

B9075 Sandwater Road Realignment

Environmental Impact Assessment Report Volume 1 - Non-Technical Summary March 2019





Non-Technical Summary

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1 Introduction

1.1 Introduction

- 1.1.1 This Non-Technical Summary forms part of the Environmental Impact Assessment (EIA) Report prepared under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 on behalf of Viking Energy Wind Farm LLP.
- 1.1.2 Viking Energy Wind Farm LLP (the Applicant) is proposing to realign the B9075 Sandwater Road on Mainland, Shetland (referred to hereafter as "the Proposed Development") between the Burn of Weisdale and its junction with the A970 at Sand Water. The realignment is required to facilitate construction access, including abnormal loads, for the consented Viking Wind Farm. The location of the Proposed Development is shown on Figure 1.
- 1.1.3 The Applicant is submitting an application for planning permission to construct and operate the Proposed Development to Shetland Islands Council under The Town and Country Planning (Scotland) Act 1997, as amended. An EIA Report has been submitted in support of the planning application and presents information on the nature of the Proposed Development, the likely significant environmental effects of the Proposed Development, and measures proposed to protect the environment during construction and operation of the Proposed Development. The EIA Report contains environmental information and a series of technical environmental assessments covering topics such as landscape and visual, ecology, ornithology, hydrology, hydrogeology and geology and cultural heritage.
- 1.1.4 The aim of this NTS is to summarise the content and the main findings of the EIA Report in a clear and consistent manner to assist the public in understanding what the environmental effects of the Proposed Development are likely to be. The full EIA Report (Volume 2: Written Statement; Volume 3: Figures; Volume 4: Technical Appendices) provides a more detailed description of the Proposed Development, and the findings of the EIA.
- 1.1.5 The full EIA Report and supporting Figures and Technical Appendices can be viewed at the following locations:

Viking Energy	Shetland Islands Council	Shetland Library
The Gutters' Hut	8 North Ness Business Park	Lower Hillhead
North Ness Business Park	Lerwick	Lerwick
Lerwick	Shetland	Shetland
Shetland	ZE1 OLZ	ZE1 OEL
ZE1 OLZ		

1.1.6 The EIA Report is also available for viewing on the application website: www.vikingenergy.co.uk/.

1.1.7 Any comments on the application for consent should be forwarded to the address below:

Development Management	Or by email to:	
Shetland Islands Council	development.management@shetland.gov	
Development Services		
8 North Ness Business Park		
Lerwick		
Shetland		
ZE1 OLZ		

- 1.1.8 Written or emailed representations should be dated, clearly stating the name of the project and the full return email and postal address of those making representations.
- 1.1.9 All representations should be received not later than the date falling 30 days from the date of the last published notice, although representations received after this date may be considered. Any subsequent additional information which is submitted by the Applicant will be subject to further public notice in this manner, and representations to such information will be accepted as per this notice.
- 1.1.10 The EIA Report is available in other formats if required. For details, including costs, contact:

Viking Energy Wind Farm The Gutters' Hut North Ness Business Park Lerwick Shetland ZE1 OLZ

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2 Consideration of Alternatives

- 2.1.1 The purpose of the Proposed Development is to enable access for the construction of the Viking Wind Farm. The existing B9075 was identified at an early stage in the wind farm development process as a potential route for turbine delivery, subject to upgrade or realignment to allow passage of wind turbine and converter components.
- 2.1.2 In 2016, an application to upgrade the B9075 Sandwater Road between Weisdale Burn and the A970 (the 2016 Application) was made to Shetland Islands Council by the Applicant and subsequently withdrawn in 2017. This involved the widening and upgrade of approximately 730m of the existing B9075 and the realignment of approximately 1,530m. A partial upgrade and partial realignment was therefore proposed for the 2016 Application to limit the requirement for road closures and traffic management, whilst also staying within the footprint of the existing B9075 as far as possible.
- 2.1.3 Full environmental survey and assessment work was previously carried out along, and in the vicinity, of the B9075 road as part of the 2016 Environmental Statement that accompanied the 2016 Application. With the implementation of mitigation measures, likely effects on the majority of environmental features assessed were not considered significant. This included potential effects on the Sandwater Site of Special Scientific Interest (SSSI). The exception to this were likely significant visual effects during the construction phase for building receptors at Setter and Sandwater (and the aspirational core path), and the volumes of peat that would require to be excavated (170,000m3) to construct the road, resulting in a large / very large impact on materials in the event that all of the excavated peat needs to be sent to licensed landfill.
- 2.1.4 The 2016 Application was withdrawn in 2017 due to a decision made by VEWF to review the proposed upgrade and realignment options.

2.2 Updated Design (March 2019 Application)

- 2.2.1 Following the withdrawal of the 2016 Application further consideration was given to the design. In discussion with the Shetland Islands Council's roads department, a fully offline alignment was agreed as the most appropriate approach. The construction of a fully offline road will allow continued use of the existing B9075 by members of the public throughout the entirety of the construction works of Viking Wind Farm. This will ensure minimal traffic disruption to the public during the works and will minimise any interfaces between members of the public and construction traffic.
- 2.2.2 The road has been designed to ensure that in areas of deep peat the alignment would be floated, where possible, thereby minimising peat excavations and leaving vegetation and soils intact. Where topography has resulted in the need for some cuttings and embankments to be established, the cut and built-up slopes would be at a suitable gradient to enable revegetation and the re-establishment of habitats as far as possible. Where areas of cut occur within stable bedrock, rock cuttings would be established to minimise the footprint of the Proposed Development and volume of excavated materials.
- 2.2.3 As per the 2016 Environmental Statement, with the implementation of mitigation measures, likely effects on the majority of environmental features assessed in relation to the Proposed Development are not considered significant, including potential effects on the Sandwater SSSI.

- 2.2.4 Significant effects on visual receptors during the construction phase are comparable with the 2016 ES, with the addition of temporary significant effects on the A970 and B9075. With the implementation of mitigation measures, no significant landscape and visual residual effects in the long term are predicted.
- 2.2.5 A notable difference between the 2016 Application and the Proposed Development is the reduction in peat volumes anticipated. The Proposed Development has been re-designed to minimise disturbance to peat by incorporating floated sections to minimise excavating deep peat.
- 2.2.6 The total excavated peat volume along the route has been estimated to give rise to the temporary displacement of 31,150m³ of peat. The Proposed Development is expected to achieve an overall peat balance, with all excavated material reused as part of the works.

2.3 Do Nothing Scenario

2.3.1 There is always the option of not developing a project. However, given the access requirements for the Viking Wind Farm, it is considered that the Proposed Development is the best option. The existing road is not considered suitable, in the absence of significant online upgrade works, for the types and number of vehicles that will require using it for the construction of Viking Wind Farm. Online upgrades would increase traffic disruption to members of the public and present an increased safety risk through significant construction and public traffic interfaces. The successful construction of the Viking Wind Farm will contribute towards achieving the Scottish Government's targets for renewable energy production and reduction of harmful emissions.

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3 Description of the Proposed Development

3.1.1 The Proposed Development would involve the realignment and widening of the B9075 between Burn of Weisdale and the junction with the A970 at Sand Water. The purpose of the Proposed Development is to facilitate construction access, including abnormal loads, for the consented Viking Wind Farm.

3.2 The Existing Road

- 3.2.1 The existing B9075 between Burn of Weisdale and Sand Water is approximately 2.26km long comprised of a mix of single track road with short sections of single carriageway. The road rises over Lamba Scord, with an elevation change of around 42m, from Setter in the west to Pettadale in the east, connecting communities in Weisdale and Kergord valleys with the main A970 road which runs north/south through Shetland Mainland.
- 3.2.2 Beyond Setter, the B9075 continues southwards for a further 2.5km to Heglibister where it joins the A971. No works are proposed to this section of the road.

3.3 The Proposed Development

- 3.3.1 It is proposed that the B9075 (Sandwater Road) is realigned between the junction with the A970 at Sand Water, westwards to the junction with the C class road to Upper Kergord (see Figure 2). At first, the realigned road would serve as an access track for the purposes of constructing Viking Wind Farm. During this time, the existing B9075 would remain open for use by public road users which will ensure separation between Viking Wind Farm construction and members of the public. Upon completion of the wind farm construction, the track would be brought up to adoptable public road standards, and public traffic would move onto the newly realigned road. In addition, a new single span bridge structure over the Pettawater Burn and two further new junctions (one to the Mid Kame Ridge, and the other to the proposed new Kergord Access track), would also be adopted by Shetland Islands Council.
- 3.3.2 A Recreational Management Plan will be prepared in discussion with Shetland Islands Council that will set out the principles for promoting access in the area, including retaining access to Sandwater Loch, and access to the wind farm. The plan will also allow for potential reinstatement of the existing road (in part), if this is considered to be desirable. It is anticipated that the Recreational Management Plan will be covered by a Condition of Consent thereby ensuring that Shetland Islands Council have an input into the design and are content with what is developed.
- 3.3.3 The Proposed Development would comprise two lanes of 2.8m width in each direction, with a further 200mm provided either side of the edge lines to give a 6m running surface. Provision for a 1.5m verge at either side would also be required. The realigned road would generally run in parallel and to the north of the existing B9075, with separation distances varying from immediately adjacent to up to approximately 85m.
- 3.3.4 The design of the Proposed Development involves the proposal to float three sections of the new road over deep peat (generally where peat is greater than 1m and ground slopes are a maximum of 5%).

- 3.3.5 The sections of floated road would minimise peat excavations, reduce excavated peat volumes and leave vegetation and soils intact. Where necessary, floating road embankments would be reinforced with basal reinforcement at the underside.
- 3.3.6 Where watercourses and ditches are to be crossed, new culverts would be required. Culverts would be designed in accordance with industry good practice.
- 3.3.7 It is anticipated that electrical cables associated with Viking Wind Farm would be laid within close proximity of the proposed new road. All cabling works will require similar drainage mitigation, materials handling and pollution prevention measures.
- 3.3.8 Construction traffic would be managed in accordance with the overall Traffic Management Plan for Viking Wind Farm.
- 3.3.9 The initial construction programme is likely to take place over a 9-12 month period following the granting of consents. Liaison with landowners and local residents would be carried out prior to, and during construction, to ensure there is minimum disruption to them. The final completion of the Proposed Development would not occur until the completion of the Viking Wind Farm works.

3.4 Environmental Management during Construction

3.4.1 Construction would be carried out in accordance with a Construction Environmental Management Plan. This document would specify conditions relating to protection of habitats and species, pollution prevention and the means by which site monitoring would occur. The final site-specific Construction Environmental Management Plan would be drawn up by the Applicant, in consultation with Shetland Islands Council, Scottish Environment Protection Agency, and Scottish Natural Heritage, once planning permission had been obtained and the contractor appointed.

3.5 Decommissioning

- 3.5.1 Due to the nature of the Proposed Development it is not envisaged that decommissioning would be required. However, in the event of this being required, it is assumed that this would involve the removal of any above ground structures and removal of the running surface of the road to enable re-growth of vegetation. Where removal of infrastructure would result in more damage than leaving in place, features would be left in-situ.
- 3.5.2 Full details of the decommissioning plan would be agreed with the appropriate authorities and landowners prior to any decommissioning works commencing.

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4 EIA Scope and Consultation

- 4.1.1 Environmental Impact Assessment (EIA) is a process that considers how a proposed development will change existing environmental conditions and what the consequences of such changes will be. It therefore informs both the project design and planning decision making processes.
- 4.1.2 To discuss and agree the proposed scope of the EIA Report, a Pre-Application Briefing Note for the Proposed Development was submitted to Shetland Islands Council on 22nd October 2018 followed by a telecom meeting on 31st October 2018 to agree the proposed scope of the EIA Report.
- 4.1.3 Meetings with Shetland Islands Council Roads Authority have been undertaken to help inform the design of the road alignment and associated junctions.
- 4.1.4 Regular pre-application meetings and telephone calls have been held with representatives of Shetland Islands Council, Scottish Environment Protection Agency, Scottish Natural Heritage and other key stakeholders to discuss the Viking Wind Farm proposals, during which the proposed realignment of Sandwater Road has often been discussed.
- 4.1.5 Public consultation has been undertaken as part of the wider Viking Wind Farm consultations, most recently the public engagement day held in the Voe Public Hall on the 2nd October 2018.
- 4.1.6 The EIA considers the potential for significant effects as a result of the Proposed Development on the following environmental features:
 - landscape and visual;
 - ornithology:
 - ecology;
 - hydrology, hydrogeology and geology; and
 - cultural heritage.
- 4.1.7 Other issues of relevance to the Proposed Development are also considered, including air quality, noise, traffic and transport, climate change, human health and the risk of accidents and disasters.

5 Environmental Effects of the Proposals

5.1.1 This section summarises the results of the technical assessments contained with the EIA Report.

5.2 Landscape and Visual

- 5.2.1 The potential effects of the Proposed Development on landscape character and visual receptors (i.e. buildings and routes) has been considered.
- 5.2.2 With regard to landscape character, direct and potentially significant effects on the Peatland and Moorland Inland Valleys Landscape Character Area (within which the Proposed Development is located) are considered likely during the construction phase due to the extent of movement and activity taking place within a concentrated rural area.
- 5.2.3 During operation, the effect on landscape character generally is anticipated to be not significant, as the movement of traffic and activity would return to levels which reflect existing use, albeit the new road would be seen in combination with the existing road in places which would result in some effect, although not significant. Mitigation measures such as sensitive design and best practice construction and restoration techniques would help to minimise effects.
- 5.2.4 For visual receptors (i.e. buildings and routes) the assessment concluded that potentially significant effects are predicted for two buildings at Setter and Sandwater, and users of the A970, B9075 (the existing road) and the Sand Water Core Path (CPPTWW05) during the construction period due to construction activity and its effects on views.
- 5.2.5 During operation, however, these effects would reduce such that no significant visual effects are predicted.
- 5.2.6 The assessment has concluded that, with the implementation of mitigation measures, there would be no long term significant landscape or visual effects arising from the Proposed Development. However, temporary significant effects are anticipated during the construction phase.

5.3 Ornithology

- 5.3.1 An ornithology assessment has been carried out to consider how the Proposed Development may affect bird species, either protected or of conservation concern.
- 5.3.2 The study area for the Proposed Development has been extensively studied for birds, both as part of the wider Viking Wind Farm studies and specifically for the B9075 proposed road realignment.
- 5.3.3 For most bird species, survey results from surveys undertaken during 2018 were similar to the survey results for 2013 and 2015 for the same study area and are consistent with the year-to-year variation expected for a relatively small survey area. However, a noticeable difference between the 2018 results and previous surveys is the absence of breeding common gull, Arctic skua and lapwing in 2018. These three species are known to have declining populations on the Shetland Mainland.

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- 5.3.4 The most sensitive area for breeding birds in relation to the Proposed Development is the Petta Dale valley area. This area has included up to 3 breeding territories of whimbrel, a species of High nature conservation value. In addition, the area also supports a wide range of other breeding species, most importantly, including up to three pairs of golden plover, up to three pairs of dunlin and up to one pair of Arctic skua (not in 2018). Other breeding birds in this area include curlew, lapwing (not in 2018), Arctic tern, ringed plover and various breeding duck species. There is the potential for the Proposed Development to cause increased disturbance and or territory loss to birds breeding to the north of the Petta Dale valley area.
- 5.3.5 Mitigation measures are proposed to minimise the likelihood of disturbance to breeding whimbrel (also relevant to other species) from construction related activities. A Bird Protection Plan is included with the application, which includes a breeding whimbrel protection zone.
- 5.3.6 An ornithological assessment was completed in 2016 for the previous alignment, and it is concluded that the previous assessment findings, in relation to disturbance of birds and the level of bird habitat loss/change, remain the same for the Proposed Development. The revised road alignment is slightly further north and closer to the important breeding area in the Petta Dale valley but the construction and operation of the new road is not likely to increase the number of important bird species and/or territories affected.
- 5.3.7 Provided that all proposed mitigation measures are implemented, there are not likely to be any significant effects on birds as a result of the Proposed Development.

5.4 Ecology

- 5.4.1 An ecological assessment has been undertaken to consider how the Proposed Development may affect sensitive habitats or protected species.
- 5.4.2 The assessment drew upon surveys undertaken in 2016 for the 2016 Application. These surveys results were deemed to still be applicable given that the application boundary remains largely the same, and therefore the previous study areas are sufficient to assess the Proposed Development. The one exception to this is for otter, where a new survey was completed in January 2019.
- 5.4.3 The consideration of potential effects on the Sandwater Site of Special Scientific Interest, covering Sand Water Loch and located to the south of the existing B9075, and otter (a protected species), were the focus of the assessment. Potential effects on habitats and other important ecological features were also considered.
- 5.4.4 Prior to the implementation of mitigation measures such as best practice construction techniques and pollution prevention control, the potential effects of the Proposed Development on Sandwater Site of Special Scientific Interest, otter and blanket bog could be significant.
- 5.4.5 However, provided that all proposed mitigation measures, such as adherence to good practice construction and pollution prevention control measures are implemented then there are not likely to be any significant effects on ecology for the Proposed Development.

5.5 Hydrology, Hydrogeology and Geology

- 5.5.1 An assessment has been carried out to consider the potential effects of the Proposed Development on hydrology, hydrogeology and geology.
- 5.5.2 The Proposed Development is located within the catchments of the Burn of Weisdale and Burn of Sandwater characterised by two valleys defined by the river systems, rising from 20 metres to 80 metres Above Ordnance Datum.
- 5.5.3 Geological mapping indicates that the majority of the Proposed Development is underlain by peat which lies on metamorphosed sedimentary rocks.
- 5.5.4 As a consequence of the Proposed Development there is the potential to impact on the existing geological, hydrogeological and hydrological environment. The potential impacts required to be assessed are; alteration of natural drainage patterns and runoff volumes/rates, pollution impact from silt-laden runoff, chemical contaminated runoff/pollution, groundwater disruption and watercourse bank integrity.
- 5.5.5 A site specific Peat Landslide Hazard Risk Assessment was prepared as part of the 2016 Application which concluded that there are three sections within the vicinity of the Proposed Development that have a medium to high risk of peat slide. This risk is caused by increased surface slope angles, greater peat thicknesses and proximity to the proposed excavation works by tributaries of the Burn of Weisdale. However, the Proposed Development includes a floating road design within areas of deeper peat which reduces the risk of peat slide significantly. The risk of instability in other sections of the proposed route has been assessed as very low to low risk.
- 5.5.6 The peat volumes for the Proposed Development have been calculated utilising the excavated areas identified along the route and modelling the cut volume of peat based on peat probing data. The total excavated peat volume along the route (with an overall length of 2090m), has been estimated to give rise to the temporary displacement of 31,150m³ of peat. The temporarily displaced peat is estimated to comprise approximately 28,450m³ of acrotelmic peat and 2,700m³ of catotelmic peat. The Proposed Development is expected to achieve an overall peat balance. All excavated material will be required for reuse as part of the works and no surplus peat is anticipated. This is detailed in a Stage 1 Peat Management Plan prepared for the Proposed Development and included within the EIA Report.
- 5.5.7 In order to reduce the impacts on the local environment a series of mitigation measures and techniques have been incorporated into the Outline Draft Construction Environmental Management Plan. These measures reduce the impact of the development, and no significant effects on hydrology, hydrogeology and geology are predicted.

5.6 Cultural Heritage

The cultural heritage assessment undertaken considers how the Proposed Development may affect archaeology and built heritage. A desk-based review of the existing baseline lead to the identification of heritage assets potentially affected by the development. This has been complimented by a site walkover to establish the importance of heritage assets, the potential effects of the Proposed Development on such assets, and the identification of suitable mitigation measures to minimise effects where practicable.

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- 5.6.2 Potential effects on cultural heritage assets could result during the construction phase from topsoil stripping and excavation associated with road cutting, embankment, drainage and other infrastructure within the construction footprint. There is also a risk of accidental damage to heritage assets outside the construction footprint from uncontrolled plant movement. Potential effects on the setting of assets could occur both during construction and in the long term because of changes to views towards and from heritage assets.
- 5.6.3 Four heritage assets exist within the Inner Study Area (i.e. within close proximity to the Proposed Development). These include a complex of earthen banks and enclosures (likely to represent post-medieval and early modern livestock management, agriculture and peat extraction), peat cutting tracks and a possible mill, all of which would are considered to be of low importance, but would be subject to direct construction impacts.
- 5.6.4 The risk of impacts on unknown archaeological remains will be reduced by a programme of archaeological evaluation. The proposed stages of this work are outlined in a Cultural Heritage Management Plan to accompany the application, and the scope of evaluation works will be detailed in a Written Scheme of Investigation, which will be agreed with Shetland Amenity Trust.
- 5.6.5 No significant effect on the setting of cultural heritage features is anticipated.
- 5.6.6 Overall, no significant effects are anticipated on cultural heritage as a result of the Proposed Development.

5.7 Other Issues

- 5.7.1 A number of other environmental factors have been considered, including:
 - Air Quality;
 - Noise;
 - Land Use, Socio-economics, Access and Recreation
 - Traffic and Transport;
 - Climate Change and Carbon Balance;
 - Population and Human Health;
 - Risk of Major Accidents and Disasters; and
 - Materials.
- 5.7.2 No significant effects are predicted for any of these features therefore detailed assessments were scoped out of the EIA Report. Nevertheless, certain mitigation measures are proposed to minimise potential effects where possible. These include:
 - Preparation of a noise management plan;
 - Measures for controlling dust and general pollution to be incorporated into the site specific Construction Environment Management Plan;
 - Preparation of a Recreational Management Plan;
 - Preparation of a Traffic Management Plan as part of Viking Wind Farm; and

• Preparation of a Site Waste Management Plan.

5.8 Cumulative Effects

- 5.8.1 Assessment of cumulative effects requires consideration of how a development is likely to interact with other similar nearby developments. While each development on its own may not result in any significant effects, multiple developments affecting the same elements of the environment, such as sensitive habitats or local residents, may result in significant effects when considered together.
- 5.8.2 Cumulative effects can also arise through the interaction between different types of effects arising from the same development on a particular aspect of the environment. For example, the effects of dust, noise, vibration, light, human presence and visual effects on a nearby protected species may individually be non-significant, but when considered together may give rise to a significant level of effect.
- 5.8.3 The assessment of the Proposed Development has given due consideration to potential effects with other projects, most notably Viking Wind Farm. No significant cumulative effects were identified, however, in many cases this relies upon the successful implementation of mitigation measures proposed for both developments.

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6 Conclusion

- 6.1.1 Viking Energy Wind Farm LLP is proposing to realign the B9075 Sandwater Road on Mainland, Shetland between the Burn of Weisdale and its junction with the A970 at Sand Water. The realignment is required to facilitate construction access, including abnormal loads, for the consented Viking Wind Farm.
- 6.1.2 An EIA Report has been prepared and submitted with the planning application and presents information on the nature of the Proposed Development, the likely significant environmental effects of the Proposed Development, and measures proposed to protect the environment during construction and operation of the Proposed Development. Consultation with statutory consultees was carried out to inform the scope of the EIA Report.
- 6.1.3 The EIA incorporates assessment of the Proposed Development's likely significant effects on the following environmental aspects:
 - landscape and visual;
 - ecology;
 - hydrology, hydrogeology and geology;
 - ornithology; and
 - cultural heritage.
- 6.1.4 Following the implementation of mitigation measures, no significant residual effects are predicted.



