

Intended for  
Viking Energy Wind Farm LLP

Date  
December 2021

Project Number  
1620009158

VIKING ENERGY WIND  
FARM  
PLANNING  
MONITORING OFFICER  
AUDIT REPORT 014:  
13<sup>TH</sup> NOVEMBER TO 15<sup>TH</sup>  
DECEMBER 2021

VIKING ENERGY WIND FARM  
PLANNING MONITORING OFFICER AUDIT REPORT  
014: 13TH NOVEMBER TO 15TH DECEMBER 2021

## CONTENTS

1.	AUDIT DETAILS	1
1.1	Audit Details	1
1.2	Distribution	1
1.3	Terms of Reference	1
1.4	Role of the Planning Monitoring Officer	2
1.5	General Limitations and Reliance	3
2.	INTRODUCTION	4
2.1	Objectives of Audit	4
2.2	Scope of Audit	4
2.3	Site Personnel	4
3.	SITE SETTING, RECORDS AND OBSERVATIONS	5
3.1	Kergord	5
3.2	Sandwater Track	5
3.3	Mid Kame Ridge	6
3.4	North Compound and North Nesting	6
3.5	Main Compound	6
3.6	Nesting	7
3.7	Substation	7
3.8	Communication with Clerks of Work	8
3.9	Scope of next audit	8
4.	AUDIT FINDINGS AND REQUIRED ACTIONS	10

## 1. AUDIT DETAILS

### 1.1 Audit Details

Audit Number	PMO 014
Location	Kergord Sandwater Road Mid Kame Ridge North Compound and North Nesting Main Construction Compound Nesting Substation
Weather Conditions	Windy, mild, dry with showers (8°C).
Audit Date	15 <sup>th</sup> December 2021
Audit Period	13 <sup>th</sup> November to 15 <sup>th</sup> December 2021
Audit Owner	Ramboll UK Ltd

### 1.2 Distribution

Position	Action
Ramboll Project Director Planning Monitoring Officer	For information
SSE Renewables Development Manager	For information
SSE Renewables Consents Manager	For information
SSE Renewables Environmental Advisor	For information
RJ McLeod Design Management Engineer	For Information
Shetland Islands Council Planning Enforcement Officer	For information
Shetland Islands Council Natural Heritage Officer	For information

### 1.3 Terms of Reference

This audit has been completed with reference to the following key documents:

- Application under Section 36C of the Electricity Act 1989 to vary the consent granted under Section 36 of that Act on 4 April 2012 to construct and operate the Viking Wind Farm located in Shetland Islands Council Planning Authority Area and for a direction under Section 57 of the Town and Country Planning (Scotland) Act 1997 for planning permission to be deemed to be granted in respect of the proposed development (i.e. the 'Variation Application').

The Viking Wind Farm project will comprise the construction of 103 wind turbines with a turbine tip height of 155 m; development of a temporary construction compound; construction of associated access tracks; development of a substation; development of a convertor station; erection of permanent Met Masts; and the excavation of borrow pits.

The project was consented as detailed above, receiving Section 36C Consent and deemed planning permission on 24<sup>th</sup> May 2019.

Separate planning consents are in place for the following specific aspects of the development:

- Construction of the Kergord Access Track<sup>1</sup> (consented on 29<sup>th</sup> April 2019).
- Re-alignment of Sandwater Road<sup>2</sup> between the Burn of Weisdale and the junction with the A970 to facilitate construction access for the Viking Wind Farm (consented on 26<sup>th</sup> May 2020).
- Formation of temporary construction compounds at two locations; Sandwater (Main)<sup>3</sup>, consented on 22<sup>nd</sup> June 2020; and North (South of Voe)<sup>4</sup> consented on 9<sup>th</sup> September 2020.

1.4 Role of the Planning Monitoring Officer

Condition No. 3 of the Variation Application states that:

“No development shall commence unless and until the Planning Authority has approved in writing the terms of appointment by the Company of an independent and suitably qualified environmental consultant to assist the Planning Authority in monitoring compliance with the terms of the deemed planning permission and conditions attached to this consent (a Planning Monitoring Officer (“PMO”). The terms of the appointment shall:

- Impose a duty to monitor compliance with the terms of the deemed planning permission and conditions attached to this consent;
- Require the PMO to submit a monthly report to the Planning Authority summarising works undertaken on site; and
- Require the PMO to report to the Planning Authority any incidences of non-compliance with the terms of the deemed planning permission and conditions attached to this consent at the earliest practical opportunity.

The PMO shall be appointed on the approved terms throughout the period from Commencement of Development to completion of post construction restoration works.

In order to discharge the above requirements, the PMO undertakes site-based audits at monthly intervals to monitor the compliance with the conditions of the consent. The primary documents used for compliance monitoring are the Construction Environmental Management Plan (CEMP); and the Pollution Prevention Plan (PPP). Additional documents will be referenced as required for specific detail.

The following traffic light system is used to indicate action status:

	Green – activities appear to be compliant with the CEMP, PPP and other applicable environmental management procedures and plans and there are no other issues.
	Amber – in general activities are compliant with the CEMP, PPP and other applicable environmental management procedures and plans but there are minor actions required.
	Red – activities may not be compliant with the CEMP, PPP and other applicable environmental management procedures and there are critical actions.

<sup>1</sup> Shetland Islands Council Planning Reference No: 2018/096/PFF

<sup>2</sup> Shetland Islands Council Planning Reference No: 2019/079/PPF

<sup>3</sup> Shetland Islands Council Planning Reference No: 2019/188/PPF

<sup>4</sup> Shetland Islands Council Planning Reference No: 2019/210/PPF

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## 1.5 General Limitations and Reliance

This report has been prepared by Ramboll UK Limited ("Ramboll") exclusively for the intended use by Viking Energy Wind Farm LLP (the "client"). No other warranty, expressed or implied, is made as to the professional advice included in this report or in respect of any matters outside the agreed scope of the services or the purpose for which the report and the associated agreed scope were intended or any other services provided by Ramboll.

In preparation of the report and performance of any other services, Ramboll has relied upon site observations, publicly available information, information provided by the client and information provided by third parties. Accordingly, the conclusions in this report are valid only to the extent that the information provided to Ramboll was accurate, complete and available to Ramboll within the reporting schedule.

Ramboll's services are not intended as legal advice, nor an exhaustive review of site conditions and/or compliance. This report and accompanying documents are intended to form a record for the purpose of documenting compliance with Condition No. 3 of the Variation Application.

Ramboll neither owes nor accepts any duty to any third party, unless formally agreed by Ramboll through that party entering into, at Ramboll's sole discretion, a written reliance agreement.

## 2. INTRODUCTION

### 2.1 Objectives of Audit

The purpose of the PMO Audits is to monitor the provision of appropriate environmental management at active work sites of the project, via desk-based review of relevant documentation and site visits to be undertaken on a monthly basis to ensure compliance with the conditions of the planning consent and associated environmental management plans.

### 2.2 Scope of Audit

The scope of the audit was as follows:

- Liaison with SIC regarding public concerns or complaints received during the audit period.
- Review of documents provided by the Client and Principal Contractor prior to and following the audit visit. Specific references are included in the relevant sections of the report.
- A site visit attended by the PMO, SSE Renewables Environmental Site Manager, and SIC Planning Enforcement Officer undertaken on 15<sup>th</sup> December 2021 which included the following locations:
  - Kergord;
  - Sandwater Road;
  - Mid Kame Ridge;
  - North Compound and North Nesting;
  - Main Compound;
  - Nesting; and
  - Substation.
- Discussions were held with the Geotechnical Clerk of Works (GCoW), Environmental Clerk of Works (ECoW) and Archaeological Clerk of Works (ACoW).

A selection of photographs taken during the audit are included in Appendix 1.

### 2.3 Site Personnel

The following site personnel were interviewed as part of this audit:

Company	Position
SSE Renewables	Environmental Advisor
RJ McLeod	Design Engineer
Tony Gee and Partners	Geotechnical Clerk of Works
MBEC	Environmental Clerk of Works
Headland Archaeology	Archaeological Clerk of Works

### 3. SITE SETTING, RECORDS AND OBSERVATIONS

Observations made during the audit are described in this section. Corresponding photographs are included in Appendix 1, alongside a plan of the site indicating the location of each photograph.

#### 3.1 Kergord

##### 3.1.1 Site Setting and Activities

Access to the Kergord Arrays is taken via the Kergord Access Track (KAT), which was accessed from the Sandwater track along the southern boundary of the central area of the development.

Activities in this area during the audit included progression of access tracks and peat restoration areas, rock extraction at borrow pits, formation of crane pad hardstanding areas, installation of steel cages and concrete pouring at turbine foundations.

##### 3.1.2 Observations

The construction of tracks and bases has continued across the arrays with steelwork and concrete pouring ongoing. The peat reinstatement along the tracks was of good quality. The drainage measures installed were also noted to be good, with measures including cut off trenches, culverts, and ditches.

It was reported by the site representative that silty water had been observed as migrating off-site into Maa Water, bypassing existing mitigation measures. Following investigation the primary source of the water was identified to be a subsurface peat pipe. In order to mitigate any flow of silty water additional silt fencing was installed and a potential source for the peat pipe was identified. It is noted that this was not a reportable incident as the concentration of suspended solids was recorded as below the reporting threshold; however the incident has been recorded through the internal project controls. There has been regular contractor-led water quality field monitoring to ensure the discharge does not exceed licensed thresholds.

Water monitoring is undertaken across the site to ensure ongoing compliance, the most recent monitoring highlighted a decrease in the pH of water close to K50. The source of the decrease in pH is currently under investigation. Ongoing ECoW led field testing has confirmed that pH levels are normalising to baseline levels. The pH levels continue to be monitored twice per week and consideration is being given to placing soft limestone in the upper regions of Red Burn (a tributary to Burn of Lunklet) should low pH levels persist.

#### 3.2 Sandwater Track

##### 3.2.1 Site Setting and Activities

A track has been constructed at Sandwater, located at the southern limit of the central site area, which provides access to the Kergord and Mid Kame Ridge wind farm areas for all construction traffic. The new track is located adjacent to the existing Sandwater Road (B7095), which remains operational for public traffic.

The Sandwater Loch is located directly to the south of the site boundary. Sandwater Loch is designated as a Site of Special Scientific Interest (SSSI)<sup>5</sup>, notified for 'Open Water Transition Fen' and 'Mesotrophic Loch' habitats.

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<sup>5</sup> As notified under the Nature Conservation (Scotland) Act 2004

## VIKING ENERGY WIND FARM

### 3.2.2 Observations

The peat reinstatement along Sandwater Track appeared to be in good condition.

During the site inspection a contractor vehicle was observed discharging concrete washings outside of the dedicated areas onto an area of formed access track. The driver was challenged and discharge stopped. An observation was recorded by the site representative. The site operative provided an explanation of mitigating circumstances as the mixer had developed a fault and needed to be flushed before the concrete solidified.

The water crossing over Burn of Weisdale has been fitted with secondary containment to capture any runoff and prevent it entering Burn. The contents of the containment are monitored, and it is replaced regularly to ensure it remains effective.

### 3.3 Mid Kame Ridge

#### 3.3.1 Site Setting and Activities

The Mid Kame Ridge (MKR) is accessed from the Sandwater track and stretches northwards to Hamarigrind Scord.

#### 3.3.2 Observations

At the north end of Mid Kame Ridge preparatory works for cable installation have begun, with ditches excavated along the track boundary. The reinstatement of peat and turves along the track had been completed to a high standard. Additionally, the backfilling of bases also appeared to be good with K78 particularly noted as positive.

### 3.4 North Compound and North Nesting

#### 3.4.1 Site Setting and Activities

The North Compound and northern Nesting turbine arrays are located towards the northern limit of the site on the eastern side of the A970. Track and bridge construction, track improvement, peat restoration, reinstatement and crane pad hardstanding formation was also being undertaken during the audit. At the North Compound batching plant 1 and 2 are in place.

#### 3.4.2 Observations

Construction had extended towards N99, there are also ongoing works along Spur 46, Spur 45, and Spur 52. At water crossing 15 the bridge had been fitted with wood panelling to prevent sediment entering the water course. The peat reinstatement along the track was observed to be good. Cut off drains are used to control the direction and flow of surface water, the drains appear to be effective in ensuring water does not drain along tracks.

The primary concrete wash out area for the site is located at the North Compound, the area comprises three bunded ponds where solids are settled out of the wash and the pH is balanced to ensure the discharge does not present a pollution risk.

### 3.5 Main Compound

#### 3.5.1 Site Setting and Activities

The Main Compound is located at the southern extent of the development site, accessed from the A970. The lower level comprises car parking and site offices and welfare facilities. The upper level is in use for material and equipment laydown.

## VIKING ENERGY WIND FARM

### 3.5.2 Observations

The site has a wheel wash area at the Main Compound which is located on concrete hardstanding. There were unknown white pellets noted in the water during the audit.

A 205L barrel of oil was observed in the Main Compound, the barrel appeared to have been damaged by a vehicle although the barrel was not leaking. The site representative immediately raised this and the barrel was moved to a suitable storage location. Additionally, it was noted that a small quantity of red diesel was stored in an inappropriate container which was leaking and had not been provided with secondary containment. The container was moved to an internal area with containment whilst a suitable disposal method was determined. It is noted that in general conformance with good practice around handling and storage of fuels has been observed to be good to date and this appears to have been an isolated incident.

### 3.6 Nesting

#### 3.6.1 Site Setting and Activities

The Nesting arrays are accessed from the A970. Activities in this area during the audit included progression of access tracks, bridges and peat restoration areas, rock extraction at borrow pits and formation of crane pad hardstanding areas.

#### 3.6.2 Observations

The activities in Nesting have included the development of Spur 38, the ongoing reinstatement of verges, and the maintenance of site drainage. The material excavated from NBP05 has been used across the project for backfilling of bases.

Track development has extended north to N127 and N128, with temporary drainage being installed to manage surface water during construction. The water crossing on Spur 24 (WC 19) was fitted with wood panelling to contain sediment; additionally, silt fencing had been installed around the water course to prevent sediment entering. Due to heavy rainfall on the previous day the silt trap required pumping out (noted to be scheduled prior to the Christmas shutdown), but the containment of silt had been maintained with no evidence of leaking into the water course.

The reinstatement of peat and turf at N114 was observed during the audit, the slope had been reinforced and no stability concerns were reported.

### 3.7 Substation

#### 3.7.1 Site Setting and Activities

The Substation occupies the northern third of the HVDC Converter Station Platform located in the Kergord Valley, between Mid Kame Ridge and Kergord. Access to the Substation is taken via the KAT. Only the substation area is subject to the PMO audit. Activities in this area included excavation, foundation work for buildings within the Substation and construction of building frame of the main building.

#### 3.7.2 Observations

The substation site was not accessible during the audit, however progress was discussed overlooking the area. Construction is ongoing with steelwork installed and preparation for the installation of pre-cast elements.

### 3.8 Communication with Clerks of Work

#### 3.8.1 GCoW

Condition 39 of the planning consent requires the appointment of a Geotechnical Clerk of Works (GCoW) to minimise the risk of peat failure arising from the development. A discussion was held between the PMO and GCoW before the site visit, on the 9<sup>th</sup> December 2021.

The GCoW described the ongoing monitoring work across the site. This has included monitoring of the general construction works, monitoring peat restoration areas and providing advice on peat handling. The monitoring did not identify any events resulting in environmental incidents. There is ongoing supervision of peat restoration areas with the GCoW working with the Principal Contractor to implement preventative measures such as lateral cut off drains. The GCoW reported a planned inspection of the cable routes.

#### 3.8.2 ECoW

Condition 19 of the planning consent requires the appointment of an Ecological Clerk of Works to ensure protection of the natural heritage of the area. A discussion was held between the PMO and ECoW before the site visit, on the 13<sup>th</sup> December 2021.

The ECoW has worked with the Principal Contractor and the Developer to develop solutions to the challenges discussed in Section 3.1.2. The ECoW is monitoring the progress of these remedial measures, the measures aim to ensure the project maintains compliance with licensed thresholds. The ECoW reported no other incidents with ecological impacts.

The ECoW has continued with regular checks across the project site.

#### 3.8.3 ACoW

Condition 29 of the planning consent requires the appointment of an Archaeological Clerk of Works to ensure archaeological features are protected and recorded during the development. The ACoW communicated the ongoing works to the PMO on the 9<sup>th</sup> December 2021.

The ACoW described the ongoing and completed monitoring works across the site. In Nesting North the monitoring of track excavation on Spur 47 (near N106) and of the extension of NBP01 are ongoing. The monitoring of track excavation on Spur 45 has been completed. There is monitoring planned for Spur 46 (near N109) as the track is excavated.

In the Nesting South array there is ongoing monitoring for the preparation for hardstanding at N132 and N143. The monitoring on Spur 26 (near N121) has been completed.

In the Kergord array there are no ongoing monitoring works. It is anticipated that monitoring will be required for the excavation of Spur 6 in the 2022.

The ACoW has continued with daily checks across the project site.

### 3.9 Scope of next audit

The scope of the next PMO audit will be dependent on the specific activities undertaken at the development site in the preceding days and weeks. This is likely to include:

- Update on progress of construction works at Kergord, Mid Kame Ridge, Sandwater Road, North Compound and North Nesting, Main Compound and Nesting.
- Consideration of any comments received by the SIC or the Developer in relation to the works, including visits to view specific areas of concern.
- Update on the formation of peat restoration areas.

VIKING ENERGY WIND FARM

- Update on the construction of borrow pits.
- Update on the construction of the VEFW Substation and audit in more detail.
- Updates from the ACoW, ECoW and GCoW teams.

## 4. AUDIT FINDINGS AND REQUIRED ACTIONS

Issue	Auditor Comments	Required Action	Action Owner	Status
Materials Storage and Handling (e.g. oil/fuel storage and peat/mineral soil storage and handling).	<p>Peat restoration areas are managed through the project Habitat Management Plan and by a dedicated HMPO which balances the geotechnical and ecological objectives of the restoration.</p> <p>Potential risks relating to storage of peat are recorded on the PRRs and communicated to the Principal Contractor to allow mitigation/monitoring to be undertaken. The PMO will request evidence in future audits to confirm compliance with requirements for GCOW and ECOW approval of proposed peat restoration areas.</p> <p>The project COSHH stores are typically used for the storage of maintenance oils and greases. The stores were all locked and the assessment for each substance was readily available in each store. The stores were bunded and no leaks or staining was observed around the stores.</p>	No action required	Principal Contractor	Green
Materials Storage and Handling (e.g. oil/fuel storage and peat/mineral soil storage and handling).	A barrel of oil and a small container of red diesel were stored in inadequate containers and without secondary containment at the Main Compound.	Ensure all oils and fuels are stored in suitable containers, particularly barrels and other large containers.	Principal Contractor	Amber
Natural and Built Environment (e.g. ecology, biosecurity, protected sites, archaeology and site restoration).	<p>Ecological constraints identified by the ECoW team are communicated to the Principal contractor and Developer to allow mitigation measures to be implemented and rescheduling of preparatory and construction work as required. These are also marked out by poles on the site and included on ecological sensitive plans issued to the Principal contractor.</p>	No action required.	N/A	Green

VIKING ENERGY WIND FARM

Issue	Auditor Comments	Required Action	Action Owner	Status
	<p>Watching briefs have been undertaken by the AcoW where potential archaeological constraints are identified. Where there are known archaeological features the track is micro-sited to avoid the feature.</p>			
<p>Pollution Prevention and Response (e.g. use of spill kits, silt control, cement/concrete, water resources).</p>	<p>The project has received authorisation to abstract water from eight locations from SEPA. The authorisation allows the water to be used for dust suppression. The PMO has reviewed documents confirming that the appropriate registration is in place with SEPA under The Water Environment (Controlled Activities) (Scotland) Regulations 2011, as amended.</p> <p>During the audit the PMO observed spill kits to be well stocked and readily available in areas where liquids are stored.</p>	<p>No action required.</p>	<p>N/A</p>	<p>Green</p>
<p>Noise, Dust, and Air Quality</p>	<p>No dust complaints had been received during the reporting period. Given the wet weather, dust suppression measures have not been required but effective measures are in place if required.</p>	<p>No additional actions required other than continued monitoring of dust conditions and implementation of control measures as needed; and ongoing liaison as required with other construction operators.</p>	<p>N/A</p>	<p>Green</p>
<p>Resources, Waste and Transport.</p>	<p>The project manages wastes through a Site Waste Management Plan, the plan identifies the contractors transferring the waste and the disposal sites. Documents are retained in line with regulatory requirements.</p>	<p>No action required.</p>	<p>N/A</p>	<p>Green</p>
<p>Pre-Planning Works (e.g. site set-up and general</p>	<p>Evidence of pre-planning works observed and reported during the audit included pre-</p>	<p>No action required.</p>	<p>N/A</p>	<p>Green</p>

VIKING ENERGY WIND FARM

Issue	Auditor Comments	Required Action	Action Owner	Status
management, access tracks, community liaison).	construction surveys, nesting bird surveys, and micro-siting of access tracks to account for constraints. Potential constraints are identified and suitable mitigation measures implemented to prevent negative impacts.			

## APPENDIX 1

### 1. SITE LOCATION PLAN AND PHOTOLOG



Photo 1. View of Maa Water from KBP03 and the peat reinstatement works.



Photo 2. View of the upper catchment of Red Burn.

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 15 <sup>th</sup> December 2021



Photo 3. Overview of construction at the converter station.



Photo 4. View of the additional sediment containment measures at Pettawater Bridge.

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 15 <sup>th</sup> December 2021



Photo 5. View of the excavation in preparation for cables to be installed on Mid Kame Ridge.



Photo 6. The completed base K78 which has been backfilled.

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 15 <sup>th</sup> December 2021



Photo 7. The settlement and balancing bunds used to clean concrete wash out.



Photo 8. The sediment containment measures around water crossing on Spur 24 are preventing sediment flow into the Burn.

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 15 <sup>th</sup> December 2021