

A spokesperson for SSE Renewables said:

“The overall footprint from Viking infrastructure is more than offset by the work being done to restore historically eroded peatland and the creation of more blanket bog.

“The importance of blanket bog in our changing climate is well known and the management of peat – including handling, storage, reuse, reinstatement and restoration – throughout construction of the Viking Energy Wind Farm (VEWF) is, therefore, a key priority for the project.

“An active bog is one that supports peat-forming species such as sphagnum mosses and cotton-grass. It captures and stores significant amounts of carbon, as well as providing a home for a variety of upland bird species and specialist plants.

“An unhealthy bog, which is actively eroding, releases carbon back into the atmosphere and, left unchecked, this erosion has the potential to spread across very large areas. Grazing by sheep, coupled with Shetland’s extreme climate, has left large parts of the wind farm site in poor condition. At its worst, large areas of peat are entirely lacking a vegetation cover, while others have no peat left at all.

“Viking Energy’s Habitat Management Plan (HMP) has been approved by SEPA, NatureScot and Shetland Islands Council, and we remain committed to working in accordance with this, supported by the Shetland Windfarm Environmental Advisory Group (SWEAG). SWEAG was established to support the project through the sharing of knowledge and the promotion of learning, and acts as an independent expert advisory group to oversee a comprehensive programme of conservation and environmental measures.

“At present, the peat generated by the excavation of tracks and turbine bases is being used to fill in bare, actively eroding areas, with the intention of halting the erosion process and the associated release of carbon. Where possible, these areas are being turfed using vegetation from the site, though some areas will be seeded with species including those native to Shetland’s blanket bog. This will stabilise the peat surface and allow species such as sphagnum and cotton-grass to colonise naturally.

“Once construction is complete, the process of peatland restoration will continue, using more ‘traditional’ techniques, for example reprofiling peat hags (bare edges) and damming the gullies that guide water away from the blanket bog. These methods have been tried and tested in Shetland over recent years, through the Scottish Government funded Peatland Action Project, implemented by Shetland

Amenity Trust. Shetland Amenity Trust and the Peatland Action Project are represented on SWEAG by members experienced in Shetland peat restoration.

“It is important to note that the restoration programme has various phases including the arresting of historic and ongoing erosion, the bulk filling of bare peat areas, the improvement to surrounding topography and hydrology and the promotion of local ecological habitats. This is a programme of work and activities which will require input from various sources and bodies over decades to achieve success. What is being undertaken in the 3 to 4 years of construction of the windfarm are the first steps in returning a swathe of land on the Shetland mainland to its original blanket bog conditions”.

- What volume of peat has so far been excavated, is it in line with expectations at beginning of the project?

The peat management plan(s) estimated the peat excavation volume to be 2.3M m³. To date, the actual volume of peat excavated is c.1.9M m³. At the time of writing, there has been 56 km of a total of c.67km of access track constructed, two construction compounds developed, one concrete batching plant compound developed, five borrow pits opened and 44 turbine foundation bases excavated.

- How much of that peat has been treated as waste, and how much used in restoration?

All peat excavated in the construction of the wind farm infrastructure is being retained on site and reutilised for restoration works or for reinstatement in situ. No peat has been removed from site as waste.

- Is the payback time still between one and two years? And was that using a 10m hydrology range?

The expected carbon payback for the wind farm is 1.65 years. A number of parameters are considered in the carbon payback calculations, including hydrology ranges measured at 10m, 20m and 50m. To put this in context, hydrology ranges in Scotland have been measured at 0m to 23m in reality on the ground, heavily dependent on prevailing local hydrology and climatic conditions.

- Big uncertainties in the calculations around drainage impact and efficacy of restoration?

The project employs an independent habitat management planning officer with a background in ecology. A central part of his duties is to ensure that suitable hydrological conditions are created to promote the creation of blanket bog conditions in restoration areas. Post construction, a monitoring programme, overseen by Shetland Wind Farm Environmental Monitoring Group (SWEAG), will be put in place to oversee the establishment, implementation and monitoring of best

practice in the restoration areas and, where required, additional work will be undertaken to continually adapt best practice to promote the long term development of the habitats.

- Payback times could be significantly underestimated?

Given that hydrological drainage buffers sit well inside 10m, in reality, on the ground in Shetland, it is more likely that the payback time could be argued to be an overestimate.

- Without a bond, restoration is not guaranteed, and that's a big problem?

All aspects of decommissioning are governed by a detailed 'SEPA and NatureScot approved' Site Decommissioning, Restoration and Aftercare Strategy (SDRAS), which can be found on the SIC planning portal as well as the Viking Energy website. The value of the final guarantee and the details surrounding it are founded on the SDRAS and, once set, the guarantee will be subject to five-yearly review. Revised initial proposals currently sit with the SIC and are close to agreement.

- The impact on peat hydrology of floating roads could be decades-long and is not understood or reflected accurately in the calculator?

The use of floating roads helps to minimise excavated peat volumes and overall disturbance of deeper peat. The parameters in the calculator are provided by the relevant statutory authorities.

- Building wind farms on deep peat must stop immediately, and even shallow peat is questionable?

The central Mainland of Shetland, where the Viking Wind Farm is located, is characterised by large tracts of significantly damaged and eroded existing peat habitats. Viking has a programme of reinstatement and restoration works which offsets the disturbance from the installation of infrastructure. There is a commitment made to SIC and relevant statutory authorities to restore areas which result in some 260ha benefiting from direct intervention in the restoration of these historically damaged and eroded areas. In the absence of other initiatives and interventions, natural erosion of these extensive areas would otherwise continue unchecked.

In response to your question about the area of the wind farm and the area disturbed:

The land area of the consented S.36 site is 7000ha. However, it is important to note that the land use area actually disturbed within that wider site boundary, during construction, is c.96ha.