawning habitat and long term habitat loss (loss of soft substrate) will result in direct impacts on this habitat. Detailed studies have been completed to ascertain whether the habitats present within the Development are important for sandeel populations and this work has shown that the Development area does not support important populations of sandeel."* MSS would suggest that as good practice and where possible, consideration be given to micro siting of gravity bases to avoid areas of suitable habitat, after site characterisation has taken place.

Mitigation

MSS welcomes the embedded mitigation that is included to reduce the potential impacts on fish and shellfish ecology and would further welcome any involvement with associated plans relating to the Environmental Management Plan (EMP), Marine Pollution Contingency Plan (MPCP) Cable Burial Risk Assessment (CBRA) Piling Strategy (PS).

commercial fisheries

MSS agrees with the proposed mitigation measures in Chapter 11 (Commercial Fisheries), including method for cable protection (burial and additional protection measures), appointment of an FLO and FIRs, Navigational Safety Plan, and modified scallop dredges fishing trials within an operational wind farm site (11.7.3.22). It is very positive that the applicants have shared a draft Commercial Fisheries Mitigation Strategy as part of their application. A meeting with fishing representatives to discuss the CFMS will be required.

Paragraphs 11.7.2.7 to 11.7.2.10 assess the potential effects of the development on the creel fleet during construction. Short-term loss of grounds (6 months) for this fleet is discounted without any prior reference to disruption settlements for genuinely impacted vessels. No such references in section 11.6.2 either. Similarly, paragraphs 11.7.2.46 to 11.7.2.49 assess the interference with Fishing Activities. No reference to a resolution mechanism is mentioned in cases where transiting construction vessels cause damage to deployed strings of creels. Both elements should be covered in the CFMS.

Section 11.7.3 assess the potential operation effects of the development. The assessment for some fleets is based on the assumption that vessels would regain access to the site during the operational phase. No reference for post-construction monitoring programme focusing on commercial fisheries is mentioned to validate this assumption and the findings of the assessment. Validation of assumptions should be reflected in the CFMS.

Section 11.8 provides information on the assessment of cumulative effects. Table 11.8.1 provides a very helpful summary of construction timeframes of relevant developments. However, it also highlights the potential of a larger number of developments to cumulatively impact on nomadic scallop fleet. Assessment outcome (sections 11.8.2.16 and 11.8.2.22) is based on the assumption of no parallel construction periods between projects or limited impacts from sequentially construction periods. As construction schedules from relevant developments become available over time, discussion with the fishing industry as part of CFMS condition should allow space for additional mitigation measures regarding timing.

benthic ecology

General comments
The benthic section of this Environmental Statement has been completed to a high standard and is very thorough. The technical summary requires some improvement to the English in a few places.

From a benthic perspective MSS has concerns regarding the continued proposal to use gravity bases for the WTGs and OSPs. We are also concerned about the route of the export cable and would strongly recommend HDD rather than open-cut trenching to minimise damage to the intertidal and benthic environment. A further concern is the finding of a 'low grade' stony reef on the wind farm site. While it is recognised that it is an Annex I feature in the Habitats Directive, there is no direct mention that it contains a maerl bed which is a protected habitat. The only mention of maerl is in a table in the Technical Appendix (7.1) and on the photographs. MSS would like clarification that the location of this stony reef is mapped and that the developer will seek to avoid locating any WTGs/OSPs or cabling in this location.

Specific comments

Comments relating to the Technical Summary
The area quoted that could be affected by the dredging and scour protection of a gravity base foundation is large. In the Maximum Design Envelope, it states that in a worst case scenario all 85 WTG may have gravity bases. Gravity bases cause considerable loss of habitat, in addition to introduction of a hard substratum and increases in suspended sediment during construction. Would the developer be able to give MSS an indication of under what circumstances they require gravity bases and whether a less damaging method cannot be used? Likewise for the OSPs, could the developer explain why gravity base structures need to remain as an option?

With regards to the benthic environment, MSS would prefer to see the offshore export cable circuits installed using HDD rather than jetting or open-cut trenching to minimise damage to the intertidal and near-shore subtidal environment. The section of coastline selected for landfall is a sensitive area, containing complex rocky reef habitat. Trenching the cable will cause damage to intertidal and subtidal habitats. MSS would recommend the method which causes minimal damage to these environments

4.10.4. *Cables*
MSS agrees, it may be preferable to leave the cables buried upon decommissioning in order to minimise further environmental disturbance. However, if the cables are to be left in situ and not removed entirely, MSS would recommend periodic monitoring of the cables to ensure they do not become exposed over time and become a snagging hazard to fisheries.

MSS is concerned that the cable route crosses the Southern Trench pNCMPA. It has been designated partly for its burrowed mud and associated fauna and is known to be an important nursery ground for juvenile fish. Laying a cable may cause significant disturbance. Trenching effectively removes habitat and increases in suspended sediment may cause smothering of sensitive mud habitats and species.

Table 6.6.1: *Design Envelope Parameters Relevant to the Physical Processes and Water Quality Impact Assessment*
MSS is concerned about the volume of sediment disturbed for each WTG in the worst case scenario using the gravity base options. MSS would prefer a method of installation which minimises the area of impact on the seabed.

7 Benthic and Intertidal Ecology

7.4.1.5
As is stated in the Environmental Statement, the Phase 1 and 2 intertidal surveys were completed at Sandend where the original cable land-fall site had been selected. Subsequently, it was decided that the landfall site would avoid this bay. MSS do recommend carrying out the intertidal survey at the precise location selected for landfall.

Section 7.4.2.3
The benthic report has identified habitats and species of conservation interest. MSS is concerned about the recording of *Arctica islandica* and *Limaria hians. Arctica* in particular is very slow growing and very long lived. Records of *Limaria* offshore are lacking. Finding these species at one station indicates that they could be more widespread given a greater survey effort. MSS recommends avoiding the site where they were found.

7.4.2.34
The Priority Marine Feature (PMF) SS.SMu.CFiMu.SpnMeg was found on the offshore export cable corridor some of which is in the proposed Southern Trench NCMPA. Seapens will be lost if dredging occurs over them and the increase in suspended sediments may cause smothering. However, this habitat is widespread within this part of the North Sea and no significant effect on the population as a whole is expected.

7.4.2.35
The PMF SS.SCS.ICS.MoeVen was identified, a component of tide-swept coarse sands with burrowing bivalves. The report states that it was found in deeper water than described in the literature. However, it is often the case that biotopes exist in slightly differing conditions than originally described. MSS would advise avoiding incidences of this biotope if feasible, as it may be sensitive to habitat changes through sedimentation, changing tidal streams and of course habitat removal. There is a lack of data for this biotope in offshore regions.

7.4.2.36
The PMF SS.SSaCFiSa.EpusOborApri were common at the Moray West site, a component of subtidal sands and gravels. Subtidal sands and gravels are an Annex I feature; however, they are very widespread offshore in UK waters. The site of the wind farm is not within an SAC.

7.4.2.37 *and Photos in the Technical Appendix 7.1*
The stony reef identified here has been labelled as low grade reef. The photographs in the appendix (images 17-05-18 11.34.12_Dive 64 W27 to Image 17-05-18 11.16.45_Dive63) display maerl. In the table it is described as *Lithothamnion sp..* MSS would question whether this biogenic reef actually constitutes 'low grade' stony reef. The finding of a maerl bed offshore is rare. They are normally found in coastal waters in depths of up to 30 metres. MSS would strongly advise avoiding placement of any structures on or near to this stony reef. Could the developer also supply MSS with depths and positions of this reef so that it can be added to a national database as it is rare that it is found offshore? Maerl is listed in Annex 1 of the Habitats Directive, it is on the OSPAR list of threatened and declining species and habitats and it is a PMF in Scottish waters.

MSS is also interested to know the species of Serpulidae that were found there.

Landfall and intertidal habitat

7.4.2.43
The original Phase 1 and 2 surveys were conducted at Sandend Beach. The surveys were conducted to a high standard but this area is no longer under consideration. The potential landfall area now being considered is between the east of Sandend beach and Redhythe Point. This part of the Moray Coast contains some exceptional examples of rock reef. There is a Seasearch report to the east of this location which gives an idea of the type of coastline here, http://www.seasearch.org.uk/downloads/North%20Aberdeenshire%20Coast%20web.pdf

Further information on near shore subtidal areas that have been surveyed may be available through Marine Recorder or the National Biodiversity Network (https://scotland.nbnatlas.org/). The habitats on this stretch of coastline that is under consideration may qualify as PMFs (e.g. tide-swept algal communities and kelp beds). Bedrock reefs within SACs are protected. This area of coastline is out with an SAC. However, MSS recommend an in depth survey of the proposed landfall site and would strongly recommend HDD for the cable installation as opposed to a 15m wide trench. This would minimise damage to rocky reefs.

Electromagnetic Fields (EMF)

7.7.3.42
MSS is in agreement that the cable should be buried to a depth of at least 1 m where possible or covered in mattresses or similar where it is not possible to bury it. As such effects of EMF to benthic species are predicted to be low. At this depth seabed heating is unlikely to be of concern except to burrowing species.

With regard to Marine Invasive Non-Native Species, MSS would recommend periodic surveys of substructures including the cable route, the WTGs and the OTGs. This could be combined with surveying for technical purposes. MSS would like to see the results of such surveys.

diadromous Fish
MSS has read the material related to diadromous fish in the Report to inform Appropriate Assessment, the Offshore HRA Screening Report, the EIA Report Main Text – Fish and Shellfish, and the Technical Appendices. What is assembled is in general accurate and comprehensive and our comments are mainly points of detail.

Report to inform Appropriate Assessment
Although this is tabled, it is not clear how much of the diadromous fish material will be required following likely advice from SNH that salmon SACs should be screened out.

Screening Report
This is a less recent document (September 2017) than the others and is less up to date.

4.2.3.1
MSS would note that as is detailed in the other documentation that more information is now becoming available on migration of salmon smolts through the Moray Firth. It is also now known to be incorrect that smolts are associated particularly with nearshore waters. MSS would also note that distances to SACs may not be a reliable indicator of probability of interaction. This is particularly true in the case of the Moriston SAC where the distance includes a long length of river which smolts are constrained to pass through is included.

5.2.4
MSS would note that Armstrong et al's study is just concerned with overt effects of AC EMF and that evidence that adult salmon mainly migrate along costal routes is weak other than close to home rivers.

Page 78
MSS would note relating to no salmon being caught in the general survey work that general survey techniques are not appropriate for catching salmon and sea trout and would not be expected to catch many, even if present.

Page 79
MSS would note that the BOWL study is now available on the internet at https://www.gov.scot/Topics/marine/Licensing/marine/scoping/Beatrice/DFM/cromartyfirthsmolttracking

Page 81 mentions the National Research and Monitoring Strategy for Diadromous Fish and indicates the need to progress project work if the Moray West site is progressed, which is good.

EIA Report Main Text – Fish and Shellfish
The above comments made in realtion to diadromous fish on the Offshore HRA Screening Report also apply where relevant.

MSS welcomes the inclusion of details from various recent studies.

It is good that the Data Limitations section mentions the National Research and Monitoring Strategy for Diadromous Fish, although it does not mention the expectation that appropriate project work will take place if the Moray West site is progressed.

MSS would emphasise that while gaps in our knowledge on the spatial and temporal aspects of salmon smolt movement in the Moray Firth and adjacent areas remain, that good progress is currently being made, partly thanks to studies which have or are being progressed with developers.

MSS would also comment that EMFs at the seabed being less than the earth's magnetic field does not in itself necessarily mean that there will be no significant effects on fish and shellfish. Nonetheless, for various other reasons MSS would support the conclusion realting to EMF which is reached in the EIA.

Additional note
MSS requests to see SNH's comments relating to diadromous fish at earliest opportunity. It is possible we may wish to add additional comment after seeing them.

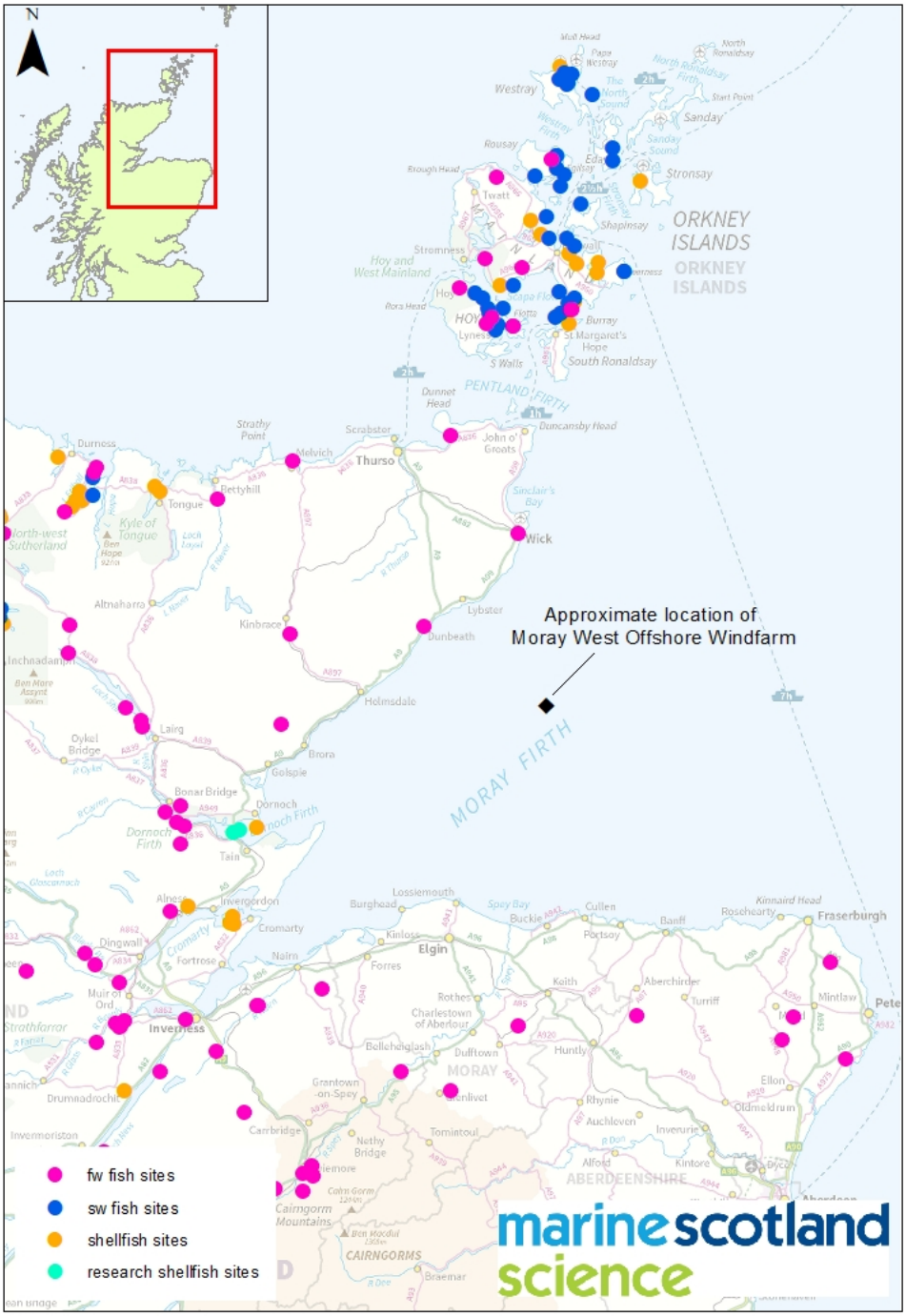
aquaculture
There are 5 active shellfish sites within the Moray Firth area. 4 sites are located in Cromarty Bay - a mussel long line site operated by Cromarty Mussels, a pacific oyster trestle site operated by Black Isle Seafood Ltd. a pacific oyster trestle site operated by MacKenzie Oysters and a land based lobster site operated by Scot Live Shellfish Ltd. There is also a wild bed of common mussels in the Dornoch Firth operated by the Highland Council. In addition, there are 2 native oyster research sites in Dornoch Firth operated by Heriot Watt University.

There are no other marine aquaculture sites on the east coast of Scotland to the south of the proposed development until North Berwick, and to the north, the next closest aquaculture sites would be around Orkney ~75km from the development in the Outer Moray Firth.

There are 3 proposed shellfish sites within the Moray Firth area which have been granted planning permission however at the time of commenting they were not yet authorised to place any equipment in the water.

There are several land based freshwater sites displayed on the map but these are not expected to be affected by this development.

Location of aquaculture sites within the vicinity of the Moray West Offshore Windfarm



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

Yours sincerely

Redacted

Marine Scotland Science

Marine Laboratory, PO Box 101, 375 Victoria Road,
Aberdeen AB11 9DB
www.scotland.gov.uk/marinescotland

Wick Harbour Authority
Harbour Office
The Harbour
Wick
Caithness
KW1 5HA

Tel. Redacted
Fax. Redacted

Moray West – Agent
Marine Scotland
Scottish Government

Our Ref:
Your Ref:

Date: 22 November 2018

Dear Sir

MORAY WEST OFFSHORE WINDFARM – NORTH PLANNING COMMITTEE

Wick Harbour Authority noted on the BBC Highland and Island news website that Highland Council Planners have recommended that the North Planning Committee raise an objection to the Moray West Offshore Windfarm at their meeting on Tuesday 27th November 2018.

The report PLN/079/18 contains a reference to Wick Harbour at para 9.38 with an inference that there is insufficient capacity at the port. It would have been helpful if Highland Council had consulted with Wick Harbour Authority before including this statement in such an important document. Wick Harbour Authority is currently progressing with our plans to develop our outer harbour area, which will effectively double our safe mooring capacity.

Could the Planning Department please include us as a statutory consultee for any future developments close to the port.

Our current contacts with the offshore windfarm industry suggest that the Highland region will obtain a large socio-economic benefit from these developments on our doorstep.

We fully support the Moray West Offshore Windfarm Development and the potential for local job creation . We believe that an objection would not be helpful at this time.

Yours sincerely
Redacted

Redacted Re
dac

From: Redacted
Sent: 13 November 2018 16:10
To: Redacted
Subject: FW: Moray Offshore Windfarm (West) Section 36 Consultation
Attachments: 18-00954-S36 Moray West.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello, please see the below email and attachment, which I just wanted to ensure came to you as the moraywest.reps email came back as undelivered.

Regards,

Redacted

Redacted

Redacted

From: Redacted
Sent: 13 November 2018 3:52 PM
To: Redacted

Subject: Moray Offshore Windfarm (West) Section 36 Consultation

Good afternoon,

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 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

Please see attached a letter containing the Section 36 response to the above project from Moray Council.

Regards,

Redacted

Redacted

****
This email has been received from an external party and has been swept for the presence of computer viruses.
****

Redacted

From: Redacted
Sent: 20 August 2018 08:55
To: MS-LOT Moray West Representations
Subject: Moray West Offshore pre-application consultation
Attachments: Mountaineering Scotland - Moray West Offshore - Redhythe Point.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Please find attached a representation from Mountaineering Scotland on the pre-application consultation for the Moray Est Offshore Windfarm transmission infrastructure.

If you have any queries then please do contact with me.

Regards

Redacted

Mountaineering Scotland
The Granary, West Mill Street
Perth, PH1 5QP

Mountaineering Scotland

Love Scotland's mountains?
Walk climb ski. Join us.

www.mountaineering.scot

Redacted

From: Redacted
Sent: 21 August 2018 11:25
To: MS-LOT Moray West Representations
Subject: FW: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm
Attachments: MORAY WEST section 36 response.pdf

Follow Up Flag: Follow up
Flag Status: Completed

From: Redacted
Sent: 21 August 2018 11:23
To: 'MS.MarineRenewables@gov.scot.' <MS.MarineRenewables@gov.scot.>
Cc: Redacted

Subject: RE: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

Licensing Operations Team,

Please find attached response from MCA regarding the application for consent under Section 36 of The Electricity Act for the Moray West Offshore Windfarm.

Kind regards

Redac
ted
Redacted

Please note I currently work Tuesdays, Wednesdays and Thursdays.

From: navigation safety
Sent: 10 July 2018 13:47
To: Redacted
Subject: FW: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

From: MS.MarineRenewables@gov.scot <MS.MarineRenewables@gov.scot>
Sent: 10 July 2018 13:10
To: MS.MarineRenewables@gov.scot
Cc: Redacted

Subject: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

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 (as amended)

MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
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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 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

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The application documentation, including the EIA Report and HRA Report can be downloaded from:

http://www.gov.scot/Topics/marine/Licensing/marine/scoping/MORLWest

If you wish to submit any representations in response to the consultation regarding the above application please ensure they are submitted to the Scottish Ministers, in writing, to moray-west.representations@gov.scot no later than **21st August 2018**. It is expected that the consultation deadline will be met by all consultees. If you are unable to meet this deadline please contact MS-LOT on receipt of this e-mail. If you have not responded by the above date, MS-LOT will assume a 'nil return'.

Marine Scotland Licensing Operations Team ("MS-LOT") will make your representations publicly available. Personal information (such as names, signatures, home and email addresses) will be redacted before the representations are made public. If you have any queries or concerns about how your personal data will be handled please visit the MS-LOT website or contact MS-LOT at MS.MarineRenewables@gov.scot.

If you have requested a hard copy of the Application and not yet received it, please contact Redacted at Moray West Offshore Wind Farm.

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

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

Yours faithfully,

Redacted

From: Redacted
Sent: 13 August 2018 10:39
To: Redacted
Cc: Redacted
Subject: RE: Moray West Application - Socio-economics Advice request

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Redacted

Good morning.

I have looked at the socio-economic impact assessment provided by Moray Offshore Windfarm (West) Limited. My comments on the assessment are below:

1. Baseline – the report provides comprehensive baseline information for a number of socioeconomic indicators for the study area, which is really welcome.

2. Impact assessment - However, the assessment has failed to follow-up to provide evidence of how these indicators will change as a result of the development. In particular, the assessment only focuses on a very small set of socioeconomic indicators, that it claims was informed by "expert judgement, reflects responses provided by statutory consultees and other stakeholders" without providing the necessary criteria that applied to arrive at these indicators. This has resulted in very limited evidence to understand, especially, the social impacts of the development, for instance in terms of (a) impact on the population in local study area (b) local labour market, (c) demand for services – education, health, etc in the O&M phases, etc. We should request that the socioeconomic impact assessment broadens the evidence provided on anticipated social impacts of the development. Otherwise, the evidence provided is too limited to form a view on the socioeconomic impact of the development.

3. Supporting evidence – the report does not provide supporting evidence for the estimates of employment and GVA impacts presented. We would have expected, for instance, the report to set out evidence on (a) expected expenditure on the development (b) assumptions for determining number of jobs (e.g. turnover per worker at different stages). Without this information, it is difficult to test the credibility of the figures provided in the report.

Overall, the evidence provided does not allow me to form a clear view on the socioeconomic impacts of the development, including if there are any actions that need to be taken to maximise positive impacts or to mitigate negative impacts.

Please let me know if you would like to discuss these.

Many thanks,

Redacted

Redacted

Cc: Redacted
Subject: Moray West Application - Socio-economics Advice request

Dear Redacte ,

I trust this email finds you well.

Please find attached a pro-forma requesting written advice on the Socio-economic impact assessment provided by Moray Offshore Windfarm (West) Limited as part of their application for construction of a generating station in the Moray Firth area.

MS-LOT would be grateful if you could provide a response by Friday, 17th August 2018.

Any further questions, or if you need more information, please do not hesitate to contact me.

Best regards,

Redacted

Marine Scotland Licensing Operations Team

Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Redacted

Redacted

w: http://www.gov.scot/marinescotland

Redacted

From: MS Marine Renewables
Sent: 16 July 2018 07:43
To: 'HIE Corporate Relations'
Cc: Redacted
Subject: RE: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

Follow Up Flag: Follow up
Flag Status: Completed

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 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

Good morning Reda cted

Many thanks for your email of 13th July 2018 confirming that Highlands and Islands Enterprise have no comment on the above consultation.

Kind regards,

Redac ted

From: Redacted
Sent: 13 July 2018 10:18
To: MS Marine Renewables; Redacted
Subject: FW: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

Dear Redact ed

I am writing to confirm receipt of your e-mail and advise that Highlands and Islands Enterprise have no comments on the Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm.

Kind regards
Reda
cted

From: MS.MarineRenewables@gov.scot [mailto:MS.MarineRenewables@gov.scot]
Sent: 10 July 2018 13:11
To: MS.MarineRenewables@gov.scot
Cc: Redacted
Subject: Application for consent under Section 36 of The Electricity Act 1989 (As Amended) - Moray West Offshore Wind Farm

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 (as amended)

MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
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 LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

On 8th June 2018 Moray Offshore Windfarm (West) Limited ("the Applicant") submitted an application to the Scottish Ministers in accordance with the above legislation to construct and operate the Moray West Offshore Wind Farm at a site approximately 22.5 km southeast of the Caithness coastline. This application is subject to an environmental impact assessment and as such the application is accompanied by an Environmental Impact Assessment Report ("EIA Report") which has been submitted by the Applicant. In addition, the Applicant has also provided an Habitats Regulations Appraisal ("HRA") Report.

The application documentation, including the EIA Report and HRA Report can be downloaded from:

http://www.gov.scot/Topics/marine/Licensing/marine/scoping/MORLWest

If you wish to submit any representations in response to the consultation regarding the above application please ensure they are submitted to the Scottish Ministers, in writing, to moray-west.representations@gov.scot no later than **21st August 2018**. It is expected that the consultation deadline will be met by all consultees. If you are unable to meet this deadline please contact MS-LOT on receipt of this e-mail. If you have not responded by the above date, MS-LOT will assume a 'nil return'.

Marine Scotland Licensing Operations Team ("MS-LOT") will make your representations publicly available. Personal information (such as names, signatures, home and email addresses) will be redacted before the representations are made public. If you have any queries or concerns about how your personal data will be handled please visit the MS-LOT website or contact MS-LOT at MS.MarineRenewables@gov.scot.

If you have requested a hard copy of the Application and not yet received it, please contact Redacted at Moray West Offshore Wind Farm.

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

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

Yours faithfully,

Redacted

Marine Scotland Licensing Operations Team

Scottish Government
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Direct Line: +44 (0)131 244 4023

Redacted

w: http://www.gov.scot/marinescotland

Redacted

From: Redacted
Sent: 20 August 2018 10:11
To: MS-LOT Moray West Representations
Subject: Moray West Offshore Windfarm EIAR - HES response
Attachments: 20180820_Moray West Offshore Windfarm EIAR_HES response.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Please see our response attached.

Kind regards

Redac
ted

Redacted Heritage Directorate Historic Environment Scotland | Arainneachd Eachdraidheil Alba Longmore House, Salisbury Place, Edinburgh, EH9 1SH
Redacted

Read our Operating Plan for 2018-2019

Redacted

From: Redacted
To: 13 November 2018 16:10 Redacted
Subject: FW: Moray Offshore Windfarm (West) Section 36 Consultation
Attachments: 18-00954-S36 Moray West.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello, please see the below email and attachment, which I just wanted to ensure came to you as the moraywest.reps email came back as undelivered.

Regards,

Redacted

Working pattern - Mon to Friday (except Thurs PM)

From: Redacted
Sent: 13 November 2018 3:52 PM
To: Redacted

Subject: Moray Offshore Windfarm (West) Section 36 Consultation

Good afternoon,

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 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

Please see attached a letter containing the Section 36 response to the above project from Moray Council.

Regards,

Redacted

Working pattern - Mon to Friday (except Thurs PM)

****
This email has been received from an external party and has been swept for the presence of computer viruses.
****

Redacted

From: Redacted
Sent: 16 August 2018 11:14
To: MS-LOT Moray West Representations
Subject: 20180816 - Moray West Offshore Wind Farm
Attachments: 20180816 - Moray West Offshore Wind Farm.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Redacted

Please find attached the MOD response to the above consultation.

Kind regards

Redacted

Defence Infrastructure Organisation

Building 49, DIO Sutton Coldfield, Kingston Road, B75 7RL

Redacted

Website: www.gov.uk/dio/ | **Twitter**: @mod_dio

Read DIO's blog: https://insidedio.blog.gov.uk/

Defence Infrastructure Organisation

Aberdeenshire
COUNCIL

Strategic Development Delivery Team
Infrastructure Services
Aberdeenshire Council
Woodhill House
Westburn Road
Aberdeen
[redacted]

15 October 2018

Marine Scotland
Licensing Operations Team
By Email

Dear Sir/Madam,

APP/2018/1730
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 And Marine And Coastal Access Act 2009 To Construct And Operate Moray West Offshore Wind Farm, Approximately 22.5 Km Southeast Of The Caithness Coastline.

Electricity Act 1989 (As Amended): The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (As Amended); The Electricity (Applications For Consent) Regulations 1990 (As Amended)

Marine (Scotland) Act 2010 And Marine And Coastal Access Act 2009: The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended); The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)

Thank you for your consultation request concerning the Moray West Offshore Wind Farm proposal, specifically those elements concerned with the offshore transmission infrastructure (OfTI).

As you will be aware, the OfTI ultimately connects into the Aberdeenshire Council administrative area at a proposed landfall. Aberdeenshire Council is currently assessing a terrestrial planning application for onshore works associated with this project. There is a degree of crossover and shared interest between the off and onshore elements of the project. The offshore EIAR has been assessed and the comments listed below reflect the key areas of interest for Aberdeenshire.

SLVIA

Three viewpoints within Aberdeenshire are identified and assessed within the EIAR, Findlater Castle (42.34km distant from wind farm site), Sandend (43.71km) and Portsoy (44.67km). It is concluded that all three viewpoints are sufficiently distant to mean that only in exceptionally clear weather conditions would the wind turbines be visible. As a result of this relatively limited visibility,

the impact is said to be non-significant. Following assessment, this is a conclusion that can be accepted and agreed upon.

Sandend village is stated as having a potential significant impact visually, owing to the likely presence of construction vessels associated with the installation of infrastructure in and around the landfall point proposed near the village. These would be short term and temporary works and while classed as significant in the EIAR, are not considered to give rise to any serious concerns.

The potential for cumulative visual impacts with other offshore wind farms is covered, with a significant impact being identified from Findlater Castle owing to a magnitude of change between the proposed Moray East and Moray West offshore wind farms and a difference in scale. The magnitude of change is stated as being "medium-low" notwithstanding the significant classification, this combined with the ultimately reversible impact and the requirement for excellent weather conditions to fully view any potential discrepancies means that there are no substantial concerns with this element, albeit it would be preferred if any proposed wind turbines could be of an appropriate scale to reduce any potential adverse impacts of this nature as far as possible.

Socio Economics

Sandend is a hub for recreation, including watersports and throughout the process Aberdeenshire Council have been keen to ensure that these recreational resources are protected.

The main recreational impact identified within the EIAR is derived from construction activities potentially disrupting the access to these sporting activities. Overall, the recreational receptors are classed as being of medium sensitivity, with surfing a prominent receptor and other sources less so. The EIAR concludes that ultimately, a non-significant impact would be experienced by surfers owing to short term (6 months) temporary impacts from the construction works. This would be similar for other recreational receptors within the area, with short term construction works providing the greatest level of disruption.

There is a degree of crossover between the offshore and onshore recreation here with many activities in the area potentially straddling both. As such, it is requested that ongoing and active dialogue and consultation be undertaken with local amenity/recreation groups in order to ensure that disruption is minimised as far as possible and that works are appropriately timed and viable mitigation implemented so to again limit the level of disruption to be experienced.

In addition to the above, economic impacts are outlined in terms of employment and contracting opportunities which are concluded as being positive. Any disruption to businesses such as the surf school is stated as being non-significant owing to the short term nature of the works. These conclusions are accepted, although it is again requested that local businesses are liaised with as far as possible to minimise disruption.

Archaeology

The submitted EIAR covers archaeology in sufficient detail. The Council's Archaeology Service are satisfied with the presented methodology and assessment. The inclusion and consideration of potential visual impacts upon assets is welcomed. The arrangement with Historic Environment Scotland with regard to a Written Scheme of Investigation being considered for other archaeology

is accepted, albeit we would request that the above is appropriately secured. There are no further comments to make from Aberdeenshire Council's perspective.

Onshore Interaction

The proposed site boundary was revised through the Pre Application Consultation process in order to remove Sanded Beach from consideration as part of the scheme. This removed some potential interaction with onshore considerations and seeks to alleviate some local concern regarding this matter.

The EIAR outlines that where practical or possible, on and offshore construction operations would be run concurrently. This aspect is welcomed and we would seek further details on timings of works to be submitted so that these can be aligned as far as possible with onshore operations in order to limit any potential disruption to the local community.

Protection of rocks and cliffs around the shoreline, where the proposed landfall may cross over between off and onshore is a key element requiring consideration. The details submitted address this sufficiently at this stage, but ongoing work and dialogue as the proposal evolves and any landfall point and method of installation becomes better defined will be necessary.

Aside from the above and ongoing management with nearshore sensitivities, it is agreed that there would be no significant crossover impacts between Aberdeenshire and the offshore application.

Natural Heritage

The submitted EIAR focusses largely on offshore ecology which is outwith the remit of Aberdeenshire Council. The intertidal survey did not highlight any issues of note, however should Horizontal Directional Drilling not be used for the installation of the landfall, further surveys of the exact landfall point would be required. Overall however, the offshore element of the project is not considered to give rise to any natural heritage concerns from Aberdeenshire Council's perspective.

Additional Matters

Alongside the above measures to assist in diluting any potential impacts at or around the proposed landfall location, consultation on details relating to the finalised cable route and associated impacts upon the community of Sandend with regard to recreation, amenity or any impacts upon the water environment in terms of physical processes or any increased risk of flooding would be appreciated. Similarly any proposed impacts upon shoreline sensitivities including offshore impacts upon the Site of Special Scientific Interest (SSSI) running along the coast should also be addressed where required.

Aberdeenshire Council note the conclusions of the Habitats Regulations Appraisal Screening Report with regard to an Appropriate Assessment on the proposals likelihood to significantly impact European designated sites. While this identifies that no adverse impacts upon any Aberdeenshire Council interests, we would still recommend that Marine Scotland fully consider this matter.

Overall, Aberdeenshire Council have no objections to the application, subject to appropriate conditions or steps taken to cover appropriate mitigation and the demonstration that there will be

no adverse noise impacts at the detailed design stage.

Please do not hesitate to contact me if you wish to discuss the above requirements or have any other queries.

Kind Regards,

[redacted]

Redacted

From: Redacted
Sent: 27 July 2018 21:37
To: MS-LOT Moray West Representations
Subject: CA-RATS-Moray West Wind Farm

Follow Up Flag: Follow up
Flag Status: Completed

Thank you for notification of document availability and Section 36 application for the Moray West wind farm.
The Cruising Association has no comments to make and wishes you well with the project

Redacted
, Cruising Association
CA House, 1 Northey Street, Limehouse Basin, London E14 8BT
Redacted

Wick Harbour Authority
Harbour Office
The Harbour
Wick
Caithness
KW1 5HA
Tel. Redacted
Fax.

Moray West – Agent
Marine Scotland
Scottish Government

Our Ref:
Your Ref:

Date: 22 November 2018

Dear Sir

MORAY WEST OFFSHORE WINDFARM – NORTH PLANNING COMMITTEE

Wick Harbour Authority noted on the BBC Highland and Island news website that Highland Council Planners have recommended that the North Planning Committee raise an objection to the Moray West Offshore Windfarm at their meeting on Tuesday 27th November 2018.

The report PLN/079/18 contains a reference to Wick Harbour at para 9.38 with an inference that there is insufficient capacity at the port. It would have been helpful if Highland Council had consulted with Wick Harbour Authority before including this statement in such an important document. Wick Harbour Authority is currently progressing with our plans to develop our outer harbour area, which will effectively double our safe mooring capacity.

Could the Planning Department please include us as a statutory consultee for any future developments close to the port.

Our current contacts with the offshore windfarm industry suggest that the Highland region will obtain a large socio-economic benefit from these developments on our doorstep.

We fully support the Moray West Offshore Windfarm Development and the potential for local job creation . We believe that an objection would not be helpful at this time.

Yours sincerely
Redacted

Redacted

The Highland Council
Comhairle na Gàidhealtachd

Moray Offshore Windfarm (West) Limited
c/o Marine Scotland
Marine Scotland Licensing Operations Team
375 Victoria Road
Aberdeen
AB11 9DB

Please ask for: Redacted

Your Ref:

Date: 19 July 2018

Dear Sir/Madam

PLANNING REFERENCE: 18/03309/S36
DEVELOPMENT: INSTALLATION OF 85 WIND TURBINES WITH A MAXIMUM HEIGHT TO TIP OF 285M, ROTOR DIAMETER OF 250M
LOCATION: AT MORAY WEST OFFSHORE WIND FARM

Thank you for your application received on 10 July 2018. It has been checked but unfortunately it is lacking in sufficient information to be validated.

The Highland Council provides guidance on the details and information required to ensure an application is valid and this may be viewed online: https://www.highland.gov.uk/info/180/planning__applications_warrants_and_certificates/143/planning_permission/2. In this instance the following details are required:

Please provide generating capacity of wind turbines.

If a fee has been requested which you have recently paid, please disregard the fee request. Please note that the Council no longer accepts cheques or cash payments for Planning and Building Warrant fees and other charges. Payment should be made either by telephone (credit and debit card) on Redacted (Monday – Friday, 0800 – 1700). You may also pay in person at any Service Point, by BACS or by using the Pay button facility on The Highland Council website homepage.

Occasionally it is necessary to amend the description of your proposal in order to ensure that it is accurate and concise. It is intended to use the description as noted above. Please contact the case officer within 7 days of the date of this letter if you do not agree with the application description.

Please submit any additional or follow up information via the ePlanning.scot portal at https://www.eplanning.scot using the Post Submission Additional Documents online form. Please note that the application you are linking the additional information to should be the reference number at the top right corner of this letter. Please do not use your online reference number from the portal unless you are unable to provide the Planning reference above.

Please ensure that all additional and amended plans are annotated with the correct drawing number, the up-to-date drawing revision number where appropriate and the date of the amendment. Failure to provide this information may result in a delay in processing the application.

Once the additional information requested has been received, your application will be made valid and passed to a case officer for consideration. If the information is not however received within 28 days of this letter, the application file will be closed and any fee submitted will be returned to you.

Yours faithfully

Redacted

Redacted

Redacted

From: Redacted
Sent: 30 August 2018 17:28
To: MS-LOT Moray West Representations
Subject: Moray West Offshore Wind Farm and Offshore Transmission Infrastructure Application

Follow Up Flag: Follow up
Flag Status: Completed

ELECTRICITY ACT 1989 (As Amended)
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)
The Electricity (Applications For Consent) Regulations 1990 (as amended)

MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
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 LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

Thank you for the above consultation to **sport**scotland.

I note that the application is for planning permission in principle in relation to the onshore element of the proposal. In relation to the offshore and landfall location the applicant should be aware that the area will be used by a range of sports and detailed consultation should be undertaken with them in order to ensure that there is no unacceptable impact on them.

In particular, we are aware that the area at Redhythe Point is a popular climbing venue and in use by a range of climbing interests. We understand that Mountaineering Scotland have made a submission in relation to the application. We would be supportive of their involvement as the development progresses to ensure the landfall area accommodates this use.

We would also suggest that the developer makes contact with the various sports governing bodies for outdoor and adventure sports. From reading the EIA it doesn't appear that this has been done. We recommend this in order to understand what sport uses are happening in the area and how any effects on them can be mitigated. You can find information on them all and their contact details here.

I trust this is satisfactory and if you need anything additional in relation to this please let me know.

Thanks, Lorraine

Redacted

t: Redacted
w: www.sportscotland.org.uk

Follow us on twitter and facebook

Nominations for the **sport**scotland Coaching, Officiating and Volunteering Awards are now open – nominate by Friday 7 September

sportscotland – **the national agency for sport**
spÃ²rsalba - am buidheann nÃ iseanta airson spÃ²rs

Awarding funds from The National Lottery

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

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

Your Ref:

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

Date: 7th September 2018

By email only: ms.marinerenewables@gov.scot

Dear Sir / Madam,

MORAY WEST OFFSHORE WIND FARM

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 10th July 2018 for the Moray West Offshore Wind Farm (hereafter referred to as Moray West).

This application is based on a design envelope consisting of a maximum of 85 turbines up 285m tall, two offshore substation platforms and two export cables coming ashore at a landfall point between Cullen and Portsoy on the Aberdeenshire coast. 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[1]. We provide advice in the spirit of Scotland's National Marine Plan[2] which balances the promotion of sustainable development of offshore wind whilst protecting our biodiversity and taking account of seascapes, landscapes and visual impacts.

We recognise and welcome the very significant contribution that this development would make to mitigating climate change.

Our advice considers Moray West on its own merits as well as taking account of cumulative and in combination effects with other projects, particularly the Beatrice offshore wind farm (under construction) and Moray East offshore wind farm (construction commencing in 2019). In our assessment of the landscape and visual impacts, we also raise cumulative capacity issues with onshore wind farms.

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

[1] Scottish Government Energy Strategy 2017: https://www.gov.scot/Publications/2017/12/5661/3
[2] https://www.gov.scot/Publications/2015/03/6517

KEY ADVICE

Natura

We have reviewed the Environmental Impact Assessment (EIA) Report, Habitats Regulations Appraisal (HRA) Report, and undertaken a preliminary appraisal of the updated Population Viability Assessment (PVA) reports. In our view, **this proposal will have an adverse effect on the site integrity for kittiwake as a qualifying interest of the East and North Caithness Cliffs SPAs in combination** with the Moray East and Beatrice offshore wind farms. Therefore, **we object to the proposal**. The key impact is collision risk.

For Moray West on its own we have **insufficient information to conclude no adverse effect on site integrity for kittiwake as a qualifying interest of the East Caithness Cliffs SPAs**. This is due to our uncertainty with the impact assessment methodology, in particular not presenting modelled outputs for combined mortality from collision risk and displacement.

For Moray West in combination with other wind farm projects we have **insufficient information to conclude no adverse effect on site integrity for common guillemot and razorbill of the East Caithness Cliffs SPA**. This is due to our uncertainty issues with the impact assessment methodology, in particular how displacement has been calculated.

Great black-backed gull is not included in the HRA. Therefore, we have **insufficient information to reach a conclusion for great black-backed gull as a qualifying feature of East Caithness Cliffs SPA**.

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

Seascape, landscape and visual impacts

The extensive cumulative scale of Moray West in addition to Beatrice and Moray East offshore wind farms contributes to widespread significant adverse effects on sensitive landscape, seascape and visual receptors, and in particular on the distinctive landscape character of the East Sutherland Coast.

Moray West cumulatively with Beatrice will introduce extensive and significant adverse effects on landscape, seascape and visual receptors almost continuously along a substantial 60km length of coastline in east Sutherland, including both daytime and night-time impacts. The open waters of the Moray Firth are a key characteristic of the landscape and coastal character of East Sutherland Coast. The extensive scale of the development running parallel to the East Sutherland Coast will cause the loss of views to open waters from most of this coast.

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 level of impacts will arise during the construction phase of the development. Any potential impacts, however, can be mitigated through conditions on any consent / license. We provide our detailed advice on these receptors in **Appendix C** - SNH advice on marine mammals.

In **Appendix D** we provide additional advice on the underwater noise modelling and use of the 0.5% conversion factor. We advise that the noise modelling for Moray West is not required to be repeated with a 1% conversion factor.

We have also considered other natural heritage receptors such as diadromous fish species, marine fish and shellfish as well as benthic ecology and physical processes – **Appendix E**. We advise that any potential impacts can be mitigated through conditions on any consent.

If Marine Scotland is minded to recommend approval of this application to Scottish Ministers, we request the opportunity to provide further advice on natural heritage aspects of the conditions. We wish to provide advice to mitigate impacts to natural heritage interests, particularly with regard to the need for a 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 Redacted in the first instance.

Yours sincerely

Redacted

APPENDIX A

SNH ADVICE ON ORNITHOLOGY

Summary of key effects

Our assessment, based on the information in the EIA Report, HRA Report, a preliminary appraisal of the updated PVA reports, and on the worst case scenario, has concluded:

- **An adverse impact on site integrity for kittiwake as a qualifying interest of the East Caithness Cliffs SPA** from Moray West **in combination** with the Moray East and Beatrice offshore wind farms. The key impact is collision risk. There may also be an issue with the combined impact of collision and displacement, but we have been unable to fully assess this due to our inability to follow the process undertaken by the developer.

- **An adverse impact on site integrity for kittiwake as a qualifying interest of the North Caithness Cliffs SPA** from Moray West **in combination** with the Moray East and Beatrice offshore wind farms. The key impact is collision risk. There may also be an issue with the combined impact of collision and displacement, but we have been unable to fully assess this due to our inability to follow the process undertaken by the developer.

- For Moray West on its own **we are unable to conclude no adverse effect on site integrity for kittiwake as a qualifying interest of East Caithness Cliffs SPAs.** This is due to potential issues with the impact assessment methodology, in particular how the PVA was undertaken.

- For Moray West in combination with the other wind farm proposals **we are unable to conclude no adverse effect on site integrity for common guillemot and razorbill as qualifying interests of the East Caithness Cliffs SPA.** This is due to potential issues with the impact assessment methodology, in particular how displacement has been calculated.

- For Moray West on its own and in combination with other wind farm proposals **we conclude no adverse effect on the site integrity of any classified SPAs** with respect to the following qualifying interests:

    - East Caithness Cliffs SPA – fulmar and herring gull.
    - North Caithness Cliffs SPA – common guillemot, razorbill, puffin, fulmar.
    - Buchan Ness to Collieston Coast – herring gull, common guillemot, fulmar.
    - Troup, Pennan and Lion's Head SPA – herring gull, kittiwake, common guillemot, razorbill, fulmar.

- For Moray West alone and in combination **we conclude no adverse effect on the site integrity for all of the qualifying interests of the Moray Firth pSPA**.

- **Great black-backed gull is not included in the HRA, therefore we have insufficient information to reach a conclusion for this species as a qualifying interest of East Caithness Cliffs SPA**.

Impact Assessment Methodology

We have reviewed the EIA and HRA Reports taking into account the advice contained in the Scoping Opinion and pre-application discussions. We wish to provide the following general comments, before providing more detailed comments on various aspects of the assessment work.

We recognise the importance of pre-application discussions. Our aim in this engagement is to provide advice on data collection for site characterisation, appropriate impact assessment methodologies, and help to reduce the impacts to natural heritage interests. When considering offshore wind applications, there have been multiple changes and updates to standard impact assessment methodologies, as well as the introduction of both new impact methods and the review of post consent monitoring results. All of this is occurring whilst there is very limited operational offshore wind experience in Scottish waters.

With this application, a large part of the detailed pre-application discussions concentrated on the deviation at the choice of the developer from the standard two year collection of baseline data for calculating bird densities and behaviour. This then resulted, due to the developer's timescales, in little or no time to discuss and agree the detail of the impact assessments to be taken forward and reported on in the EIA / HRA Reports.

Below, we provide detailed advice on aspects of the impact assessment process we have found to be unclear. This lack of clarity has arisen due to a lack of detailed information provided in the EIA / HRA Reports, difficulties in understanding how the assessment was undertaken, and deviations from recommended approaches used without clear explanation. We provide a number of detailed points below. We would welcome the opportunity to discuss with Marine Scotland how / if these could be addressed, and if this might alter our advice as well as whether there are implications for the assessment of other projects.

Detailed advice

1. In addition to not reaching an agreement about the suitable baseline values to take forward to impact assessment prior to submission, insufficient information has been provided to assess the validity of the values used. Notably the absence of Technical Appendix 10.1 - Annex 10.1A: Baseline Data Decision Support Flow Charts, but also the absence of clear explanations and justifications for the values taken forward. We requested this in pre-application meetings with Moray West, as noted in the minutes of the meeting held on the 13 April 2018. As a result, we have no certainty over the validity of the values underpinning the impact assessment process, which impacts our ability to be confident in the level of impact being predicted.

2. The PVA models, although following appropriate methods, calculate impacts of the proposed wind farm in 50 bird death increments. This seems to be based on theoretical scales of impact rather than being informed by the impact values predicted by displacement and collision risk modelling. As a result, the scale of impact is only broadly suitable for assessing the in combination impacts on kittiwakes from East and North Caithness Cliffs SPAs, but not for kittiwake alone or other species with lower mortality figures. This has prevented us from being able to fully assess population level impacts for these species.

3. The HRA Report to Inform Appropriate Assessment is inconsistent in the way it presents impacts for each species (with some information absent), and the document does not present the relevant information together in an accessible way. This has made the HRA report challenging to follow and assessment of impacts difficult.

Collision risk

4. At a high level, the approach to collision risk modelling (CRM) is consistent with that requested in the scoping advice and pre-application discussions. However, certain details of how the modelling has been undertaken are unclear which has led to problems being able to fully quantify species-specific impacts.

5. Moray West has used different species-specific flight speed parameters (from the ORJIP Thanet project) to those usually recommended for CRM. Although no agreement was reached in pre-application discussions about whether these flight speeds are appropriate, we are content for these updated flight speeds to be used in the CRM. This is based on the very low sample sizes (n=2-32) used to inform the recommended flight speeds (which until now have represented the best available evidence), compared to the sample sizes used to inform the more recent flight speed estimates (n=287-790). Moray West has also presented the outputs of CRM using the originally recommended flight speeds to enable comparison.

6. Moray West presents collision risk calculated using the SNCB recommended avoidance rates (ARs), in addition to estimates using a variety of other ARs. Our advice is based on outputs calculated using the agreed SNCB AR recommendations.

7. Our advice is not based on the collision outputs from Option 1 Band models, but if considered in the future it should be borne in mind that boat based survey data flight height bands do not accord with the size of the proposed turbines. This will lead to over/underestimation of collisions.

8. A correction factor has been applied to collision estimates from all developments included in the in combination assessment that intends to take account of changes in nocturnal factors applied in collision risk modeling. This is a novel approach that was not discussed or agreed prior to submission. The correction factor will act to reduce in combination collision impacts.

9. Although there are inconsistencies across documents regarding the minimum blade tip height above Highest Astronomical Tide (HAT) (between 22m and 35m), parameters given in Table 3.4 in Appendix 10.2 indicate 35m above HAT is used in CRM.

10. Standard deviations around ARs do not seem to be presented. This is contrary to agreed SNCB guidance on avoidance rates and prevents us from fully understanding the range of potential mortality resulting from collisions.

11. Non-breeding season assessments have not been calculated in an agreed way. Cumulative collision risk has been calculated for kittiwake and gannet during post-breeding and pre-breeding periods rather than as a non-breeding season total. Pre-application discussions about impact assessment methods, as advised in our scoping opinion, would have enabled us to advise Moray West on how to appropriately undertake this part of the assessment. During autumn 2017, we produced an illustrative example for Marine Scotland to assist developers in undertaking cumulative non-breeding season assessments. The current assessment does not allow us to fully quantify cumulative collision risk.

Displacement

12. As the Marine Scotland tool was not available a matrix approach has been applied. The displacement assessment broadly follows SNCB displacement guidance and provides estimates for a range of mortality and displacement rates.

13. Our advice is based on displacement rates of 60% for the auk species and 30% for kittiwake, and mortality rates of 2% for puffin and kittiwake, and 1% for guillemot and razorbill (for both adults and immatures).

14. Seasonal mean peak population estimates, including both birds on the water and in flight, have been used in the impact assessment for displacement as recommended to Marine Scotland. Population estimates have been derived from the 'decision support system' for guillemot, razorbill, puffin and kittiwake, and taken directly from the single year of aerial survey data for fulmar (Section 10.5.4.18, Chapter 10, EIA Report). It is not clear why a different approach has been taken for fulmar.

15. The breeding season definitions Moray West has used in the displacement analysis (and collision risk analysis) do not follow SNH recommended seasonal definitions. SNH has previously provided guidance to Marine Scotland on how to incorporate half months into impact assessment. The use of different seasonal definitions will reduce breeding season predicted impacts for the auk species and fulmar, and increase the impacts for kittiwake.

16. Displacement impact assessment provides population estimates for the Moray West site + 2km buffer, but does not include estimates for the Moray West site alone, as is recommended in the SNCB displacement guidance.

17. Count adjustments and corrections for survey coverage and availability bias are not fully documented, as recommended in the SNCB displacement guidance. This prevents us from assessing how the data have been processed prior to input into impact assessment.

18. SNCB displacement guidance advises that breeding season assessment should be undertaken against appropriate regional populations agreed with SNCBs but likely to cover total colony counts within mean max foraging range of the development. It is not clear what regional population Moray West has used when calculating breeding season impacts (by comparing the predicted displacement mortality to the 1% baseline mortality of the regional population). The tables in Technical Appendix 10.3 provide a breeding season regional population figure but this is labeled as a regional BDMPS figure. BDMPS is a non-breeding season tool. As it isn't clear how the breeding season regional populations have been generated, we cannot assess whether displacement impacts have been compared against the appropriate regional population. This will affect whether an impact is deemed significant or not, and whether that impact should be taken through to PVA or considered in the HRA. For example, the regional breeding population for puffin is cited as 119,600 birds (Table 4.5, Technical Appendix 10.3, and Sections 10.7.2 and 10.8.4, Chapter 10 EIA Report), whereas the North Caithness Cliffs SPA population of puffin within mean max foraging range of Moray West comprises 3,053 individuals (most recent counts). As such, the population values Moray West has used appear to underestimate the impacts of displacement on connected populations.

Apportioning of impacts to SPA populations

19. In the absence of the Marine Scotland apportioning tool being available, Moray West has broadly followed SNH apportioning guidance.

20. Despite Section 3.1.1, Appendix 4.4 of the HRA Report describing that a two-stage apportioning process was followed, it is not clear that recommendations for Stage 2 of process have been followed. HRA Appendix 4.4 Section 7, suggests that Stage 2 apportioning between SPAs has been undertaken using Seabird 2000 data rather than the most recent colony counts provided by SNH (in the Annex of the Moray West memo to Marine Scotland dated 18th December 2017). From a rough comparison of

weightings calculated using both colony counts for kittiwake, there does not seem to be much difference between the two values. However, the counts used could lead to over/underestimates of bird mortality figures attributed to each SPA.

21. SPAs considered in apportioning appear to have been included in HRA based on a mix of mean max and mean max ± 1 SD foraging ranges as reported in Thaxter et al 2012 (See Section 3.1.1, Appendix 4.4 of the HRA Report). Mean max ± 1 SD has been used to ensure kittiwake and razorbill from North Caithness Cliffs SPA are considered. Although SNH usually recommends mean max ± 1 SD, using mean max foraging ranges for the other species should not alter the species and SPAs considered.

22. Colony weighting has been calculated using Seabird 2000 data in accordance with SNH guidance and using the recommended colony counts provided for kittiwake and herring gull (Annex of the Moray West memo to Marine Scotland dated 18th December 2017). However, Seabird 2000 colony counts for guillemot, razorbill and puffin do not match the recommended values provided by SNH. It is not clear which colony counts have been used in the apportioning process or why discrepancies between the figures occur. This could be related issues recently highlighted regarding the use of a 1.34 correction factor for auks but this is not clear from the information provided.

23. Sabbatical birds are taken into account in the apportioning process, using agreed rates advised for the most recent Forth and Tay offshore wind farm applications. These rates are appropriate for the Moray West application, although there is no established agreed position on how best to account for sabbatical birds in impact assessment.

24. A novel method has been used to apportion impacts between age classes for kittiwake, which was not previously discussed or agreed with SNH (HRA Report, Appendix 4.4, Section 5). It draws on an approach developed for the Hornsea II wind farm. The approach uses age-specific survival rates to calculate the proportion of different age-classes likely to be present at the Moray West site rather than using site specific or agreed proportions. This could increase or decrease the impacts attributed to SPA populations.

25. Collision mortality is apportioned to adult birds during the apportioning to SPA stage (Section 6.8, HRA Report e.g. Table 6.8.4). Apportioning to adult birds should not be done at this stage as the apportioned mortality figure is then used in PVA modeling. PVAs allocate impact mortality across all age-classes through applied survival rates. By removing immature birds at the apportioning stage, only the impact on adults is distributed across all age classes in the models (including immatures), which will underestimate the population impact on adult birds. Although the effect of this error may be small at an individual SPA level (e.g. 58 instead of 61 birds deaths attributed to East Caithness Cliffs SPA for kittiwake for Moray West alone) it is not fully known what effect this could have on in combination impacts if the same process has been followed when calculating mortality for other developments.

Population Viability Analysis Methods

26. The population models used for the PVA are described as stochastic, density Independent, age-structured Leslie matrix models. The models use matched runs between impacted and unimpacted scenarios. These models are in accordance with currently recommended methods to estimate population impacts.

27. Population models give outputs for 35 year and 50 year timespans. Models for at least one species are optimistic about the trajectories of the populations involved (kittiwake), although counterfactual/ratio outputs should be robust to this. When calculating population growth rates, the first five years of simulations are discarded, as per

scoping recommendations, to remove the influence of starting conditions. The use of 35 years rather than 25 years prevents the comparison of impacts with other developments that have routinely used a 25 year runtime.

28. Stochasticity is introduced to the population model by sampling from appropriate probability distributions for demographic rates.

29. Model parameters are derived from Horswill and Robinson (2016), as advised in our Scoping Opinion response - except for maximum number of eggs per pair, which is taken from Snow and Perrins (1998). Mean ± SD of clutch size would have been preferred rather than a maximum clutch size, with sampled rates taken from within this distribution to reflect observed variation in clutch size.

30. PVA models appear to be based on theoretical impact levels rather than informed by predicted mortality figures, with the model outputs presented in increments of 50 bird deaths. For most species, these thresholds are uninformative as impact levels are lower. The increments used are of some use for kittiwake as the scale of estimated impact is similar to the increments presented, although it would still be useful to present population impact increments below 50 bird deaths, particularly in the case of impacts on kittiwake from Moray West alone.

31. Mortality is applied within the model immediately following chick fledging. This should result in a slightly less precautionary output than if mortality were applied at the beginning of the breeding season, as all breeding birds in the population are allowed to breed before collision/displacement mortality is applied, despite collisions occurring during the breeding season and removing some of these individuals. This should not have a large impact on the population modelling results, but is worth bearing in mind when considering the outputs.

32. Stable age structure models were used to compile age classes. Stable age structure models tend to allocate a greater proportion of non-breeding age birds to populations than is usually observed in near-shore developments sites like Moray West. This can lead to a lower impact modelled for adults, as impacts are allocated equally among adult and non-breeding age birds equally. This effect in the modelling process is greater during the breeding season, when adults are central place foragers, than during the non-breeding season, when birds of all ages tend to be more dispersed.

33. Combined impacts from collision and displacement have not been modelled for kittiwake. If combined then the level of impact increases.

Habitat Regulations Assessment

34. The impacts are not presented for all species and site combinations where it was considered that likely significant effect would exist, and as was requested in the scoping advice and subsequent advice provided to Marine Scotland on 18th December 2017.

35. Connectivity of SPAs with the development site is based on Thaxter *et al* (2012) foraging ranges that largely follow SNH recommendations.

36. HRA has been undertaken for collision risk for:

Species	**SPA**
Herring gull	• Buchan Ness to Collieston Coast SPA • East Caithness Cliffs SPA • Troup, Pennan and Lion's Head SPA
Kittiwake	• East Caithness Cliffs SPA • North Caithness Cliffs SPA • Troup, Pennan and Lion's Head SPA

HRA has been undertaken for displacement risk for:

Species	**SPA**
Guillemot	• Buchnan Ness to Collieston Coast SPA • East Caithness Cliffs SPA • North Caithness Cliffs SPA • Troup, Pennan and Lion's Head SPA
Razorbill	• East Caithness Cliffs SPA • North Caithness Cliffs SPA • Troup, Pennan and Lion's Head SPA
Puffin	• North Caithness Cliffs SPA
Kittiwake	• East Caithness Cliffs SPA • North Caithness Cliffs SPA • Troup, Pennan and Lion's Head SPA
Fulmar	• Buchnan Ness to Collieston Coast SPA • East Caithness Cliffs SPA • North Caithness Cliffs SPA • Troup, Pennan and Lion's Head SPA

37. The tables in Section 6.8 of the HRA Report that present disturbance/displacement impacts at each of the SPAs for the relevant species are difficult to understand. It is not clear where the figures presented originate from. As such, they may be affected by issues outlined in the displacement section above, which have made it difficult to come to a conclusion about the significance of displacement effects.

38. Great black-backed gull as a qualifying interest of East Caithness Cliffs SPA was not taken through to HRA despite scoping advice to do so. Breeding season collision estimations indicate an increase in baseline mortality for great black-backed gull of

over 20% (Table 10.7.10, Chapter 10 EIA Report). Potential impacts of this level warrant this species inclusion in HRA.

39. Moray West's reasons for not taking this species through to HRA are attributed to 1) results of tracking from East Caithness Cliffs SPA suggesting great black-backed gulls from that colony remain near the coast and do not enter the Moray West site, 2) the inclusion of immature and non-breeding (sabbatical) birds observed in the Moray West site in collision risk modelling population figures where only breeding pairs are considered in the colony counts against which the collision estimates are compared, and 3) that 70% of breeding season collisions occur in August when it is suggested a significant proportion of individuals in the region will be immature or passage birds (Section 10.7.2.130, Chapter 10 EIA report).

40. PVA modelling results indicate the population trajectory for great black-backed gull drops to extinction almost immediately following impact (extinct by first increment of 50 bird deaths). Collision risk mortality indicates 9-10 birds killed per annum but PVA modelling output presentation does not allow assessment of this lower level impact on the population. More detailed assessment for this species is required to establish impacts on the SPA population.

Conclusion

Impacts on populations

41. Impacts resulting in likely significant effect on qualifying interests are generally at the in combination level and at East and North Caithness Cliffs SPAs; the exception being kittiwake collision mortality at East Caithness Cliffs SPA, which is also likely significant effect for Moray West alone.

42. PVA for **kittiwake collision** at **East Caithness Cliffs SPA** modelled with impacts from Moray West **alone** suggest a population size after **35 years** of **96%** the unimpacted population. For **50 years** the population is predicted to be **94%** the unimpacted population. This has been calculated based on 50 bird deaths whereas the actual collision mortality figure for kittiwake alone at East Caithness Cliffs SPA is 58 birds. This will result in a slight increase in the population level impacts, although it is not possible to establish how much of an increase owing to the way the data has been presented in 50 bird death increments. Considering this assessment is based on collision alone (i.e. without combining impacts from displacement), then **we conclude insufficient information to ascertain no adverse effect on site integrity for kittiwake as a qualifying interest of East Caithness Cliffs SPA.**

43. PVA for **kittiwake collision** at **East Caithness Cliffs SPA** modelled with impacts from Moray West **in combination** with Moray East and Beatrice suggest a population size after **35 years** of **75%** the unimpacted population. For **50 years** the population is predicted to be **65%** the unimpacted population. We conclude that **Moray West in combination impacts for kittiwake collision will lead to an adverse effect on site integrity at the East Caithness Cliffs SPA.** This has been calculated based on 350 bird deaths whereas the actual in combination collision mortality figure for kittiwake at East Caithness Cliffs SPA is 325 birds. This will result in a slight decrease in the population level impacts, although it is not possible to establish how much of a decrease owing to the way the data has been presented in 50 bird death increments. If collision and displacement were combined, then the level of impact is likely to increase.

44. PVA for **kittiwake collision** at **North Caithness Cliffs SPA** modelled with impacts from Moray West **in combination** with Moray East and Beatrice suggest a population size after **35 years** of **83%** the unimpacted population. For **50 years** the population is

predicted to be **77%** the unimpacted population. We conclude that **Moray West in combination impacts for kittiwake collision will lead to an adverse effect on site integrity at the North Caithness Cliffs SPA**. This has been calculated on 50 bird deaths whereas the actual in combination collision mortality figure for kittiwake at North Caithness Cliffs SPA is 49. This should not change the population level impacts. If collision and displacement were combined, then the level of impact is likely to increase.

45. PVA for **guillemot displacement** at **East Caithness Cliffs SPA** modelled with impacts from Moray West **in combination** suggest a population size after **35 years** of **96%** the unimpacted population. For **50 years** the population is predicted to be **95%** the unimpacted population. Guillemot populations at East Caithness Cliffs SPA have increased since 1977 but have shown a decline of 6% since 1999[3]. Due to concerns about how displacement impacts have been calculated **we have insufficient information to ascertain no adverse effect on site integrity for common guillemot as qualifying interest of the East Caithness Cliffs SPA.**

46. PVA for **razorbill displacement** at **East Caithness Cliffs SPA** modelled with impacts from Moray West **in combination** suggest a population size after **35 years** of **95%** the unimpacted population. For **50 years** the population is predicted to be **93%** the unimpacted population. Razorbill populations at East Caithness Cliffs SPA have been increasing since 1977[1]. Due to concerns about how displacement impacts have been calculated **we have insufficient information to ascertain no adverse effect on site integrity for razorbill as qualifying interest of the East Caithness Cliffs SPA.**

Moray Firth pSPA

47. Overlap with the Moray Firth pSPA occurs with the proposed cable corridor. Distribution maps indicate that this area is within or adjacent to max curvature boundaries for non-breeding divers (red-throated and great northern combined), common eider and European shag. The key potential impacts during construction are disturbance due to vessel movements and loss of supporting habitat along the cable route. Considering any disturbance during construction will be temporary in nature, and the loss of habitat along the cable route is small/reversible, **we conclude no adverse effect to the site integrity for all the qualifying interests for the Moray Firth pSPA.** We advise that mitigation to minimise further any potential impacts should be detailed in the any post consent plans, such as the Vessel Management Plan, Cable Management Plan, and the cable routing study.

Other Species

Special Protection Areas – qualifying interests

48. Great black-backed gull is not included in the HRA, therefore we have insufficient information to reach a conclusion for this species.

49. 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 Moray West on its own or from in-combination effects with other projects**.

[3] Swann, B. 2016. Seabird counts at East Caithness Cliffs SPA for marine renewable casework. Scottish Natural Heritage Commissioned Report No. 902.

Non SPA colonies

50. Similarly, for all species other than those we provide advice on above, we advise that there will be no major significant adverse impacts to species at breeding colonies, including gannets at Gamrie and Pennan Coast SSSI.

APPENDIX B

SNH ADVICE ON SEASCAPE, LANDSCAPE AND VISUAL IMPACTS

Summary

1. There are two key issues identified relating to the extensive cumulative scale of Moray West in addition to Beatrice and Moray East offshore wind farms. Cumulatively these developments contribute to widespread levels of significant adverse effects on sensitive landscape, seascape and visual receptors, and furthermore on the distinctive landscape character of the East Sutherland Coast.

2. It is considered that this level of effect on sensitive landscape, coastal and visual receptors, and distinctive landscape character which contributes to Scotland's national landscape resource raises issues of national interest for SNH.

3. Moray West in addition to Beatrice will introduce extensive and significant adverse effects on landscape, seascape and visual receptors almost continuously along a substantial 60km length of coastline in east Sutherland, including both daytime and night-time impacts.

4. The substantial extent of significant effects arising with the addition of Moray West will be introduced into the open waters of the Moray Firth, which are a key characteristic of the landscape and coastal character of East Sutherland Coast. The extensive scale of the development running parallel to the East Sutherland Coast will entail that for most of this coast the views to open waters will be lost.

5. There is a national interest in safeguarding and enhancing the distinctive character and diversity of Scotland's landscapes at the regional scale. Our aim is to ensure that Scotland's landscapes retain their distinctive regional character and features that contribute to national identity and our sense of place. Moray West is a very large proposal with extensive and significant impacts on landscape character and it will significantly erode the distinctive characteristics of the East Sutherland landscape.

Onshore / Offshore Capacity and Planning for Wind Development

6. This application has highlighted an issue with regard to the joint consideration of landscape / coastal character impacts (see paragraphs 37 & 38 below) and the need for a more holistic consideration of the siting of both onshore and offshore developments. We are unclear on how best to take this conversation forward, but would welcome further discussion with both Marine Scotland and Energy Consents Unit on this issue.

EIA Report
Project scenarios

7. Following on from design development through the Rochdale Envelope approach, 4 development scenarios have been taken forward for consideration in the EIA Report (Chapter 14 14.6.1.19 and Volume 3a – Figures 14.6.1).

    a. Model 2 – 85 turbines of up to 230m blade tip height
    b. Model 3 – 72 turbines of up to 265m blade tip height
    c. Model 4a – 41 turbines of up to 285m blade tip height
    d. Model 4f – 62 turbines of up to 285m blade tip height.

8. Of these the realistic worse-case scenario (RWCS) is Model 4f – 62 turbines of up to 285m blade tip height, which has the greatest number of the tallest turbines. However

for the night-time assessment, the photomontages have been modelled using Model 2, as it has the greatest number of turbines and therefore the greatest number of lights.

9. In appraising these scenarios in terms of potential mitigation, all of them extend out to the full site boundary. As such the horizontal extent of the development does not change. Moray West is further offshore than Beatrice at 22km distance. However due to the larger turbines assessed as the RWCS for Moray West (in comparison to Beatrice) from many views they will actually appear the same size or even larger than Beatrice, and so they contribute to a similar or greater impact. This aspect of the development therefore could be mitigated by the smaller turbines suggested for Model 2 in the scenarios improving the cumulative relationship between Moray West and Beatrice in several views. Furthermore reducing turbine height would also reduce the extent of turbines visible in views from locations such as Brora, Tarbet Ness and the Moray/Aberdeenshire coasts.

Understanding the scale of Moray West and the significance of effect

10. With the addition of Moray West to the landscape baseline, there will be a substantial 'step change' in the extent of significant effects arising on landscape and visual receptors in the Moray Firth.

11. There are 3 main factors which contribute to the level of significant effects arising, these being:

    a. The larger scale of the development.
    b. The orientation of the development with regard to the coastline.
    c. Sensitivity of the receiving environment (assessed in the EIA Report as Medium to High for the majority of receptors and in this advice discussed in relation to the East Sutherland Coast).

12. For all scenarios the Moray West layout is 30km in length and 10km in depth, orientated northeast to southwest. At its closest point the development sits 22km off shore (equivalent to 12nm extent of Scottish Terrestrial Waters).

13. Cumulatively and partially overlapping with the 15km length of Beatrice, (now under construction) the development would contribute to an overall wind farm 45km in length.

14. The straight line length of the East Sutherland Coastline (see point 27 for definition) runs approximately 70km from the northern shore of Loch Fleet to Sarclet. The distance by road along the A9 and A99 is collectively 85km. So for almost half this route through this area, large scale wind turbines will run in parallel to the coast and be prominent in views.

15. As such, whilst wind energy development, and in particular terrestrial wind development, is increasingly familiar in some of our landscapes, the extent of Moray West both individually and cumulatively, creates a uniform continuous array of turbines of a scale unprecedented in Scotland.

16. In contrast to terrestrial development, the Beatrice/Moray West (and Moray East) grouping is viewed at distances of a minimum of 13km to 22km within a wider seascape, which can accommodate a larger scale of wind development. However, the orientation of the development running parallel to the populated and accessible coastline entails that typically the full or a significant proportion of this 45km length wind development will be viewed by many receptors for a considerable period of time, travelling both north and south along the coast (on known tourist routes which contribute to the popular North Coast 500).

Landscape, Seascape and Visual Impact

17. Broadly speaking we agree with the nature, extent and level of significant impacts identified by the applicant within the EIA Report. As such the detailed assessment of landscape, seascape and visual effects contained within this Report, has been used as a basis to inform this advice.

18. In summary the Moray West EIA Report Chapter 14 identifies the following significant effects on sensitive receptors:

Impacts on Landscape and coastal character

19. Significant adverse effects were identified for the following landscape character types (LCTs):

    a. *Small Farms and Crofts* LCT between Sarclet Head and Berridale;
    b. *Moorland Slopes and Hills* LCT in the vicinity of east facing slopes at Badbea and Cnoc na Croiche;
    c. *Coastal High Cliffs and Bays* LCT

20. Reflecting the impacts on landscape character, significant adverse effects were identified on the following coastal character areas (CCAs):

    a. *Sarclet Head* CCA (from Sarclet Head south);
    b. *Lybster Bay* CCA
    c. *Dunbeath Bay* CCA
    d. *Helmsdale to Berridale Coastal Shelf* CCA (to the north east of Helmsdale)

21. Contrary to the EIA Report we consider that the *Coastal Shelf* LCTs of high sensitivity (its classification is rare in a highland context[4]) and as such we appraise that there would be significant effects on this LCT and where it contributes to the coastal character of the *Brora to Helmsdale Deposition Coast* CCA.

Impacts on Visual Receptors

22. As part of the EIA Report, 24 representative viewpoints were used to assess the development (4 viewpoints had both daytime and night-time photomontages produced). Below is a summary of the key points of impacts on visual receptors:

    a. Of the 24 viewpoints, significant adverse effects were identified for 10 locations, representing potential visual impacts from Wick extending southwards to Navidale, a 50 km length of coastline.

    b. Significant effects from lighting were identified from Dunbeath and Navidale, which can be extrapolated to represent the type of effects from visual receptors within the vicinity and between these two locations for a minimum of 20km.

    c. Significant adverse sequential effects were assessed for the A9 on the views obtained predominantly by north bound travellers between Crackaig and Ousedale (approximately 17km); and by north and south bound travellers between Berridale and Latheron (approximately 13km) although it is considered this would be greater extent up to Whaligoe (26km).

[4] SNH Caithness and Sutherland Landscape Character Assessment. 1998 C Stanton.

d. Along the A99 significant adverse effects were identified between Wick and the north of Ulbster, a distance of 10km.

23. Extrapolating the results of the viewpoint and sequential assessment, we consider that significant effects on the wider visual amenity of the East Sutherland Coast will extend from Wick, down to Ballinreach just north of Brora, a distance of approximately 60km. This represents where Moray West (in isolation – see Figure 14.7.3[5]) will be viewed predominantly as an array of turbines occupying a horizontal field of view, of a minimum of 30-40 degrees up to 50-60 degrees between Berridale and Whaligoe. The exception to this is the horizontal field of view between 20-30 degrees from the north of Brora to the south of Helmsdale.

24. Whilst the analysis of the horizontal field of view of Moray West in isolation is useful, Beatrice is part of the baseline landscape. Combined cumulative impacts with Moray West are predicted almost continuously along the majority of the East Sutherland Coast (EIA Figure 14.8.2) and therefore the two developments will largely be viewed together. As such the reality is that Moray West in addition to Beatrice will contribute to turbines occurring across a much wider horizontal field of view of up to 90 degrees, as evidenced by the assessment of viewpoints (for example at Lybster and Latheron). This will contribute to an increased severity of impact and significance of effects on these receptors.

25. From viewpoints including Brora, Tarbet Ness and Lossiemouth, at over 30kms distant from the nearest Moray West turbine, significant effects are not predicted. However it is considered that the level of effect arising on these viewpoints is on the threshold for being significant. In these instances the scale of the development introduces the experience of large scale wind energy development into the more enclosed waters of the Moray Firth, where previously there was none. In particular Tarbet Ness has pronounced qualities of remoteness and seclusion, reinforced by the diminished hierarchy of travel (from A to B to minor roads, to track to footpath) as you approach the popular viewpoint.

26. In conclusion, the large scale and extent of Moray West will introduce significant adverse effects on landscape, seascape and visual receptors almost continuously along a substantial proportion of coastline in east Sutherland, including both daytime and night-time impacts and raises issues of national interest for SNH.

Impacts on the East Sutherland Coast

27. It is considered that the landscape character along the Sutherland coast can be experienced as a distinctive regional area, referred to as the East Sutherland Coast.

28. Our responses in landscape cases are based on the approach set out in the SNH Landscape Policy Framework (LPF 2005)[6]. An overarching aim of this Policy Framework is '*To safeguard and enhance the distinct identity, the diverse character and the special qualities of Scotland's landscapes as a whole*' (LPF para 9). To achieve this aim, the Policy sets outs a series of four actions (Para 10), which include working with others and encouraging high standards of design of new development and upholding the '*tangible and intangible qualities that contribute to the landscapes being recognised as distinctive of Scotland through….safeguarding the diverse and distinctive regional character of different parts of Scotland*'.

[5] EIA Report Figure 14.7.3 Horizontal Angle of View ZTV whilst useful, only models the visibility of MWOW and not the cumulative horizontal field of view of MWOW in addition to BOWL.
[6] https://www.nature.scot/sites/default/files/2017-06/A147583%20-%20policy%20statement%200501-%20Landscape%20Policy%20Framework.pdf

29. This approach to landscape character remains consistent with current Scottish Planning Policy (SPP), which '*should facilitate positive change while maintaining and enhancing distinctive landscape character'* (SPP para. 194). In this context it is important to recognise that protection of distinctive landscape character as part of Scotland's landscape resource, is a separate but interrelated issue from the protection of 'scenically valued' landscapes through designations such as National Scenic Areas (NSAs) and Local Landscape Areas (LLAs). There will undoubtedly be instances where distinctive landscape character will contribute to the experience and special qualities of a NSA, so distinctive landscape character and valued landscape are not mutually exclusive, but they are both afforded protection at a national level.

30. At the broad scale, the East Sutherland Coast is comprised of three categories or combinations of landscape character:

    a. a narrow low-lying coastal shelf or strip, to the east;
    b. contained by open sea; and
    c. to the west, backed by extensive upland moorland slopes and hills.

31. It is considered that all of the East Sutherland Coast can be experienced as a distinctive area, the characteristics of which contribute significantly to Scotland's national landscape resource, resulting from:

    - **the clarity and contrast of transition between upland, lowland coastal strip and open sea which is almost always continually displayed.** Along the East Sutherland Coast, the clarity of this transition is particularly pronounced at the transition of *Moorland Slopes and Hills* and *Coastal Shelf* LCTs. The occurrence and juxtaposition of character between these types is recognised as highly distinctive, and centrally located within the East Sutherland Coast providing a particularly intense experience of this transitional landscape.

    - **over a distance of approximately 50km the orientation of the Sutherland coastline south west to north east defines the overriding and cohesive linear character.** Within the East Sutherland Coast the relatively abrupt change in elevation between upland and lowland and coast creates a strong but simple visual composition, where the eye is drawn to the skyline (both terrestrial and marine) and the coast.

    - **the distinctiveness of character is experienced when travelling through the area**. There is a tangible sense of entering and exiting this stretch of coast and within it a distinctive rhythm comprising open wide panoramas out to sea, views focussed along the coastal strip, and enclosed views inland. This rhythm of views is distinctive to travelling north and south along the A9 through the East Sutherland Coast.

32. The experience is of the 'whole'; the combination of landscape character types which presents as views of a coastal landscape - the panoramas out to sea are combined with characteristic views along the coast which draws the eye to the backdrop of hills. Unless dictated by local screening, most views along the East Sutherland Coast will combine these three elements. Views from the A9 which, by their very nature, are typically transient and experienced sequentially combine often abrupt changes from enclosed views inland, to open panoramas along the coast and out to sea.

33. The landscape character and experience of the East Sutherland Coast is recognisable as a cohesive area which can be defined at a regional level. This distinctiveness of character makes a significant contribution to both the Highland identity and to the

national landscape resource. This formed part of SNH's evidence to the West Garty Wind Farm Public Inquiry in 2017.

34. Significant adverse effects on landscape character, coastal character, and visual amenity (including static and sequential high sensitivity receptors) have been predicted from the addition of Moray West. This is in part due to the high sensitivity of the receiving environment and the way it is experienced, and the scale of the development which contributes to an extensive wind farm.

35. The substantial extent of significant effects arising with the addition of Moray West will be introduced into the open waters of the Moray Firth, which are a key characteristic of the landscape and coastal character of the East Sutherland Coast. The extensive scale of the development running parallel to the East Sutherland Coast will entail that for most of this coast (approx. 75 %) the views to open waters will be lost.

36. Moray West is a very large proposal with extensive and significant impacts on landscape character and it will significantly erode the distinctive characteristics of the East Sutherland landscape.

Cumulative impacts – future implications for terrestrial capacity

37. Notwithstanding the significant offshore cumulative impacts with Moray West in addition to Moray East and in particular Beatrice, significant adverse cumulative landscape and visual impacts are identified with the combination of terrestrial and marine wind energy developments, both at the local and strategic level.

38. Locally from many visual receptors significant cumulative impacts are predicted for the addition of Moray West in combination with both existing and consented marine wind energy, and existing, consented and proposed terrestrial wind energy (as evidenced by the assessment of impact from viewpoints 4, 5, 6, 8, 9, 10, 11, 12). From a landscape and visual impact perspective, this leads to the conclusion that should Moray West be consented, the already limited capacity to develop further terrestrial wind energy (avoiding extensive significant cumulative effects), will be substantially curtailed.

APPENDIX C

SNH ADVICE ON MARINE MAMMALS

Appraisal of EIA and HRA Reports

We have reviewed the EIA and HRA Reports taking account of advice contained within the Scoping Opinion. We provide the following advice on our appraisal of the impact assessment for marine mammals:

1. Although we have residual concerns regarding the underwater noise modelling, with regard to the conversion factor (see Appendix D), we consider that further assessment is not required.

2. We note that the cumulative Permanent Threshold Shift (PTS) assessment has been based on the modelled maximum impact ranges, and has been estimated without mitigation included, such that once mitigation is employed, the risk of PTS is negligible. We broadly agree with this conclusion, but require clarification on the numbers of animals that are predicted to experience PTS from piling in Moray West.

3. We interpret the PTS peak threshold as a range of instantaneous auditory injury at maximum hammer energy. However the cumulative PTS is also called a range – this is confusing as it seems the cumulative range is smaller than the instant. We interpret cumulative PTS as the maximum starting distance for an individual fleeing animal in order that PTS is accrued over the piling event.

4. Figure 4-6 in Technical Appendix 9.1 – marine mammal baseline - shows the harbour seal density surface obtained from Bailey 2017 (Annex 9.1A). The maps presented in Annex 9.1A however, do not appear to match the density layer used in Technical Appendix 9.1. The Bailey analysis is at a different scale to the SMRU at-sea density maps, but appears to estimate higher densities, therefore the estimates considered in the EIA Report could be considered as more precautionary. Although this may not alter the conclusions, we require clarification on the interpretation of the Bailey paper.

5. With regard to minke whale, we require clarification as to the number of animals that are predicted to experience cumulative PTS in the concurrent scenario as the cumulative PTS range is large and at over 28.5km there is no effective mitigation. We agree that it is likely to be a low number of individuals and that this is unlikely to result in a population effect. However, the predicted number as well as range will enable us to form a view with regard to injury and the EPS licence application.

6. The iPCoD assessment for bottlenose dolphin is done twice, one including PTS and one excluding PTS. There are two aspects to consider:

    - There is only one of the developments that predicts PTS for bottlenose dolphin (Inch Cape consented). Looking at the new application (draft) the number of bottlenose dolphin predicted to suffer PTS is now zero. Therefore the inclusion of PTS is over precautionary.

    - The assessment was done using the version of iPCoD predating the latest expert elicitation round. The new version (4) has radically changed how PTS is assessed in that the effect of PTS is not at all as significant as was previously thought. Therefore, even if there were individuals predicted to suffer PTS the effect on the population would not be as marked as is suggested in the HRA report.

Conclusion
Bottlenose dolphin

7. 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.

8. 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.

Harbour seal

9. 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 Dornoch Firth and Morrich More 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.

Harbour porpoise

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

Minke Whale

11. We advise that there will be **no impact on the FCS** for minke whale as an EPS, subject to conditions on any consent / licences. However, please see point 5 above regarding the number of animals that are predicted to experience cumulative PTS.

Other cetaceans

12. We concur 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 the Moray West underwater noise modelling and use of the 0.5% conversion factor

1. Technical appendix 9.2 – Underwater noise modelling - is as we have previously seen, but we note that the units for tables 2-1 and 2-2 have not been corrected. As it stands it is not clear that the source levels are presented as SEL and not SPL.

2. We are content that the detailed approach to estimate PTS (both instantaneous and cumulative) and behavioural response to piling noise is as agreed, and uses our understanding of current good practice.

3. Our main concern has been with the use of the 0.5% conversion factor (CF). This factor is used in an energy conversion model described in De Jong and Ainslie (2008). There are and have been various methods of estimating a source level from piling, including extrapolating from measured levels and estimates using the pile diameter. We welcome the benefits of using an equation such as this; it's transparent and should lead to consistency in source level estimations – understanding that the source level isn't actually a 'real' level, but a means of describing the acoustic energy for noise propagation modelling.

4. The equation uses an energy conversion factor to estimate the proportion of hammer energy that translates into acoustic energy (that then propagates into the marine environment). To do that the parameters used are the impact hammer energy, the speed of sound through seawater and the density of seawater, plus a constant. Seabed type is not included. We assume the harder the seabed substrate is, the greater the hammer energy required, and therefore the seabed type has no bearing on the source level. The key parameter in this equation is therefore the conversion factor.

5. Our concern is that the 0.5% CF returns source level estimates that although are within source levels for piling as reported, they are at the lower end of estimates and much lower than estimates seen in contemporary applications.

6. Appendix A has been added to technical appendix 9.2 and contains CEFAS comment/reasoning on the use of the 0.5% CF, including a literature review intended to support the use of 0.5% CF. This review predominantly leans on the review paper of Dahl, deJong and Popper (2015). However, this is an article in Acoustics Today, rather than a peer reviewed paper. Having said that the authors are recognised experts in the field. Therefore, we view this as valid evidence, but not evidence in itself of a scientific consensus.

7. Evidence presented in table 1 is based on lower hammer energies than will be used for the OWF piling in Moray West, and therefore the assumption is that there is a linear relationship between hammer energy and the conversion factor to enable extrapolation. Also, these are based to some extent on received levels being back calculated to a source level and the conversion factor being calculated from that. Therefore, the sediment type is incorporated into the propagation calculation and resulting source level.

SNH advice on the use of the 0.5% CF

8. There is uncertainty in any modelling used to estimate impact zones and numbers of animals predicted to experience PTS or disturbance.

9. There is uncertainty pertaining to the prediction of the source level by any method.

10. There are a range of source levels that may be predicted from offshore wind piling.

11. Recalculation using a 1% CF will increase the size of impact zones, and the numbers of animals predicted to be affected.

12. A few dB difference at source will make a difference to the propagation modelling. However, it is considered that the ultimate conclusions relating to significance will remain the same.

13. We agree that uncertainty in back-calculation from received levels could give rise to a +/- 3dB difference in SL estimation, which is the difference between a SL estimated using a 0.5% or 1 % CF.

14. Our view is that the Dahl, deJong and Popper review article (2015) is valid evidence, but is the opinion of the authors rather than proof of scientific consensus.

15. It is likely that there is a range of appropriate conversion factors, and in that case preferably one should be chosen that reflects a degree of conservatism.

16. Therefore, we remain of the view that a 1% CF would have been preferred to a 0.5% bearing in mind uncertainty and conservatism.

17. However, the source levels as presented are within the range of piling noise levels as presented in literature and grey literature, although the use of 0.5% CF appears to return levels at the lower end of the range.

18. The predictions of ranges made for Moray West are without mitigation. Although it is possible these ranges may be an underestimate, adequate mitigation is likely to be gained via a piling strategy plan.

19. **Therefore, we do not recommend that the noise modelling for Moray West is repeated with a 1% conversion factor.**

APPENDIX E

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

PHYSICAL PROCESSES

1. The EIA Report covers both the Offshore Wind Farm (OWF), and the Offshore Transmission Infrastructure (transmission infrastructure). As part of the latter, the export cable landfall corridor has been revised (EIA Report page 7 & figure 1.5.1) to between Sandend Bay and West Head, i.e. on the west side of Redhythe Point. This change to rule out Sandend Bay and the coast to the west was apparently made very late, as Chapter 6 Physical Processes still assesses potential impacts in the original landfall corridor including at Sandend Bay.

General advice

2. The EIA Report concludes that changes to physical processes will be limited and would not lead to significant adverse impacts on the seabed in/around the OWF site and export cable corridor, or on designated coastal sites at the landfall and elsewhere. We agree with this conclusion.

Landfall: Cullen to Stakeness Coast Site of Special Scientific Interest (SSSI)

3. The landfall options ostensibly still include cutting and backfilling a trench (6.8.2.17). However, trenching was only ever being considered through the coastal sediments of the soft sandy sediments of Sandend Bay, now excluded from the revised landfall corridor. Following our advice on the draft EIA Report, the wording "rocks… associated with the SSSI that are normally exposed will not be cut" was added at 6.8.2.22. We welcome this commitment to protect the geological notified feature, which we would recommend as a condition in any consent granted.

4. That being said, we cannot rule out that the preferred option will be trenching through the less cliffed coastline at the western end of the revised landfall corridor (Red Haven area), where there is intermittent rock outcrop between beach sediments and is within the SSSI. In that scenario it is possible, though far from likely, that through detailed geological consultation a route and methodology could be agreed that avoided significant adverse impact despite minor excavation. In that case we advise there should be a condition to avoid affecting exposed rock within the SSSI, unless through a detailed landfall plan agreed in advance with MS and SNH.

5. Whatever landfall method is chosen, there is clear potential for adverse effects on the lowland heath notified feature of the SSSI, unless it is bypassed by Horizontal Directional Drilling (HDD). This potential impact has not been assessed, probably because the current application considers works below the MHWS, and work above the MHWS will be addressed in the onshore transmission infrastructure application.

BENTHIC ECOLOGY

Summary

6. Although some of the impacts will be permanent, most of the protected habitats and species are commonly occurring across the wider area, so the development is unlikely to have a significant impact on these habitats and species populations. Precise details of the landfall are unclear, and further work is required to assess potential impacts.

Protected sites

7. The cable route passes through the Southern Trench proposed Marine Protected Area (pMPA) selected for burrowed mud as well as shelf deeps, fronts and minke whale. The benthic survey shows the presence of the burrowed mud (SS.SMu.CFiMu.SpnMeg, 'Seapens and burrowing megafauna in circalittoral fine mud') Priority Marine Feature (PMF) at five sites along the export cable corridor. White cluster anemone (*Parazoanthus anguicomus*), which has also been recorded in the Southern Trench, was not recorded in the benthic survey.

8. The pMPA, and the burrowed mud feature within it, is extensive, with burrowed mud widespread across the southern half of the Moray Firth and relatively widespread across the waters surrounding Scotland. The area of habitat likely to be affected by the development is therefore comparatively small compared to the area of burrowed mud within the pMPA and the area should recover, though this may take some time.

9. We advise that the proposal is capable of affecting the burrowed mud feature of the Southern Trench pMPA. However, these effects are insignificant. Further assessment is therefore not required.

Priority Marine Features (PMFs)

10. Some PMFs are present within the site and may be affected by the development.

11. Burrowed mud is discussed above under protected sites.

12. Tide-swept coarse sands with burrowing bivalves (SS.SCS.ICS.MoeVen 'Moerella spp. with venerid bivalves in infralittoral gravelly sand') were identified at four sites on the benthic survey. These habitats are likely to be sensitive to physical disturbance but have low sensitivity to siltation changes and are likely to recover quickly. There are likely to be impacts on the PMF, but without significant impact on the national status.

13. Offshore subtidal sands and gravels (SS.SSa.CFiSa.EpusOborApri (or transitional with this biotope) '*Echinocyamus pusillus*, Ophelia borealis and *Abra prismatica* in circalittoral fine sand') were present at 47 stations. Sand and gravel sediments are the most common subtidal habitat around the coast of the British Isles and are abundant in the offshore waters of Scotland. There are likely to be impacts on the PMF, but without significant impact on the national status.

14. Three individual flame shells (*Limaria hians*) were identified at one site on the benthic survey, but these are not considered a PMF unless they form a flame shell bed. Individual flame shells are fairly widespread, and the biotope coding does not indicate that a bed was present. Although poor resolution, the images from this station in the technical appendices do not indicate that this is likely to be a flame shell bed, and look similar to images from other stations where no flame shells were found. Flame shell beds are also not known to exist on the east coast of Scotland. These records are therefore not considered a PMF and are not considered further.

15. The ocean quahog (*Arctica islandica*) has been found in low numbers at one station. This species is considered important as Scotland holds a large proportion of the British records and due to the fact that it is long lived, under threat of decline and functionally important. However, it is widespread around Scotland and whilst there are likely to be impacts on the PMF this is likely to be without significant impact on the national status.

Annex 1 habitats

16. There was a small area (approximately 25m wide) of stony reef identified on the benthic survey. Other areas outside the survey stations could also have stony reef and areas of mixed coarse stony/cobble habitats with boulders which may also be considered stony reef. Reef habitat will have a low recoverability and high sensitivity to physical disturbance and smothering. However, the area likely to be affected is likely to be small in the context of the wider area and the development is unlikely to have a significant impact.

Intertidal

17. It is not clear where exactly within the wider area the landfall will be and what habitats are likely to be affected, though none of the landfall area falls within a designated site for intertidal features.

18. The survey work relating to the intertidal all relates to Sandend Bay and methods appropriate for the littoral sediment habitat of Sandend Bay. However, this area has now been discounted as an option for landfall. The remaining area appears to be more rocky, though there is no survey work relating to it. We are unable to make an assessment of the potential impacts of the landfall on the intertidal without more information on both methods and location. HDD would be our preferred option for intertidal habitats over open cut trenching.

FISH (INCLUDING DIADROMOUS FISH) AND SHELLFISH

Electromagnetic fields

19. Technical Appendix 4.3 D (Electromagnetic Fields Modelling) was produced for the 'Telford, Stevenson, MacColl' wind farms and has been included in the EIA Report for Moray West. The Appendix states that, 'in all cases, where cables are buried to 1 m depth, the predicted magnetic field is expected to be below the earth's magnetic field (assumed to be 50 μT). Where DC cables cannot be buried and are instead protected, the magnetic field is expected be below the earth's magnetic field within 5 m from the seabed'.

20. The EIA Report for Moray West states that the cables will be buried to a minimum target depth of 1 m where possible and protected (e.g. with rock placement or concrete mattresses) where burial is not feasible. Where they come ashore they will be installed beneath the ground by either trenching or horizontal drilling methods. We welcome this mitigation for diadromous fish species, as cable burial would be expected to increase the distance between the cables and the water column. The offshore cable export corridor landfall search area does not include the mouths of any SAC rivers, and is more than 20km from the nearest riverine SAC with diadromous fish/fresh water pearl mussel interests (River Spey SAC).

Noise and vibration

21. We welcome the commitment to submit a Piling Strategy to MS-LOT for approval prior to the commencement of piling. This will set out any mitigation and management measures that will be implemented during pile installation. We support the commitment to soft starts which could allow fish to move away from the vicinity of piling operations. In Technical Appendix 9.2, figures 3-11, 3-12 and 3-13 indicate the extent of exposure effect zones for Atlantic salmon exposed to different piling methods at various hammer energies. The Non-Technical Summary sets out the programme for the proposed development and reflects that piling would be undertaken between

the start of Q2 2022 and the end of Q1 2023. Given the timespan of the proposed piling activity (spanning a 12 month period), the 'Design Envelope' scenario reflected within the EIA Report, and the extent of the area within which Temporary Threshold Shift is expected, it would be helpful if the Piling Strategy would set out for agreement with MS-LOT further details of the piling methods, cumulative impact of concurrent piling at different locations where this is anticipated to occur, and timing.

Our Ref: MM/dr -18-24

Your Ref:

26 January 2018

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Dear Sirs

Moray West Offshore Wind Farm Consent Application

The Scottish Fishermen's Federation, on behalf of the 400 plus vessels in membership of its 8 constituent associations wish to formally object to this application.

The SFF would contend that this development runs contrary to Scotland's National Marine Plan, in key policies GP1 – a presumption in favour of sustainable development, where fish is further described as a food sector, GP4 on co-existence – as yet there is no proof that this will be possible or happen, GP17 refers to transparency, which was not evident at the start of the planning process. Further to these, the specific Fisheries Policies, 1 refers to safeguarding existing fishing wherever possible, FP2 refers to the cultural and economic importance of fishing and the potential impacts of displacement, and on sustainable fish and shellfish stocks.

The SFF is pleased that the developer has acknowledged that throughout the whole of its footprint in ICES squares 44E7, 45E6 and 45E7 it has impact on creeling, jigging, nephrops trawl, squid trawl, scallop dredge and seine net. Those fisheries for these 3 ICES squares, comprise up to £10 million p.a. at first sale, which is significant for the area, with huge proportions of scallop and nephrops in this figure and particularly the development site, which is identified as 50% scallop grounds (fig 4.6).

The SFF would further contend that the socio-economic impacts of the potential loss of £10m landings to the onshore supply chain must be taken into account as directed in GP2 & 3 and F2.

Turning to the technical appendices, the SFF would point out the difficulties in the assumption of treating the fishing industry as a homogenous single entity to arrive at the standard definition of low intensity impacts. It should be highlighted that each vessel is a separate, usually family, business and should be considered as such, this lack of such an assessment is contrary to GP2, 3, 17 and Fishing Policy 1, 2 and 3.

The SFF considers that the design envelope approach, whilst useful in many ways, is actually

making it more difficult for stakeholders to respond appropriately to many aspects of the development, again contrary to GP4 and 17. It is now apparent from this application that, once built, the development is likely to be in place for at least 50 years, thus denying fishing use of the area for at least a generation, contrary to GP4.

It is also difficult to consider how fishing may be feasible, as it is currently impossible to define what ground will be safe to use for mobile gear, as the worst case scenario could be gravity base/suction bucket which along with scour protection could end up hundreds of metres away from the base point. To compound this problem there is no cable plan to consider yet, but the developer seems content to postulate 10% of the inter array and 20% of the export cables may remain unburied. All of these variables are likely to close the ground to fishing and thus contradict GP4 and 17.

The SFF is consistent in the demand for restoring the seabed post development, so any cable/scour protection should be conducted with that in mind. Cutting piles below seabed is acceptable but the rigs to reef concept, already ruled out by the Oil and Gas Authority, is not.

Referring to appendix 8.1 – Electromagnetic field, whilst quoting many sources, fails to point out that the most common conclusion that arises from studies is that more work/knowledge is needed. Indeed very little of the published work actually refers to the species indigenous to the development area so this is in contradiction of GP19.

Concerning Appendix 9, the SFF would agree with the concerns about the modelling, and would rather wait for the actual survey results from BOWL before accepting this. Furthermore there is a growing body of evidence onshore of the thrumming effect transmitted through the base of the towers having negative effects.

The SFF is surprised that in chapter 8, fish and shellfish ecology, 8.2.2 does not quote from Scotland's National marine plan, particularly fisheries 1 and 2, as they are relevant to protecting the ecosystem for fish and shellfish.

With particular regard to herring (8.4.2.74 on) in line with ICES advice development should not occur, unless the effects of these activities have been assessed and shown not to be detrimental to any spawning grounds.

Looking at the information on sediment concentration and deposition, the worst case scenario can be seen to be seabed disturbance in the development area for 36 months and the cable for 6 months. Unsurprisingly this is described as potential long term habitat loss, which, including recovery time, could last up to 10 years for shellfish, over an area of 630716m ^{2}, whilst also, most significantly, accepting that suspended sediment concentration will have greater effect on scallops than other species.

The points in 8.7.2.31 are challenged by SFF, manmade structures can attract certain fish but there is no scientific case to claim that this means commercial populations are increased

Finally in 8.8, regarding cumulative effects the SFF are not convinced that this, or any other development have really understood how the loss of grounds will affect commercial fishing, especially when considering the catching sector as many separate family businesses.

Moving on to the commercial fisheries chapter, the development seems to want to downplay scallop fishing in the area, 11.4.2.25 calls it low level, but is contradicted by 11.4.2.88 which states high activity. Given that 11.4.2.30 also describes Seine netting activity as high on the site, it would seem that GP14 and 17, co-existence and fairness need to be considered properly here.

Regarding 11.6.2.1, SFF would expect KIS ORCA and Kingfisher to be included in notifications to ensure dissemination to industry.

The SFF notes that 11.7.2.2 onwards repeats the mantra of minor effects on commercial fisheries and would reiterate the points made earlier on the fish and shellfish ecology, that the loss of grounds for many years is not minor, indeed the claim in 11.7.3.9 that the development area is available for fishing seems little more than a platitude given the potential length of disturbances likewise 11.7.2.53 on displacement, the SFF would contend is not minor.

Moving to paragraph 11.7.2.18 experience shows that it is essential for a good working relationship between FLOs and FIRs, and to translate this into ensuring accurate data swap on local fisheries especially creel. This needs to be included as part of any vessel management plan to avoid later problems.

The SFF would hope that renewables developers would buy in to a similar set up to Oil and Gas for notification of dropped objects/obstacles on the seabed as in 11.7.3.9, taking into account any impact of construction on the benthic population, and experience of other windfarms suggest the phrase “available for fishing” is irrelevant and hence contradicts GP4 and 17 and F1 and 2.

The SFF would expect that the statements in 11.7.3.11 through to 20 would be translated into genuine trials using the vessels which are affected to see how they fare on returning to the development.

Going forward, if the development achieves consent, the SFF would expect to see a real effort from the developers to host the CFWG and use it in a meaningful way to ensure the development impact on fishing is as limited as possible. The SFF would highlight the need for real personal contact to avoid misunderstandings, it is worthless producing a list of failed calls to prove anything.

Furthermore the SFF would expect to be engaged in any discussion on cable plans, vessel plans, development layout and any other plan relevant to the impact on fishing, in line with all the policies quoted from Scotland’s National Marine plan.

The SFF would also hope that Marine Scotland would take their responsibility to ensure sustainability and co-existence is translated into some meaningful compliance measures to ensure developers pay more than lip service to the consent conditions. This should be particularly relevant for any contractors or sub-contractors, developers should be held responsible for ensuring that they may adhere to the spirit of agreements.

Yours faithfully

Redacted

Redacted

From: Redacted
Sent: 20 August 2018 13:30
To: MS-LOT Moray West Representations; info@moraywest.co.uk; Redacted
Subject: SEPA Response to Consultation Reference Moray West Offshore
Attachments: PCS160164Response.doc

Follow Up Flag: Follow up
Flag Status: Completed

Thank you for consulting SEPA on the above proposal. Please find our response attached.

Where applicable this email has been copied to the agent and/or applicant.

This is an auto-generated email sent on behalf of SEPA's Planning Service. Information on our planning service along with guidance for planning authorities, developers and any other interested party is available on our website at http://www.sepa.org.uk/planning.aspx.

Redacted

From: Redacted
Sent: 31 August 2018 17:42
To: Redacted

Subject: RE: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation Update
Attachments: MSLOT Moray West OfTi Response FSDCCa.pdf

Importance: High

Dear Reda

We have discovered a couple of important typographical errors please find attached updated copy.
Apologies for the inconvenience.

Regards

Redac

From: Redacted
Sent: 31 August 2018 16:32
To: 'Redacted
Cc: 'Redacted
Subject: RE: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation
Importance: High

Dear Reda

Please find attached our submission to Scottish Ministers for the Marine Licence application for the Moray West OWF Transmission Infrastructure.

If you could confirm receipt and acceptance I would be most grateful.

Should you have any queries or difficulties with the document please let me know as soon as possible.

Regards

Redac

Redac Red
47 Village
Sandend
Banff
AB45 2UB

Redacted

From: Redacted
Sent: 09 August 2018 15:47
To: Redacted

Subject: FW: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation

Dear Redacted

Many thanks for your request.

MS-LOT agrees to extending your consultation deadline to the 31st August 2018.

Please be advised that this is the latest responses can be submitted, no other extensions will be granted.

Best regards,

R Red
o acto

From: Redacted
Sent: 09 August 2018 12:12
To: Redacted
Cc: Redacted
Subject: RE: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation

Dear Redacted

I write to request an extension of time in respect of the Moray West application consultation due to the difficulties caused by summer holidays the Council has with meeting dates and member availability. I understand other consultees have also requested an extension.

A date of September 7th would be sufficient for our purposes.

Please advise soonest if this will not be possible.

Kind regards

Redacted

Fordyce Sandend & District Community Council

From Redacted]
Sent: 13 July 2018 12:49
To: Redacted
Cc: Redacted
Subject: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation

ELECTRICITY ACT 1989 (As Amended)
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)
The Electricity (Applications For Consent) Regulations 1990 (as amended)

MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009
The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
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 LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE.

Dear Redacted

Thank you for your email of 13th July 2018.

On 8th June 2018 Moray Offshore Windfarm (West) Limited ("the Applicant") submitted an application to the Scottish Ministers in accordance with the above legislation to construct and operate the Moray West Offshore Wind Farm at a site approximately 22.5 km southeast of the Caithness coastline. This application is subject to an environmental impact assessment and as such the application is accompanied by an Environmental Impact Assessment Report ("EIA Report") which has been submitted by the Applicant. In addition, the Applicant has also provided an Habitats Regulations Appraisal ("HRA") Report.

The application documentation, including the EIA Report and HRA Report can be downloaded from:

http://www.gov.scot/Topics/marine/Licensing/marine/scoping/MORLWest

If you wish to submit any representations in response to the consultation regarding the above application please ensure they are submitted to the Scottish Ministers, in writing, to moray-west.representations@gov.scot no later than **21st August 2018**. It is expected that the consultation deadline will be met by all consultees. If you are unable to meet this deadline please contact MS-LOT on receipt of this e-mail. If you have not responded by the above date, MS-LOT will assume a 'nil return'.

Marine Scotland Licensing Operations Team ("MS-LOT") will make your representations publicly available. Personal information (such as names, signatures, home and email addresses) will be redacted before the representations are made public. If you have any queries or concerns about how your personal data will be handled please visit the MS-LOT website or contact MS-LOT at MS.MarineRenewables@gov.scot.

If you have requested a hard copy of the Application and not yet received it, please contact Redacted at Moray West Offshore Wind Farm.

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

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

Yours faithfully,

Redacted

Redacted

– Redacted

Marine Scotland Licensing Operations Team

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

Redacted

w: http://www.gov.scot/marinescotland

From: Redacted
Sent: 13 July 2018 10:50
To: Redacted

Subject: RE: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation
Importance: High

Dear Redacted

Contact Update
Fordyce, Sandend & District Community Council

Further to our correspondence earlier in the year (see below) in connection with the above project I wish to advise a change in the contact person for our Council.

Re Redacted has stood down as Chair and I will revert as the main contact for correspondence. I have copied in our Redacted to ensure the record of correspondence is maintained.

We note the developer has now submitted a formal application for the proposed scheme and I have downloaded the document package from your website.

We look forward to receiving your formal consultation invitation shortly. If this has already been sent to Mr Murray please advise.
It would also be useful if you could confirm the MS email address for representations by the general public in respect of this application.

Regards

Redacted

Redacted
For and on behalf of FSDCC

Redacted

47 Village
Sandend
Banff
AB45 2UB

From: Redacted
Sent: 19 January 2018 11:57
To: Redacted
Cc: Redacted

Subject: RE: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation

Dear Redacted

Many thanks for your response which is welcome and reassuring from our point view.

I can confirm that our Redacted at email addres R is the correct contact for correspondence with our Council.

Regards

Redac

From: Redacted]
Sent: 19 January 2018 11:31
To: Redacted

Subject: RE: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation

Dear Re Red

Thank you for sending the email below after our conversation last week. I'd like to apologise for not acknowledging the email or responding sooner, unfortunately I was unexpectedly out of the office. I would be grateful if for any future correspondence you could cc the Renewable Licensing Department general email address as this is monitored daily, the email address is MS.MarineRenewables@gov.scot , apologies for not providing this email address previously.

I can confirm Fordyce Sandend & District Community Council will be consulted at the next stage, which will be when Moray West submit their application. Please can you confirm the email address Redacted is the correct email address to send correspondence to Fordyce Sandend & District Community Council.

Thank you for providing the contact details for Sandend Harbour Trust, please also be advised that Historic Environment Scotland is a statutory consultee and will be contacted during the consultation stage of the application.

Again apologies for the late response, I have tried to call you back but the phone line was busy. Please do not hesitate to contact me if you have any further questions or queries.

Kind regards,
Redact

Redacted

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

Redacted

From: Redacted
Sent: 17 January 2018 12:20
To: Redacted
Cc: Redacted
Subject: Moray West OWF Transmission Infrastructure - Marine Scotland Consultation
Importance: High

Dear Redact
ed

Further to our conversation last week regarding the consultation process for the Moray West OWF, we can confirm that Fordyce Sandend & District Community Council wish to submit a consultation response in respect of the developers proposed submarine transmission cables coastal landing zone.

The developer has now significantly narrowed the area of interest for the transmission cable landing zone since the submission of their Scoping Report to Marine Scotland. The revised area presented at their Statutory Pre App Public Consultation yesterday is attached for your information. From discussions with representatives of EDPR yesterday it is clear that the proposed landing site is Sandend Bay.

Sandend Bay is a very unique coastal environment along the Southern coast of the Moray Firth, it has many benefits as a beach cable landing site from the developers point of view. However there are also many factors to be considered which impact on the viability of the bay as a suitable location. These include technical, environmental and socio-economic factors which we believe may not be addressed by the developer, or may not be apparent to Marine Scotland without local consultation.

The Council is both disappointed and concerned that none of the Council bodies other than the County Councils, who have a coastal boundary with the proposed OWF scheme appear to have been consulted during Marine Scotland's assessment period for the developers Transmission Infrastructure Scoping Report May 2017.

We have noted that for the Moray East OWF, Banff & Buchan CC where a consultee of Marine Scotland in respect of that development.

Can you therefore confirm that Marine Scotland will at this stage of the licensing process accept representations from Fordyce Sandend & District Community Council in respect of the Moray West Development.

As discussed we have also spoken to the Sandend Harbour Trust who own and operate the historic 19th Century harbour at Sandend Village. They also feel that as a harbour operator they should be considered as an individual Consultee for the Moray West OWF.
Redacted
Redacted

We thank you for your time last week and look forward to your response.

Regards

Redac
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This email has been received from an external party and has been swept for the presence of computer viruses.
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This e-mail (and any files or other attachments transmitted with it) is intended solely for the attention of the addressee(s). Unauthorised use, disclosure, storage, copying or distribution of any part of this e-mail is not permitted. If you are not the intended recipient please destroy the email, remove any copies from your system and inform the sender immediately by return.
Communications with the Scottish Government may be monitored or recorded in order to secure the effective operation of the system and for other lawful purposes. The views or opinions contained within this e-mail may not necessarily reflect those of the Scottish Government.

Tha am post-d seo (agus faidhle neo ceanglan còmhla ris) dhan neach neo luchd-ainmichte a-mhàin. Chan eil e ceadaichte a chleachdadh ann an dòigh sam bith, a' toirt a-steach còraichean, foillseachadh neo sgaoileadh, gun chead. Ma 's e is gun d'fhuair sibh seo gun fhiosd', bu choir cur às dhan phost-d agus lethbhreac sam bith air an t-siostam agaibh agus fios a leigeil chun neach a sgaoil am post-d gun dàil.
Dh'fhaodadh gum bi teachdaireachd sam bith bho Riaghaltas na h-Alba air a chlàradh neo air a sgrùdadh airson dearbhadh gu bheil an siostam ag obair gu h-èifeachdach neo airson adhbhar laghail eile.
Dh'fhaodadh nach eil beachdan anns a' phost-d seo co-ionann ri beachdan Riaghaltas na h-Alba.
****

Redacted

From: Redacted
Sent: 13 August 2018 14:46
To: MS-LOT Moray West Representations
Subject: RE: Moray West Offshore Wind Farm and Offshore Transmission Infrastructure Application
Attachments: Moray West Windfarm 13.8.18 Final.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Dear Redacte d ,

Please find attached RYA Scotland's response to the above noted application from Graham Russell, RYA Scotland Planning and Environment Officer.

Kind Regards

Redact ed

Redacted

RYA Scotland, Caledonia House, 1 Redheughs Rigg, South Gyle, Edinburgh, EH12 9DQ
T: 0131 317 7388, Fax: 0844 556 9549

From: Redacted
Sent: 10 July 2018 08:22
Subject: Moray West Offshore Wind Farm and Offshore Transmission Infrastructure Application

Dear All,

Moray West Offshore Wind Farm and Offshore Transmission Infrastructure Application

Please see the links below for the Moray West Offshore Wind Farm and Offshore Transmission Infrastructure (OfTI) Section 36 and Marine Licence Application Documents.

http://www.gov.scot/Topics/marine/Licensing/marine/scoping/MORLWest
http://www.morayoffshore.com/moray-west/document-library/

Included at each link is the following information:

- Volume 1 – Non-Technical Summary
- Volume 2 – EIA Report
- Volume 3a – EIA Report Figures
- Volume 3b – SLVIA Visualisations
- Volume 4 – Technical Appendices
- Other Supporting Documents:
    - Section 36 Consent Application Form
    - Marine Licence Applications for the Offshore Wind Farm and OfTI
    - Report to Inform an Appropriate Assessment (RIAA)
    - PAC Report
    - Safety Zone Statement
- Gap Analysis Spreadsheet

Hard copies of the EIA Report (Volumes 1 to 4) and Supporting Documents are also available to view at the following locations:

- The Highland Council, Planning Office, Glenurquart Road, Inverness, IV3 5NX;
- Caithness Planning Office, Market Square, Wick, KW1 4AB;
- Helmsdale Library and Service Point, Dunrobin Street, Helmsdale, KW8 6JX;
- Buckie Library, Cluny place, Buckie, AB56 1HB;
- Golspie Service Point, Olsen House, Main Street, Golspie, KW10 6RA;
- Brora Library, Gower Street, Brora, Highland, KW9 6PD;
- Moray Council, Planning Office, High Street, Elgin, IV30 1BX; and
- Aberdeenshire Council, Banff Planning Office, Winston House, 39 Castle Street, Banff, AB45 1DQ.

Any representations should be made in writing by email to: moray-west.representations@gov.scot or by post to: The Scottish Government, Marine Scotland Licensing Operations Team, Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB, identifying the proposed development and specifying grounds for objection or support, not later than **Tuesday 21st August 2018**. The Scottish Ministers may consider representations received after this date. Representations should be dated and should clearly state the name (in block capitals) and the full return email or postal address of those making representation.

Yours sincerely

Redacted

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giving nature a home
rspb Scotland

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

7th September 2018

Dear Redacte

APPLICATION FOR CONSENT TO CONSTRUCT AND OPERATE MORAY WEST OFFSHORE WIND FARM, APPROXIMATELY 22.5 KM SOUTHEAST OF THE CAITHNESS COASTLINE

RSPB Scotland welcome the invitation to review and comment upon the above noted application. The Moray West proposal lies adjacent to the Beatrice and Moray East offshore wind developments in the Moray Firth. Beatrice is due to be operational in 2019 and Moray East has received a Government Contract for Difference and is expected to commence construction in the near future.

Whilst the assessment contains errors, omissions and inaccuracies that are discussed below, the presented in-combination impacts on seabird populations from the Moray Firth and other UK east coast projects are unacceptable; are significant in EIA (Environmental Impact Assessment) terms; and constitute an adverse effect on integrity of relevant Special Protection Areas (SPAs). For these reasons, **RSPB Scotland object to the Moray West offshore wind farm application**.

The Moray West assessment, using more up-to-date methods than those used for the consented Beatrice and Moray East assessments, confirms our long-held concerns that the impacts of already consented projects exceed the environmental capacity of regional seabird populations to cope with these new threats. This very concerning situation demands a robust and strategic approach to decision-making. To grant more damaging development in the Moray Firth will certainly limit the future expansion of offshore wind in better, less environmentally sensitive locations (e.g. further from shore and deeper water locations) and increase the already unacceptable impacts on seabird populations in the Firth and further afield.

Yours sincerely,

{SENT BY EMAIL}

Redacted

Scotland Headquarters
2 Lochside View
Edinburgh Park
Edinburgh
EH12 9DH

Tel: 0131 317 4100
Facebook: RSPBScotland
Twitter: @RSPBScotland
rspb.org.uk

ANNEX: RSPB SCOTLAND DETAILED RESPONSE TO MORAY WEST OFFSHORE WIND FARM APPLICATION SEPTEMBER 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 relevant UK projects (primarily Scottish and English east coast sites), after applying the developers' own 'correction factors' predicts a total of 3,845 kittiwake deaths per annum. This is considered to be a significant impact in EIA terms on the kittiwake population both at regional breeding and non-breeding periods.

- **East Caithness Cliffs SPA:** the kittiwake population has seen a 39.5% decline at this site since 1999 and the latest condition assessment, despite this decline, concluded the population to be in *Favourable* condition (2015). The predicted counterfactual of population size of 35% over 50 years (i.e. the population is expected to be 35% smaller with the wind farm developments in the Moray Firth than without) is an adverse effect on integrity of this SPA.

- **North Caithness Cliffs SPA:** the kittiwake population has seen a 55% decline since 1999 and is assessed as being in *Unfavourable* condition (2016). The predicted counterfactual of population size of 38% over 50 years (i.e. the population is expected to be 38% smaller with the wind farm developments in the Moray Firth than without) is an adverse effect on integrity of this SPA.

- **Troup, Pennan and Lion's Heads SPA:** Latest condition assessment concluded that kittiwake were in *Unfavourable* condition at this site (2007). The proposal, in combination with other consented and partially constructed development is estimated to cause 79 mortalities per annum. This impact is likely to cause population scale effects, but these have not been presented in the assessment. We conclude that these impacts, on an unfavourable population, are likely to constitute an adverse effect on integrity of this SPA.

Great Black Backed Gull (GBBGs): the assessment of GBBGs in the EIA is not accurate and is insufficient in terms of HRA. GBBGs are present in nationally important numbers on the site during breeding and post breeding periods (see paragraph 10.4.2.114 of the EIA). The predicted mortalities of the project in isolation and in-combination with other offshore wind sites on the UK's east coast is significant in EIA terms. The in-combination assessment, after applying the developers own 'correction factors' predicts a total of 755 GBBG deaths per annum. This equates to an increase in baseline mortality of 217% on the regional breeding population and 9.9% on the pre-breeding Biologically Defined Minimum Population Scale (BDMPS) population (see paragraph 10.8.4.117 of the EIA).

The assessment has omitted providing any information to support the HRA for this species and a PVA has not been undertaken. Instead the assessment has relied on tagging data from a limited number of individuals over a limited time frame as justification for there being no connectivity with the project site. A full appropriate assessment is required for this species at relevant SPAs during

the breeding season and the non-breeding season where the in-combination impacts are likely to undermine SPA conservation objectives.

Gannet – The assessment states that the mean max foraging range from a number of SPA breeding colonies overlap and so gannet is included in the Moray West Offshore Wind HRA (see Technical Appendix 10.1: Section 5.16.1, page 67). However, gannet is not considered in the HRA as it is stated as not being an SPA species (see paragraph 6.6.6.13 of the RIAA). The in-combination assessment including all relevant UK east coast projects, after applying the developers own 'correction factors,' predicts a total of 2,919 gannet deaths per annum. An appropriate assessment on gannet at relevant SPAs is required, particularly due to the potential in-combination impacts on SPA populations during the non-breeding season.

Herring gull: A qualifying feature of both the East Caithness Cliffs and Troup, Pennan and Lions Heads SPAs, the herring gull populations are recorded as being in unfavourable and unfavourable declining condition at both sites respectively. The in-combination assessment including all relevant UK east coast projects, after applying the developers own 'correction factors', predicts a total of 406 HG deaths per annum.

The most recent population count at East Caithness Cliffs SPA indicates a continuation of the decline in the population totalling a 79% decline since 1977, with no up-to-date information available for Troup, Pennan and Lion's Heads. These important contextual facts are not referenced in the HRA, which is a clear omission. If included this information would likely result in different conclusions being made in the assessment. We disagree with the current conclusions on the impacts to both SPAs.

The auks: For razorbill, guillemots and puffins, RSPB Scotland disagree with the various and inconsistent HRA tests that have been applied in the assessment to determine whether the impacts equate to an adverse effect on integrity of the relevant SPAs and their qualifying features.

In the original report one test applied for guillemot and razorbill is to compare the predicted impacted end population against the SPA citation population. If the end population is above the citation population then it is concluded to have no adverse effect (presumably if it were to be below then it is an adverse effect?). For puffin, the assessment relies on a comparison of the relative impact of Moray West against committed impacts from the consented Moray East and Beatrice projects. Stating that this additional impact is small and would not materially alter the existing effects predicted for already consented development. This comparison in itself does not help conclude what the effects on integrity may be. If impacts from already consented development are having an effect on integrity on the SPA (North Caithness Cliffs) then any additional impact would exacerbate this state. No information is provided on what the population consequences of a 0.95-1.14% increase in baseline mortality could be.

The additional updated PVA report (14th August 2018) seems to apply a test whereby if the population can grow with minimal delay in reaching the same population level as the un-impacted population, post project, there is no adverse effect. This is an inappropriate test.

A consistent approach to determining effects on integrity of an SPA for auks is required in addition to new information presented on what the population consequences of the projects in-combination could be on the puffin population at North Caithness Cliffs SPA.

2.0 Other technical points

Precaution: The environmental reports repeatedly refer to the '*excessive degree of precaution*' contained within the assessment methods. A number of reasons for this excessive precaution are presented. RSPB Scotland agree that some potential risks of offshore wind to seabirds are reducing. For example, through the installation of fewer, larger turbines as improved turbine technology becomes available, allowing the same amount of energy to be generated but reducing the risk to seabirds. Also in terms of improvements in scientific understanding of the risks to seabirds, which is reducing estimated risks in some, but not all, cases.

This relative reduction in risks to seabirds is certainly welcome, however the operational capacity of offshore wind in UK waters is now over 7GW. The predicted in-combination impacts to seabirds are of an unprecedented scale – there is no other sector which has progressed in the knowledge that it is causing this scale of impact to internationally important wildlife. The growth of the sector, and the growth of its impact on seabirds, is happening at a rate that far outpaces existing and potential future reductions in impact that can be realised by better science and new turbine designs. We accept in principle the potential impact reductions that could be realised through the "consented" compared with the "as-built" developments from new data on nocturnal activity, avoidance rates and flight speeds used in the collision risk modelling. However, we do not agree with the *extent* of reductions that these bring for the reasons set out below. The predicted in-combination impacts are of such a large scale that this project would be clearly unacceptable.

Survey effort: The lack of a full two-year dedicated site survey record is an important and fundamental omission to the assessment. The justification provided for why the baseline data of only one years' worth of data is considered to be sufficiently robust is inadequate. Furthermore, the assessment first attempts to demonstrate the robustness of the baseline data but then takes advantage of the fact that the data set has been extrapolated, by suggesting it has '*likely overestimated*' the presence of seabirds on the project site. This suggestion is used as a means to conclude that the predicted in-combination impact is much less than predicted (see RIAA, page 125, paragraph 6.9.3.18).

Nocturnal Flight Activity: For kittiwake and large gulls, there is no peer reviewed evidence for a change in the factor used. The current factor is derived from the expert opinion collected by Garthe and Huppop (2004) and this use is endorsed by Band (2012). A review of seabird vulnerability to offshore wind farms (Furness *et al.,* 2013) recommended that no changes be made to the nocturnal activity scores for these species, and an update, including the same authors (Wade *et al*., 2016) maintained this recommendation. Furthermore, the Skov *et al.,* 2018 report does not fully account for the distinction between the definition of daylight as used in the Band model and with the official concept of 'twilight' and 'night'. This is an issue as the Band (2012) model considers the nocturnal period as between sunset to sunrise and so treats flight activity that occurs at twilight as being within the nocturnal flight period. Evidence from tagging shows that a number of seabirds actively forage at twilight.

The Nocturnal Activity Score presented for gannet is not in accordance with the latest published evidence (Furness *et al*., 2018), which recommends 8% in the breeding season and 3% in the non-breeding season. The value used in the assessment, 1, corresponds to 0% nocturnal activity, and will result in a prediction of fewer collisions. While we welcome this review, we are concerned that the mortalities predicted using revised nocturnal activity rates for gannet (and this is applicable to

other species) are potentially underestimated because they do not account for the potential interaction between survey timing and diurnal behavioural patterns, whereby peaks in foraging activity at first and last light (see Fig. 3 in Furness *et al.* 2018) will not be accounted for in the assessment if these did not coincide with surveys (the timings of which are currently unknown, but likely to be midday if aerial), and the survey may have been carried out at a time of much lower activity. Thereby the application of the revised nocturnal activity factor recommended by Furness *et al*., (2018) could result in inaccurate underestimates of collision risk.

Flight Height: Given the emphasis put on the results of Skov *et al*., (2018) elsewhere in the assessment it is perhaps surprising that the flight height data used for the assessment is not derived from this report or referenced anywhere in the documentation. Flight heights in Skov *et al*., were measured using laser rangefinders to a high level of accuracy. Conversely the flight heights used for Option 1 of the collision risk model in the assessment were from historic surveys of Moray East windfarm and buffer, between April 2010 and March 2012, where boat based surveyors estimated the heights of birds and allocated them into broad height bands. For Options 2 and 3 the generic data from Johnston *et al*., (2014) was used. These aggregated data are based almost entirely on boat based estimates, and while the manner in which they were analysed by Johnston *et al*., was statistically robust and the paper that presented them was an important step forward, there was still a reliance on observers ability to estimate the height of a flying bird; a wholly questionable proposition. The ORJIP BCA study has generated the most extensive dataset of observations of seabird behaviour in and around an operational offshore wind farm that is currently available. This includes species-specific data on flight height as measured using laser rangefinders. The use of these data in collision risk modelling would result in greater predicted mortalities, as higher numbers of birds were measured at collision risk height than either the historical estimates from Moray East surveys or the modelled data from Johnston *et al*., (2014).

Consideration of uncertainty in CRM: In the guidance accompanying the Band (2012) model, explicit mention is made of the need to consider uncertainty and variability in the modelled predictions. As such we welcome the inclusion of some consideration of uncertainty in the assessment. However this consideration is limited to flight height only; uncertainty is inherent in not only the collision risk modelling but throughout the assessment process and it is afforded scant concern. In terms of CRM only, the assessment does not take into account uncertainty and variability in bird density, nocturnal activity, flight height, flight speed, or avoidance rate. For all of these, confidence intervals and/or probability distributions around all the variables used (or in those we would recommend to be used) are available and a statistically robust method for carrying out the analysis is also available. There is no reason for these analyses not to have been carried out and we suggest that they are.

Avoidance Rate – We acknowledge that the avoidance rates used in the collision risk modelling that inform the assessment were in accordance with those recommended in Cook *et al.,* (2015 and 2018) and the SNCB guidance. However it is claimed that the predicted mortalities arising from modelling using these rates is an overestimate and more realistic values are presented in Skov *et al.,* (2018). However the empirically derived avoidance rates presented in Skov *et al.,* (2018) are functionally different from the Avoidance Rates used in the Band (2012) model, as the latter incorporate error and variability in relation to both the data used and the model itself (Cook *et al.*, 2015), which means that Band model Avoidances Rates will be lower than empirically derived avoidance rates. Debate is ongoing as to how to apply the empirically derived avoidance rates into the Band model and so it is not clear how, if at all, predicted mortalities would be different if the Skov *et al.* rates were considered.