Intended for
Viking Energy Wind Farm LLP

Date
July 2022

Project Number
1620009158

VIKING ENERGY WIND FARM
PLANNING MONITORING OFFICER AUDIT REPORT 021: 18TH JUNE 2022 TO 20TH JULY 2022

RAMBOLL

VIKING ENERGY WIND FARM
PLANNING MONITORING OFFICER AUDIT REPORT
021: 18TH JUNE 2022 TO 20TH JULY 2022

Ramboll
80 George Street
Edinburgh
EH2 3BU
United Kingdom
T +44 131 297 2650
www.ramboll.co.uk

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1. AUDIT DETAILS

1.1 Audit Details

Audit Number	PMO 021
Location	Kergord Mid Kame Ridge North Compound Main Construction Compound Nesting Substation
Weather Conditions	Slight breeze, Dry and mild (16°C).
Audit Date	20th July 2022
Audit Period	18th June to 20th July 2022
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 24th May 2019.

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

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

[1] Shetland Islands Council Planning Reference No: 2018/096/PFF
[2] Shetland Islands Council Planning Reference No: 2019/079/PPF
[3] Shetland Islands Council Planning Reference No: 2019/188/PPF
[4] Shetland Islands Council Planning Reference No: 2019/210/PPF

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.
  - Concerns were raised during the audit period regarding a peat slide on the Mid Kame Ridge with questions directed to the Community Liaison Group.
- 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, RJM Environmental Clerk of Works and SIC Planning Enforcement Officer undertaken on 20th July 2022 which included the following locations:
  - Kergord;
  - Mid Kame Ridge;
  - North compound;
  - Main Compound; and
  - Nesting;
- 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 Site Manager
RJ McLeod	Environmental Clerk of Works (ECow)
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 and formation of crane pad hardstanding areas.

3.1.2 Observations

The construction of tracks and bases has continued across the arrays with steelwork and concrete pouring, and the backfilling of bases ongoing. Installed drainage measures are of good quality and preventative mitigation will continue to be installed as turbine base and hardstanding excavation continue. The base excavation at K68 was observed by the PMO. Limited work was ongoing on site due to summer holiday stand-down. The PMO observed equipment for dewatering the excavation, including a pump unit (sat on spill mat) and hoses discharging to vegetation via silt fencing (see photos 1, 2 and 3).

The PMO observed the construction crew in the process of building watercourse crossing WC03 (photo 4 and 5), which drains the Truggles Water (between K64 and 66). There was evidence of ground reinstatement around the foot of the bridge foundations and rock filled gabions, which was noted to be good practice, with reinstatement progress in parallel with the work, rather than being left until the end. Spill kits were checked and found to be in good order.

The PMO observed the drainage management measures installed adjacent to the track to treat runoff from borrow pit KBP03 (photo 6 and 7). The installed measures appeared to be effective in providing settlement of solids prior to discharge, although it was dry at the time of the audit. Some of the silt fencing downstream of the track was noted to be loaded with sediment and will require ongoing maintenance. The SSE Environmental Site Manager confirmed that the need to clean out these silt fences has been set as an action in the Environmental Mitigation Log/Risk Register for the project.

3.2 Mid Kame Ridge

3.2.1 Site Setting and Activities

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

Cable trench excavation, the laying of the base material (site won aggregate) and the laying of the cables was being undertaken during the audit.

3.2.2 Observations

A peat movement event was recorded on the 4th July 2022 adjacent to spur 18 on the MKR (located at approximately chainage 500). A section of the cable trench approximately 15 m long and 8 m wide slipped down the west side of MKR, over a distance of approximately 72 m. The incident was reported in the local media some days after the event had been noted, remediated and reported internally. The PMO understands that following an investigation it was found that

an alternative construction method would have been more effective in this location. Remedial action was taken quickly, with the peat reinstated using a series of rock bunds. The cable trench is now founded, rather than floating.

The PMO visited the MKR and can confirm the reinstatement of the peat movement (photo 8,9 and 10). The peat movement resulted in localised disturbance of peatland. No other environmental consequence was noted. The PMO understands that SEPA attended site following the event and raised no issues regarding environmental damage or risk.

Works on the west side of MKR are ongoing on the cross country cable route. All parties have identified the potential geotechnical concerns associated with the construction of the cross country routes. The Contractor and their Geotechnical Consultant are following the construction methodology and Peat Risk Registers have been prepared and assessed for the cable routes ahead of the works. This Risk Register includes the Contractor's mitigation in connection with the Method Statements and Risk Assessments. The principal mitigation is understood to be avoiding the stockpiling of peat or excavation arisings at the edge of the cable route.

3.3 North Compound

3.3.1 Site Setting and Activities

The North Compound is located towards the northern limit of the site on the eastern side of the A970. At the North Compound batching plant 1 and 2 are in place.

3.3.2 Observations

The PMO visited the North Compound during the audit.

The fuel storage at the compound was noted to be in good order, with spill kit provided (photo 11). Waste segregation was in place with appropriate signage noted (photo 12).

PMO 19 noted that IBCs were being stored on the compacted stone surface rather than on bunded hardstanding. The Developer and the PMO agreed that temporary impermeable bunding would be necessary to mitigate the risk from potential spills from the IBCs reaching the ground.

During PMO 20, three IBCs were observed to be on the compacted stone surface, however all were in use with the concrete pouring works that were ongoing. The remainder of the IBCs were on hardstanding. It was discussed with the H&S Advisor during the walkover that the management of the IBCs were under review and that risk assessments were being updated. It was however agreed that if IBCs are not being stored on bunded concrete hardstanding then they should be in a temporary bund.

During PMO 21, four IBCs were observed to be on the compacted stone surface (photo 13). Two were in use with the concrete batching works that were ongoing, while two were reportedly expected to be used later in the week. The remainder of the IBCs were on hardstanding. It was discussed with the RJM ECOW at the time and later with the SSE Environmental Site Manager. Both agreed that temporary impermeable bunding should be provided e.g. in the form of visqueen sheeting and stone.

3.4 Main Compound

3.4.1 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.

3.4.2 Observations

The car parking, site offices and welfare facilities are functioning well. All materials are stored according to regulations. No evidence of leaks or staining was observed in the vicinity of the store. All waste skips are clearly labelled.

3.5 Nesting

3.5.1 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, cable trench excavation, rock extraction at borrow pits and formation of crane pad hardstanding areas.

3.5.2 Observations

The PMO visit included observations at turbine base N119, where a crew was setting up a closed loop water cooling system, pumping water through the recently poured foundation base. The system was set up with IBCs of water, recirculating the water through the comms and electrical cable ducting installed in the base (photo 14).

Observations were made at the peat restoration area adjacent to NBP05 (photo 15). Stone and mineral content was noted on the surface. The PMO understands that final steps in the restoration work are still to be undertaken and further guidance is being sought from the Habitat Management Plan officer and local peatland restoration contractor in order to restore the eroded peatland such that conditions are created, which in time will be conducive to the formation of blanket bog. The PMO understands that this restoration will not be completed until works at NBP05 are complete and restoration will be carried out in conjunction with the borrow pit reinstatement to ensure a sympathetic and blended finish across the areas.

3.6 Substation

3.6.1 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 construction of building frame, cladding and pre-cast equipment foundations.

3.6.2 Observations

The PMO made observations of works currently being undertaken under license to install cable ducts under the northern perimeter drain, which ultimately discharges water into the Burn of Weisdale. The perimeter drain has been temporarily diverted and crews were noted to be overpumping water during the site visit (photo 16) into an adjacent field, with appropriate silt fencing in place.

The PMO noted that ecologists were surveying to map the extent of a rare bog orchid at the time of the audit, with the objective of seeking to avoid impacts during cable installation.

3.7 Communication with SIC

As described in Section 3.7, SIC advised the PMO of a public observation that had been received regarding the MKR peat movement. The PMO understands that the issues raised were addressed at the Community Liaison Group (CLG) meeting held on the 19th July 2022.

3.8 Desk Based Audit

3.8.1 Condition 4: Construction and Environmental Management Plan - Water Quality Monitoring

A Water Quality Monitoring Plan was agreed under condition 4 of the planning consent. The PMO has reviewed the most recent Freshwater Invertebrate Monitoring Report (June 2022) prepared as part of the wider Water Quality Monitoring Plan. The report confirms ongoing compliance with the terms of the Water Quality Monitoring Plan. Monitoring of all water courses is ongoing. Where reportable and/or non-conformances have been identified the PMO has confirmed that the appropriate internal measures are taken and relevant external bodies notified.

3.9 Communication with Clerks of Work

3.9.1 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 13th July 2022.

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 GCoW confirmed the peat movement on MKR and that the main cause has been identified as the type of construction method used at this specific location, as opposed to a more effective alternative. The GCoW has highlighted the potential ongoing risks on the west side of the MKR associated with the cross country cable route. These risks are noted in the risk register and will be continually monitored on site during construction.

3.9.2 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 19th July 2022.

The ECoW continues to work with the Principal Contractor to identify and implement mitigation measures throughout different stages of construction. The measures aim to ensure the project maintains compliance with relevant licences. The ECoW is monitoring the progress of these measures on an ongoing basis.

The ECoW noted the importance of dust mitigation, including mitigating the dust spread onto nearby vegetation. The ECoW understands that RJM have five water bowsers available to damp down tracks..

The ECoW noted good practice by RJM to protect rare birds including red throated diver and great skua (bonxie).

3.9.3 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 19th July 2022.

The ACoW described the ongoing and completed monitoring works across the site. Ongoing works mostly related to cabling work.

The ACoW noted dialogue with the SSE Environmental Site Manager regarding the level of monitoring required for the cable trench works and the cross-country cable routes has completed and are in agreement.

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

3.10 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 cable track areas.
- Update on the construction of the VEWF Substation and undertake PMO audit of the substation area.
- 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).	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. 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. 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.	No action required	Principal Contractor	Green
Materials Storage and Handling (e.g. oil/fuel storage and peat/mineral soil storage and handling).	Approximately 4 no. IBCs with concrete plasticizer were being stored directly on the ground, rather than on an area of hardstanding.	A temporary bund is required whist the IBCs are being stored off the hardstanding. The SSE Environmental Site Manager has confirmed that the contractor will provide a temporary "bund" made up of a visqueen sheet bunded with sandbags.	Principal Contractor	Amber
Natural and Built Environment (e.g. ecology, biosecurity, protected sites,	Ecological constraints identifed 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.	No action required.	N/A	Green

Issue	Auditor Comments	Required Action	Action Owner	Status
archaeology and site restoration).	These are also marked out by poles on the site and included on ecological sensitive plans issued to the Principal contractor. Watching briefs have been undertaken by the AcoW where potential archaeolgical constraints are identifed. Where there are known archaelogical features the track is micro-sited to avoid the feature.			
Pollution Prevention and Response (e.g. use of spill kits, silt control, cement/concrete, water resources).	The project has recieved 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. During the audit the PMO observed spill kits to be well stocked and readily available in areas where liquids are stored. The project continues to improve the pollution prevention measures with additional measures installed in high risk area. PMO observed effective measures in place including but not limited to cut off drains, settlement ponds, silt controls, track side ditches and water pump reactor.	No action required.	N/A	Green
Pollution Prevention and Response (e.g. use of spill kits, silt control, cement/concrete, water resources).	Good practice pollution prevention measures were observed around the site.	No action required.	N/A	Green
Noise, Dust, and Air Quality	The ECOW has highlighted the ongoing need for dust mitigation.	Continued monitoring of dust conditions and	N/A	Green

Issue	Auditor Comments	Required Action	Action Owner	Status
		implementation of control measures as needed; and ongoing liaison as required with other construction operators.		
Resources, Waste and Transport.	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.	No action required.	N/A	Green
Pre-Planning Works (e.g. site set-up and general management, access tracks, community liaison).	Evidence of pre-planning works observed and reported during the audit included nesting bird surveys, archaeological watching brief, community liaison. Potential constraints are identified and suitable mitigation measures implemented to prevent negative impacts.	No action required.	N/A	Green

APPENDIX 1
PHOTOLOG

Photo 1. Base excavation at k68

Photo 2. Pump on spill mat

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022

Photo 3. Drainage from k68 excavation

Photo 4. WC03 construction

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022

Photo 5. WC03 construction

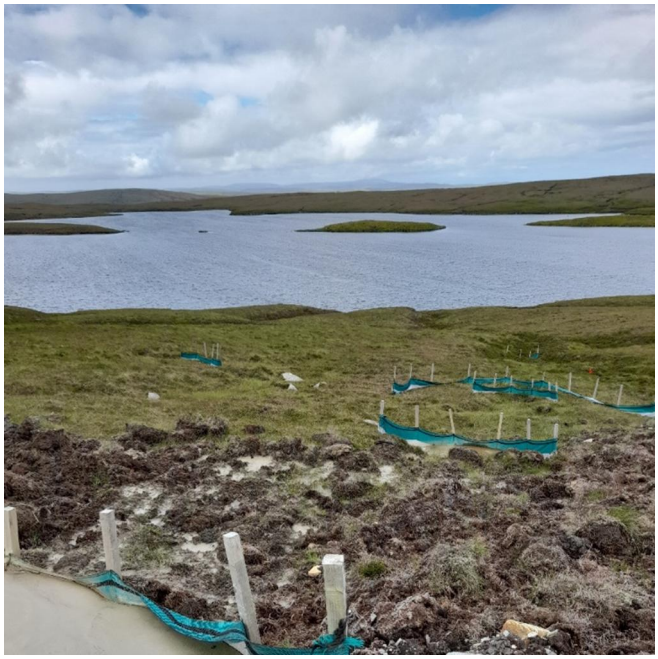

Photo 6. Silt mitigation

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022

Photo 7. KBP03 Drainage Management

Photo 8. MKR Cable Track/Trench Preparation

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022

Photo 9. Peat Landslide on west side of MKR following reinstatement

Photo 10. Start of temporary track construction for cross country cable to connect to substation from MKR

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022

Photo 11. Refuelling mobile fuel bowsers at North Compound

Photo 12. Waste segregation at north compound

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022

Photo 13 IBCs stored outside bunded area

Photo 14 N119 – curing using recirculated water

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022

Photo 15 Peatland Habitat Restoration Area adjacent to NBP05

Photo 16 Cable ducting works under the substation perimeter drain

Title: Photographic Log	Client: Viking Energy Wind Farm
Site: Viking Energy Wind Farm	Date: 20th July 2022