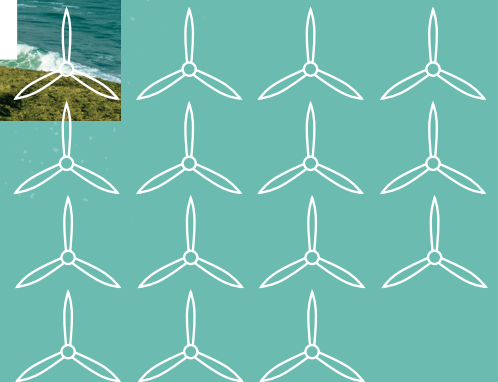


# Building Shetland's energy future

APRIL ISSUE 2024



TRANSMISSION



### About SSE Renewables

SSE Renewables is a developer and operator of renewable energy across the UK and Ireland, with a portfolio of around 4GW of onshore wind, offshore wind and hydro. Part of the FTSE-listed SSE plc, its strategy is to drive the transition to a net zero future through the world class development, construction and operation of renewable energy assets.

SSE Renewables owns nearly 2GW of operational onshore wind capacity with over 1GW under development. SSE Renewables also has the largest offshore wind development pipeline in the UK and Ireland at over 6GW, of which around 3GW is in construction or consented.



### About Viking Energy Wind Farm

Viking Energy Wind Farm (VEWF) is a 103-turbine onshore wind farm set around the central Mainland of Shetland. The £580m project is owned by SSE Renewables and construction began in the autumn of 2020.



TRANSMISSION

### About SSEN Transmission

SSEN Transmission, operating under licence as Scottish Hydro Electric Transmission, owns, operates and develops the high voltage electricity transmission network in the north of Scotland. Its network consists of underground and subsea cables, overhead lines on wooden poles and steel towers, and electricity substations, extending over a quarter of the UK's land mass crossing some of its most challenging terrain.

SSEN Transmission powers the communities its network serves by providing a safe and reliable supply of electricity, taking the electricity from generators and transporting it at high voltages over long distances through the transmission network for onwards distribution to homes and businesses in villages, towns and cities.

We are committed to inclusive stakeholder engagement, and conduct this at an 'Accomplished' level as assessed by AccountAbility, the international consulting and standards firm.

### Keeping in touch

We are keen to hear your feedback, so if you have any questions about the newsletter or the works currently underway please contact:

SSEN Transmission Community Liaison Manager Thea Groat [thea.groat@sse.com](mailto:thea.groat@sse.com) / 07901 127 205

Viking Energy Wind Farm Stakeholder Engagement Manager [Julie.Graham2@sse.com](mailto:Julie.Graham2@sse.com) / 07586 282236

To find out more about the projects and to register for updates please visit:

[www.ssen-transmission.co.uk/projects/Shetland/](http://www.ssen-transmission.co.uk/projects/Shetland/)  
[www.vikingenergy.co.uk/](http://www.vikingenergy.co.uk/)

# Getting Ready For Grid



## Wind Farm Array Cabling works

Despite the harsh weather over the last couple of months our cable installation contractor managed to safely complete the last of the high voltage and fibre cable installations to the turbines. This was coupled by a stellar effort from our jointing teams, despite the challenging conditions, who managed to complete all HV and fibre cable jointing.

With all the cabling and jointing between the turbines and 33kV substation now complete, this allowed for the next stage of cable testing to be undertaken to ensure that all cable installed meets the test criteria, before being given the green light to commence with all the final HV terminations

to the turbine 33kV switchgear and back at the main 33kV substation (see photo above).

Once all high voltage cable terminations were complete, we moved to the final suite of High Voltage cable tests which are required to be undertaken prior to the first energization of the array cables. All 16 circuits (arrays) have now been fully tested and are ready to be put into operational use. Similarly, all fibre final connections and tests are complete, and we have established communications with our SSE Renewables Wind operation center, and they now have visibility of Viking Wind Farm. We are now progressing with the full commissioning of the turbines in preparation for our grid connection.



VEWF Platform Overview

### Viking Wind Farm 132/33kV Substation

Progress at the substation has seen some challenges over the last couple of months, but we are pleased to say we have been able to overcome these to maintain our schedule for the final connection to the grid.

In what has been a theme of this project, the wintry weather has had an impact, however with our civil teams making some early starts to keep roads clear, we were able to gain access for our many commissioning teams to continue with stage 1 commissioning of all our 132kV and 33kV plant and equipment.

Less challenging conditions were faced by our substation commissioning teams that that of our cable laying teams as all our 33kV and 132kV plant and equipment is housed within buildings/enclosures and sheltered from the Shetland elements to ensure the longevity of our plant and equipment.

See photos of our enclosures housing our plant and equipment:

Commissioning works have been ongoing over the last 9 months varying from our smaller systems i.e. communications, CCTV, fire and intruder alarm, battery backup systems before commencing with the more onerous high voltage switchgear, Grid transformers, and control and protection systems, these commissioning activities have been spread over the latter months and all leading and contributing to the final stage 2 commissioning



132kV Grid Transformer Hall

works once our Grid connection is established in spring 2024.

We will undertake our stage 2 commissioning with live 132kV and 33kV plant and equipment ensuring that all of the commissioning plans are followed, and all test and inspection criteria is met and signed off, after which we will be ready to provide the clean Energy to the people of Scotland.

# What's in Store for 2024 – Environmental Summary

The first three months after Christmas on any construction project are generally busy with the team getting back to work, picking up where they left off and assessing the impacts from the festive break. (Photo Back to work challenges) This year hasn't been too different, other than a reduced workforce now that the main infrastructure works have been completed.

The environmental focus has been on ensuring that temporary drainage control systems are replaced or removed, where they are now not required and that permanent drainage systems are functioning as expected, ensuring there is protection against erosion run off and maintaining the natural water flows to ensure wetland habitats are maintained.

This all forms part of a "snagging" exercise, requiring all disciplines across the project team to input to identify areas in need of additional work. At time of writing there are a few aspects still to be resolved, including monitoring of the upgrade of the Sandwater track, to the new B9075 public road which will be taking pace over the spring and early summer months.



Permanent Drainage



Sandwater Road Layouts



Back to Work Challenges

Water quality monitoring will continue throughout 2024 and in keeping with the applicable planning condition, will continue at least 12 months post commissioning. Similarly, the final season of ornithological monitoring will be carried out in 2024 resulting in a report analyzing the impact of construction works on bird populations and impacts on habitat dispersal.

We are currently engaging with treatment specialists to explore long term treatment systems for the Burn of Lunklet and Weisdale. We are focused on developing a long-term solution which can be easily maintained in the operational phase. We remain in consultation with SIC and SEPA on the development of these systems.

The progression of the initiatives set out in the Habitat Management Plan (HMP) are the primary priority for environmental handover. SSE Renewables have employed

an Operational Environmental Manager to oversee the continuation of these works, a detailed handover and familiarisation period has been ongoing since January of this year. The goals and aims the HMP will continue to be attained, with additional initiatives, new ways of working and monitoring are being investigated to not only reach but actively try to exceed the original commitments.

While at times for those of us who have been involved in construction since 2020, it can feel like everything is changing, the reality is nothing is changing.

The environmental goals and initiatives enshrined in the construction plan will continue, and looking ahead, the SSE Renewables Operational team will be looking to build on the portfolio of ecological improvements already set out, while ensuring there are negligible environmental impacts from operational activities.

# Sandwater Road

Works are due to recommence on Sandwater Road ahead of surfacing works scheduled to start in mid April of this year. With Sandwater Road being one of the 1st parts of the project constructed, it will be great to see it completed and opened as a public road. For the past 3 years RJM have been monitoring the material already placed on the floated sections of Sandwater Road, along with Tony Gee and SSE Renewables, to ensure the road is stable and ready for the next phases of work.

Kerbing is well underway to all junctions leading to the A970 from the site including the new junction from Sandwater Road. The kerbing installed is a beany block kerb that has an internal drainage system within it to assist drain the junctions and prevent standing water during the heavy periods of rain that Shetland is often subjected with. Stone has been crushed on site in the borrow pits located in Kergord and then transported to Sandwater Road using the 30 ATD's and stockpiled on the road. This stone will be used to upfill to the underside of the tar surface. The stone will be placed with the on site excavators and 13t rollers

and our engineers will continually monitor the level of the stone to ensure a smooth surface is created head of the tar being placed. Tar will be delivered from Scord Quarry to site in tipper wagons with the surfacing works programmed from April into June with specialist plant brought to site to accurately place the tar.

Once the surfacing has been completed white lines, signage, road restraint barriers and the parapet to Pettawater bridge will be installed to bring the road to a standard ready for adoption by Shetland Islands Council. RJM also have ducting to install to both side of the new road before landscaping at the edge of the tar. Final landscaping will then be completed along with the final sections of drainage ditching and drainage ponds to deal with the surface water created by the new tar finish. Upon completion of the landscaping local fencing contractors will install fence lines to keep a boundary between the livestock and traffic using the new road. The new road will be a quicker and most importantly a safer route to drive past Sandwater Loch once open to the public.



Sandwater Road Culverts

# Financial Bond

The financial bond for Viking Energy Wind Farm has now been formally agreed with Shetland Islands Council, as has the mechanism for providing the guarantee in the form of a Standby Letter of Credit (SLoC), from a mutually agreed financial institution. This follows a period of ongoing engagement between SSE Renewables and Shetland Islands Council and the associated planning condition is now discharged.

## Parking at Sandwater Road

In accordance with the planning conditions of the Sandwater Road consent, a temporary carpark is currently in place at Sandwater Road. A further planning condition requires the construction of a permanent carpark at Sandwater Road. It is intended this will be located close to the B9075 and A970 junction. The carpark will provide a safe, public parking area to benefit the local community for commuting and recreation.



B9075 and junction of A970



Proposed area to be redeveloped into recreational carpark

## North compound

North Compound located at Scars Quilse was previously utilised as a batching plant compound. It is proposed a section of this area will be redeveloped into a carpark with picnic area. Providing additional recreation facilities, and offering easier access for the community and visitors, to the wind farm tracks in the north of the site and Mid Kames ridge area. A full planning application for this proposal will be submitted to Shetland Islands Council in due course.

## Green Energy Award Win.

The team at Viking got a lovely big pat on the back when it was announced at the Scottish Green Energy Awards in Edinburgh late last year that the work they have done in the Shetland community had been recognised with the Best Engagement Award. Their Community Engagement Strategy was recognised which represents years of dedicated work with groups and organisations across Shetland, especially young people. We would like to thank everyone who has worked with us over the last three years, it has been our pleasure to get the opportunity to meet so many.





# SSER's Graduate Programme

As part of SSER's Graduate Programme I recently had the unique opportunity to spend a 3-month placement within the Turbine Package team, working on Viking Energy Wind Farm (VEWF). The entire project team quickly welcomed us on board, and it was great to get such a vast exposure to the ongoing site activities as well as how the construction, design and management (CDM) regulations are maintained daily on a site level. Being able to not only visit, but to live and involve myself in Shetland's rich culture and fabulous scenic beauty is an experience I will treasure for life. Seeing both the 27's and 65's orca pods was definitely an added bonus!



Chay Ross



Alexander Potapov Crighton

## Viking Graduate Experience- Chay Ross

I'm Chay Ross, a renewables graduate from SSER. Last summer, I had the incredible opportunity to spend three months in Shetland. Having previously worked in oil and gas on the island, returning to Shetland to be part of its green energy transition was a privilege. Not only was I able to contribute and learn from the innovative Viking project,

but I also had the opportunity to fully immerse myself in the island's rich culture, even developing a fondness for saucermeat. My journey on Shetland reflects the spirit of innovation and collaboration driving sustainable progress in Scotland, and highlights the opportunities that Shetland presents as we navigate the just energy transition.

# Make Some Noise

Last year we were approached by the organisers of Make Some Noise to see if we could offer support to enable an inclusive and diverse cabaret evening to take place at the Mareel in Lerwick. As SSE encourages us to be our authentic selves and our strong link to Shetland Pride, this seemed an ideal opportunity. Make More Noise took place just before Christmas and had a wide range of different acts, some local and others who travelled from the mainland. This is the third time this event has taken place, the first since covid.

Taking part were Drag Queen Timberlina, who returned with her hugely popular Big Bingo Show, this year with Aunt Maureen in tow, Marjolein Robertson, performing some of her hit comedy from her Edinburgh Fringe show, currently gaining 5-star rave reviews! Aerial hoop performances from Chrissie Ardill Shetland's own party-starters, klezmer-infused Odesa will be the house band, with Aunt Maureen spinning hits for the dancers in the Café Bar and a first performance by Victoria Pier – Shetland's first home-grown drag queen.

The event was really well attended, and we were thrilled to be able to support it.



# Support in the community

We are always looking to support a range of organisations and community ventures here at Viking and the upkeep of the Dim Riv is the latest of these. We were approached by the committee that runs and maintains the vessel for support to keep her in the water.

Over forty years ago a replica Viking longship was built by a local boat builder in Shetland and launched in 1980. She is 40ft long excluding the head and tail. A competition to name her was run by the committee, with schools and the name Dim Riv was chosen. It means the dawning of a new day,

the strip of light when the sun rises over the horizon.

Since its launch it has been a focal point along Lerwick's waterfront and offers short trips around the harbour. The Dim Riv is looked after by a group of volunteers and is stored away during the winter months where any repairs can be undertaken. It is run and crewed by volunteers.

The £2,500 we donated will help keep this iconic vessel in the water and bring enjoyment to countless visitors in 2024.



## Helping create new wellbeing spaces

When we were approached by Aith Junior School to support their project to install new polycrubs tunnels to create new outside spaces for the pupils, we were more than happy to help. The current provision of internal social space for pupils is lacking, which is felt particularly on days with poor weather. The new tunnels will help to create new social spaces, which will help with pupil wellbeing and enable them to get close to nature, even if the weather doesn't allow. We are looking forward to seeing how the pupils make use of these new outdoor multi-functional spaces.



# An update from SSEN Transmission project teams

## Shetland HVDC Link

2024 marks the final year of construction for the Shetland HVDC link project and the commissioning team at Kergord are now underway with Stage 2 Commissioning, which is the final activity to be completed before formal handover of the HVDC system to National Grid Electricity System Operator (ESO).

In February the project reached a key milestone when they handed keys over to SSEN Transmission's Operations team who will be the operator of the Kergord site going forward. The Kergord site is now governed by SSEN Operational Safety Rules (OSR's), and access to the substation is now restricted and only those involved in critical commissioning activities have access.

SSEN Transmission and Hitachi Energy commissioning specialists are working together closely as they progress through the commissioning switching programme for energisation and integration of the HVDC link and new Shetland Transmission network into the existing mainland

electricity network. This will also include coordination with Viking Energy Wind Farm (VEWF) to ensure both SSENT and VEWF commissioning activities can be completed in conjunction with each other.

## Lookahead:

- Continue with Stage 2 Commissioning,
- On track for handover to National Grid on 1st July 2024

**Gremista GSP update:** Below ground concrete works have now all been completed, and the civils team are preparing for the ground level works including concrete slabs. A mobile crane has been on site from March to commence erection of the buildings structural steel frames starting with the transformer buildings, the first of which has been completed. The second transformer building is in progress before the focus moves on to the Control Building. In parallel with the building works, below ground drainage, ducting and earthing will commence from April.

GSP progress, March 2024: Photo courtesy of Shetland Flyer





First batch of the cable drums arrived in Shetland

**Under Ground Cable update:** All 132kV cables have now been manufactured and split into three batches of deliveries, with the first batch successfully delivered to Shetland in March. Batches two and three should be completed by the end of May. We are working closely with a local company to keep the cable drums in storage until they are required.

Ducting route progress is going well, and the first Horizontal Directional Drilling (HDD) under the Weisdale burn is now successfully complete. HDD is used, where appropriate, to avoid disturbing the environment and reduce disruption, for example, to public roads.

From the Kergord Substation to Sandwater, all temporary access tracks have been constructed and some have now been reinstated now that duct installation is complete.

Ducting works have commenced on the A970 between Sandwater and South Nesting junction and these works involve road traffic management and a lane closure. We

aim for these works to be completed by the end of May.

**Over Head Line update:** Over 152 of the 275 Overhead Trident H-Poles have now been successfully erected by NorPower, with an aim for all poles to be erected mid-Summer.

Wiring works are well underway, with 60 spans now wired at the Northern section of the line near Girlsta.



Overhead Trident H-Poles

## A thank you to the community

SSEN Transmission and SSEN Distribution would like to thank the community for their patience and understanding during the ongoing traffic management which is currently in place on the A970 between Tingwall and Sandwater. We recognise that the temporary disruptions caused by these necessary works have impacted your daily routines and commutes, and we sincerely appreciate your cooperation throughout this process.

## Community Engagement

# SSENT & SSER supporting delivery of Shetland STEM Festival for second year.

SSEN Transmission and SSE Renewables are looking forward to taking part in an educational day of science, technology, engineering, and maths (STEM) activities at the Shetland Museum in Lerwick on Wednesday 8 May.

The interactive event which has been organised by Prosper & YESC, will involve local schools taking part in STEM challenges with representatives from various local businesses on hand to provide advice and guidance. Over the course of the day, pupils will be asked to get involved in a fictional scenario called The Power Path Challenge, which involves building a marble run to represent a subsea cable transferring electricity from renewable



sources, just like a giant undersea extension cord! Schools that sign up to take part are being provided with free kits to enable the children to build a model which will then be put to the test on the day!

SSEN Transmission and SSE Renewables are committed to working with young people to help inspire and develop the future workforce and provide a pathway for school leavers into the wider energy sector.

## Edinburgh Science Festival to visit Shetland schools

SSEN Transmission and Hitachi Energy are proud to be supporting Edinburgh Science's "Generation Science" Shetland Tour 2024.

Generation Science is a programme of immersive and inspiring science shows and workshops which visits primary school pupils in P4 – P7 and their teachers across Scotland. The workshops and shows help bring science to life for all children and can be extremely beneficial to those who struggle to engage in a traditional classroom setting, and focus on a range of scientific topics, including renewable energy, power generation and smart grids.

This year Edinburgh Science will be delivering the "Electrical Explorers" workshop to a number of Shetland primary schools from the 6th – 10th of May, in which pupils are invited to discover the wonders of electricity first-hand. The pupils get an opportunity to explore the workings of circuits and components by using their own movement to generate green electricity and find out how it is stored.



## Supporting The Fishermen's Mission Annual Appeal



SSEN Transmission are proud to continue to support The Fishermen's Mission by donating towards their Annual Appeal. With so many families connected to fishing or seafaring more generally, the Mission is often asked for assistance in times of bereavement, supporting and visiting families and conducting funeral services throughout the isles.

Retired fishermen and widows of fishermen are always glad of a visit either at home or if they indeed need to go into hospital. They partner with other seafaring charities to bring financial help where we are aware of the particular need of an individual or family. Keeping up with the active fishermen through regular harbour visits and conversations on the Quayside is also a priority. Entirely dependent on voluntary contributions, the Annual Appeal is one of their main fundraising events of the year which helps care for fishermen and their families, active and retired, particularly in times of difficulty and distress.

## £1,500 donation to local foodbank



Back in December, SSEN Transmission, Morgan Sindall Infrastructure and NorPower made a joint project donation of £1,500 to the Shetland Foodbank to help purchase emergency food and household items for families most in need during the festive season.

Part of the Trussell Trust, the Shetland foodbank is part of a nationwide network of foodbanks, working to combat poverty and hunger across the UK, and serves as an essential emergency service to people most in need, not just at Christmas.

Ian Clark, SSEN Transmission Deputy Project Director said: "Christmas is such a difficult time for some, and the whole project team wanted to give something back to the local community. The Shetland Foodbank is such a vital lifeline to families most in need, not just at this time of year, and we hope that our donation from the whole project team will help the foodbank to provide some extra items and comforts to people who need it most."

# Our Community Benefit Fund

Following an extensive stakeholder consultation exercise in 2023, we aim to launch our first Community Benefit Fund in 2024 to fund a range of community projects across the north of Scotland. Our Community Benefit Fund plans involve a local and a wider regional element:

### Regional

The regional element will consider applications from projects anywhere in the north of Scotland region which is covered by SSEN Transmission. We anticipate that the regional projects will be of higher value and have a greater transformational impact.

### Local

The local funds will be solely for communities who are situated close to new infrastructure. We're working on a strategy for delivery of this fund, and more information on how we plan to administer this will be published once determined. Local communities will be able to apply for both elements of the fund.

Our consultation last Summer showed over 70% of respondents were supportive of the initiative. The six-week long consultation invited stakeholders from across the north of Scotland to share their views on our initial plans for the fund.

The consultation received around 140 responses from local authorities, community members and other interested parties. As a stakeholder led business, we will take learning from our consultation, and guidance from UK Government and the Energy Regulator as we work up the detail of the fund.

Based on our ambitious investment plans and indications from Government on the anticipated scale of community benefit funding, we expect the value of the community benefit fund to be over £100m. We will work with communities and partners to maximise the impact that this can have for local communities.

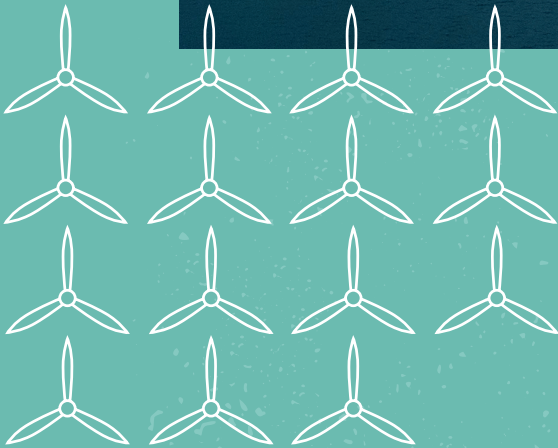
More information on our community benefit fund can be found at our webpage:

[ssen-transmission.co.uk/Community-Benefit-Fund/](https://ssen-transmission.co.uk/Community-Benefit-Fund/)  
Enquiries can be made to: [community.benefit@sse.com](mailto:community.benefit@sse.com)





Hoswick Village



To find out more about the projects and to register for updates please visit:  
[www.ssen-transmission.co.uk/projects/Shetland/](http://www.ssen-transmission.co.uk/projects/Shetland/)  
[www.vikingenergy.co.uk/](http://www.vikingenergy.co.uk/)

