

REPORT TO: Cabinet

MEETING DATE: 15 January 2013

BY: Executive Director (Services for Communities)

SUBJECT: Consultation by Marine Scotland on a Section 36

application for Neart na Gaoithe offshore windfarm and a

Marine Licence application for the windfarm and

transmission assets

1 PURPOSE

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

2 RECOMMENDATIONS

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

3 BACKGROUND

- An application with an accompanying Environment Statement (ES) has 3.1 been made by Mainstream Renewable Power under Section 36 of the Electricity Acts for an offshore windfarm, as well as for a Marine Licence for the windfarm and transmission assets. Marine Scotland is seeking the views of East Lothian Council on this application, along with statutory and other consultees. As the Section 36 application covers the windfarm itself and not the transmission assets, and no part of that application is within East Lothian, an objection by this Council would not automatically require Scottish Ministers to hold a public inquiry. The Environment available Statement is online http://www.neartnagaoithe.com/environmental-statement.asp Visualisations and visibility mapping are in *Appendix 21.2 – Extended* of this document, at the foot of that page. Alternatively, the ES can be seen at Planning Reception in John Muir House.
- 3.2 The Neart na Gaoithe (NnG) windfarm site covers an area of 105km2. It is some 15km (9 miles) from Fife Ness, the closest point to the coast, and some 28km (17 miles) northeast of Dunbar and 32 km (19 miles) northeast of North Berwick. The exact design details of the windfarm have not been determined due to the need to allow for technological progress and detailed technical work between consenting and construction of the windfarm which may lead to alterations in the details of the design. Design parameters are set to allow for assessment and consent, and are based on 'worst case' for each potential impact, but one that nonetheless gives a realistic project. There will be between 64 and 125 turbines, of 3.6MW - 7MW capacity. The maximum height will be between 171m and 197m above lowest astronomical tide. For reference, the turbines at Aikengall are 125m to blade tip, the Forth Road Bridge towers are 156m above mean river level, and North Berwick Law is 187m. The windfarm will have a maximum capacity of 450MW. For comparison, Aikengall has a maximum capacity of 48MW, Crystal Rig (all phases) 253.5MW, and Pogbie 5.1MW. There will be either more, smaller, or fewer, taller turbines. The colour of the turbines will be decided in discussion with the Northern Lighthouse Board and Civil Aviation Authority but are likely to be light grey.
- 3.3 Consent is also sought for turbine foundations, a meteorlogical mast, one or two offshore collector stations, an inter-array of subsea cables connecting the turbines to the offshore substation, and 2x 33km export cables to landfall, which is at Thorntonloch, near Torness, in East Lothian. There will also be further onshore works associated with the grid connection within East Lothian, which will be the subject of a separate planning application and Environmental Impact Assessment submitted to this Council. These works will include a transition pit at Thorntonloch, as well as cabling and a substation at Crystal Rig, which are considered an integral part of this project. As Marine Scotland is responsible for consenting works up to the High Water Mark and East Lothian Council is responsible for consenting works above the Low Water Mark, there is an overlap in the intertidal zone.

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

History and context

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

Potential Impacts on East Lothian

Landscape and Seascape

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

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

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

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

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

Heritage

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

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

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

Biodiversity

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

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

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

Economic Development

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

Intertidal works

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

Consultation

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

Summary and Conclusion

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

4 POLICY IMPLICATIONS

4.1 None

5 EQUALITIES IMPACT ASSESSMENT

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

6 RESOURCE IMPLICATIONS

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

7 BACKGROUND PAPERS

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

AUTHOR'S NAME	J Squires
DESIGNATION	Planner
CONTACT INFO	01620 823966
DATE	12 December 2012