sse Renewables

viking energy
Harnessing Shetland's natural resources

Scottish & Southern Electricity Networks
TRANSMISSION

BUILDING **SHETLAND'S ENERGY FUTURE**

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 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 last year. When completed in 2024, VEWF will become the UK's most productive onshore wind farm in terms of annual electricity output, playing a crucial role in contributing towards the UK and Scotland's net zero targets. (Please see the "Reaching Net Zero" section of our website for substantiation).

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.

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 **Sharon.Powell@sse.com / 07918 305099**

Viking Wind Farm Community Engagement Manager **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/
www.vikingenergy.co.uk/

Cover photo: The Nesting beauty spot of Lingness - Margaret Clark

WELCOME BACK

MAKING PROGRESS

As we head into the summer months, the main construction at the Kergord converter station is now in full swing. We have completed all the required rock extraction onsite, bringing to a close our programme of weekly blasts in April. With the rock processing activities well underway, and in just 10 short months, the HVDC convertor station platform is already 90% complete. This has all been achieved without importing any rock material.

The team have been working hard, making significant progress, completely transforming the site over the last 3 months. The building foundation layouts are really taking shape, with all the precast foundation bases are now installed. The service building basement is complete and surface water drainage installation works are also nearing completion. It is only when you view the site from above that you can really get a sense of how much the site has changed and see the progress being made.

January 2021

March 2021

June 2021

Building up the team and creating a working space

With the permanent site office and welfare facilities now fully installed onsite, the team now have a collaborative working environment that they can use every day. For some of the team this might only be their office for a couple of months, but for many of the team they are settling in to make this their working home until March 2023.

MAJOR MILESTONE: **UNDERGROUND CABLE INSTALLATION GETS UNDERWAY**

In late June our principal contractor NKT and their subcontractor Tulloch Developments Ltd began works on the installation of underground cable, marking a major milestone for the project. To date work on the project has been within the site boundary of the Kergord converter station and the commencement of the cable works will be first time we will be working offsite.
The installation of cable will involve the removal of the topsoil, the excavation of a trench and the laying of ducting along the base of trench. The cable will then be laid in sections and pulled through the ducting before being tied in to the convertor station at Kergord.

Ahead of works commencing, the team have carried out pre-condition surveys to record the condition of roads, structures, fences, walls and other properties in proximity to the works. In recent weeks you might have seen some of the team marking out the areas of works with markers and fences.

The cable installation works will comprise of four main elements:

- Installation of ducting along the Kergord converter station site boundary
- Installation of ducting along the A971
- Installation of ducting from the A971 to the landfall site at Weisdale Voe
- The creation of temporary compound and welfare facilities at Weisdale Voe and a temporary haul road from the Cott Road

To ensure the works can be carried out safely along the A971, traffic management measures will be in place requiring the closure of the northbound lane in 300m sections at a time, with traffic controlled using temporary traffic lights. The closure of sections of the carriageway are essential to ensure the safety of the construction team and passing vehicles. Work on each section will take up to 6 weeks to complete, with works commencing in July 2021 and expected finish in the Spring of 2022.

Across the sea in Caithness, we are pleased to confirm that the cable installation works are also underway, with work commencing on the HDD (horizontal directional drilling) at the landfall site. However, installing the cables at Caithness comes with a different set of geological challenges, the coastal cliffs and near shore rock formations at Noss Head where the subsea cable makes landfall. Here we need to install the cable ducts using a specialist technique called HDD which is a trenchless drilling method used to install ducts beneath the ground.

Once the ducts are installed and cable has been delivered, it will be pulled into the ducts in sections, jointed and then terminated at the switching station at Caithness and the converter station at Kergord.

Top soil removal getting underway

Cable tiles

SURVEYING **THE SEABED**

Ahead of the subsea cable installation, we have been carrying out pre-lay surveys to understand the seabed condition, sediment depth, locate bedrock and identify any hazards such as shipwrecks or unexploded ordnances. The Nordhoek Pathfinder is responsible for surveying the full offshore cable route from Caithness up to Shetland.

For the nearshore area in Weisdale, some of you may have noticed something that looked like a Mars Rover, swimming around the Voe acquiring survey data at the end of May during a patch of glorious weather. It was in fact a specialist autonomous survey vessel called Argonaut, pictured below. The data captured will allow us to ensure the cable route is designed and constructed suitably to protect the cable and other sea users from any issues.

Subsea surveys getting underway

Argonaut gets ready to get in the water

GETTING FIRED UP **ABOUT STEM CAREERS**

It takes a variety of specialists to make a project like the Shetland HVDC link project a success. So we thought we would shine a light on a specialist role you might not see on every project, an Explosive Supervisor and Incorporated Engineer or blasting expert.

Charlene Geddes has been our resident blasting expert on the project. She began working for our principal contractor, BAM Nuttall, in 2014, initially taking up a post with them to work and study. By 2016 she had already completed her NVQ in shot firing.

Over the next two years she gained experience throughout the company and in 2018 went to Norway to work as a shot firer, assembling, positioning and detonating explosives. Charlene was soon promoted to blasting engineer and had the opportunity to travel internationally, even making it to the Antarctic. In 2020 she got a call to come to Shetland to lead the team here as Blasting Engineer. A project that Charlene said was actually logistically harder to manage than Antartica!

During her stay in Shetland, Charlene has been working with the local Developing the Young Workforce team (DYW) to bring to life the wide range of careers and opportunities available within the energy sector. Charlene had hoped to visit the local schools before moving onto her next project to share her experiences with the next generation of engineers but with Covid-19 restrictions preventing this, instead we came up with another solution, preparing a pre-recorded interview. The interview will be shown in schools as part of the DYW's STEM careers engagement programme.

Now that the blasting activity onsite has come to a close Charlene is off to her next assignment, wherever it is, we are sure it won't be as good as working in Shetland.

SSEN TRANSMISSION
CONNECTING SHETLAND'S FUTURE RENEWABLE GENERATION

As Transmission Network Owner in the North of Scotland we are responsible for providing connections for new generators looking to connect to the GB Transmission System. Over the past 12 months we have been developing proposals to provide connections for a number developers in Shetland. Mossy Hill and Beaw Field wind farms are being developed by Peel Energy and Energy Isles wind farm is being developed in partnership with Statkraft.

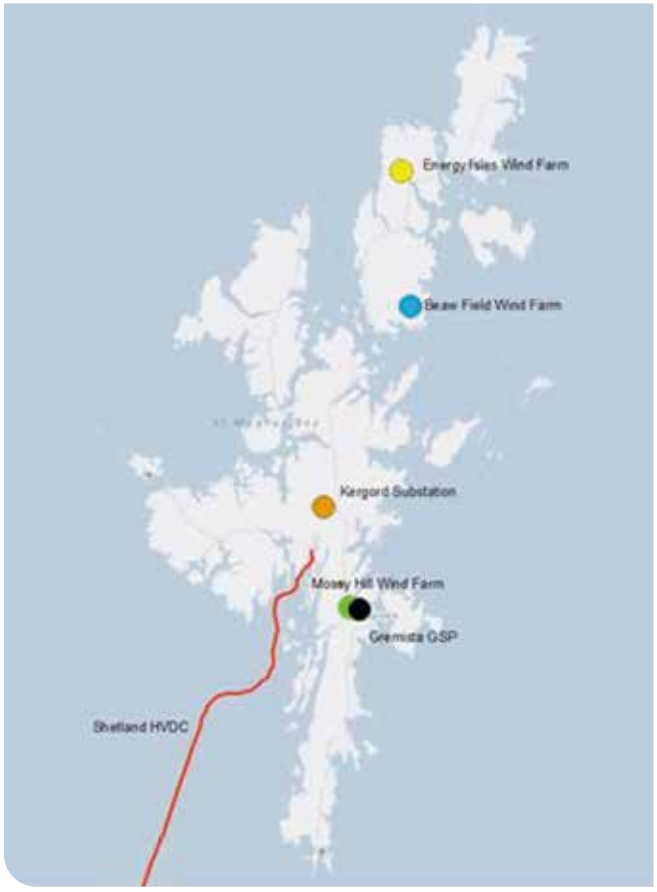
In addition to this we are developing a demand connection with SSEN Distribution, which owns and operates the distribution network supplying homes and businesses across Shetland, for a Grid Supply Point (GSP) Substation at Gremista, planned to be located near Lerwick Power Station.

On 1st June we launched our second project consultation, following the first consultation events in July 2020. Throughout June we sought feedback on our proposals for the preferred technology and routes for the connections, seeking feedback on the following elements:

- New 132kV switching station located in Yell to connect Energy Isles and Beaw Field wind farms;
- Two new 132kV connections from the proposed Yell switching station to Energy Isles and Beaw Field wind farms;
- A new 132kV connection from Yell switching station to a new substation at Kergord;
- Two new 132kV connections from the new substation at Kergord to Gremista GSP; and
- A new 132kV connection from Mossy Hill wind farm tee-ing into one of the Gremista connections.

In June we held held 4 consultations events, over 2 days, where visitors could join the online platform to view exhibition boards, maps and interactive videos, as well as share views and ask questions on the proposals by directly engaging with the project team.

The team are now working through the feedback they have received during the consultation. This feedback will inform the next stage of development



where we will prepare a proposed alignment within the selected route corridor using the selected connection technology. Our next consultation event is planned for early September where we will present the alignments following further design development incorporating feedback received to date.

We would like to thank everyone who participated in our consultation events and we look forward to continuing to engage constructively in the coming months as part of the ongoing development of the project. Although the consultation period is now closed, if you have any questions about our proposals please contact our Community Liaison Manager Sharon Powell at **Sharon.powell@sse.com**

LENDING A HAND TO DA VOAR REDD UP

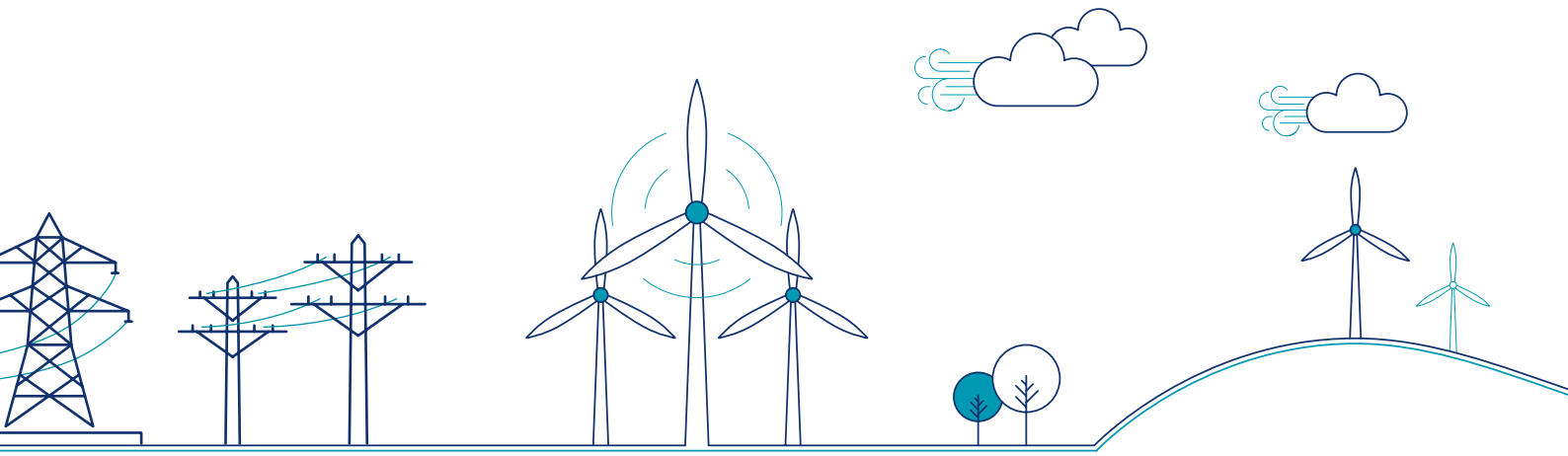
Back in April we got involved in UK's most successful community litter pick Da Voar Redd Up, joining over 20% of Shetland's population who volunteer their time annually to the big clean up. This annual spring clean makes an invaluable contribution to Shetland's natural environment and wildlife, clearing Shetland's beaches, coastlines and roadsides of litter and the debris washed up by storms.

Our Marine Consents Team undertook a beach clean along 1km of coastline east of the Ninian pipeline landfall, collecting 9 bags of rubbish along the way. Ocean Conservancy estimate that 8-13 million tonnes of plastic enter our oceans each year. It's important that we all play our part in actively reducing the amount of plastics that make their way into our oceans.

If you would like to find out how you can get involved in Da Voar Redd Up visit the Shetland Amenity Trust website at **www.shetlandamenity.org/da-voar-redd-up**

Litter collected from local beaches

Marine plastic on a local beach



PROTECTING AND ENHANCING **THE ENVIRONMENT WE WORK IN**

Ecological surveys were undertaken at our site at Kergord ahead of works getting underway to identify any areas of ecological interest. The habitats consisted mostly of improved or semi-improved grassland due the site being a used as farmland, but the surveys identified a number of small areas of wetland habitat which were deemed to be of good ecological value, so we looked at how we could relocate these within the boundary of the site.

One such habitat was classified as base rich acid flush (M10a), consisting of a wet area with bog pondweed, common butterwort and dioecious sedge. Common sedge was abundant over half the area, and which also supported few-flowered spike-rush, round-leaved sundew and alpine meadow-rue.

So along with several small areas of this and other wetland habitats we carefully removed and translocated them into newly created sites with suitable conditions signed off by the contractor's onsite Ecologist. In addition to these relocated habitats we are also creating some new wetland habitats as well as undertaking other biodiversity measures. We will be keeping a close eye on these wetland areas, monitoring to see how well the habitat regenerates and to measure their success.

Protecting nesting birds as cable installation works get underway

Ahead of breaking ground and starting installation of the underground cable we undertook detailed breeding bird surveys. An Ecological Management Plan was then developed which includes measures to ensure that birds are protected during the construction of the projects.

Ahead of works commencing, bird deterrents have been put in place to minimise the risk to birds nesting within the construction areas, these are non-invasive and can take many different forms including the use of model hawks and reflective tape.

It is NKT Environmental Clerk of Works, David Morgan's job to monitor the activity of birds in the area throughout the and installation phase , carrying out daily checks along the cable installation route to make sure as works progress that no new birds have nested in proximity to the works area and to ensure there is no impact on any nesting birds as a result of our works.

Photo: Golden plover - Paula Moss

WHAT IS COMING NEXT

- We will complete the convertor station platform with all rock processing and placement work completed.
- The main line surface water drainage works will be complete.
- Completion of all foundations and further pouring of floor slab/bases.
- Steelwork will be delivered from July for the convertor station building and the steel erection process will be undertaken on the superstructure during this period as the building form starts to take shape.
- Foundations for the portal frame GIS building will be excavated and poured from July to august 2021 with the steel work bring erected into August/September.
- Duct installation will commence along the A971.
- Trenching and duct installation will continue along the HVDC cable corridor.

CONSTRUCTION **UPDATE**

Civil engineering firm RJ McLeod and its sub-contractors are making rapid progress through the hills with over 50 percent of the required access tracks already built to a standard for use by construction traffic. Capping and finishing to a higher standard will follow to ensure smooth delivery of wind turbine components at the appropriate time.

It's 10 months since RJ McLeod's experienced team arrived on site and one whole year since local firm Tulloch Developments began building the Kergord Access Track, delayed by the first Covid-19 shutdown in March 2020.

The capping layer on the Mid Kame track. The SSEN Transmission project site at Upper Kergord can be seen in the background.

Access tracks

The network of tracks to the turbine sites now extends well into all four sections of the wind farm. The first stretch to be further improved, closer to its finished standard, is along the ridge of Mid Kame, between Sandwater and Hamarigrind, south of Voe.

The rough track used during early construction is being capped with processed stone aggregates to make for a smoother finished surface.

Across on the east side of the A970 main road, a new site access point and the temporary North Compound have been created at Scar Quilse from where a new track now extends inwards about one mile towards Laxo.

The North Compound now houses the first of two concrete batching plants which will provide the supply needed for many of the turbine bases. This piece of kit can turn out 60 cubic metres of concrete an hour. It can be seen clearly from the north by passers-by.

Much of the peat to the east of the Lang Kames is severely eroded, such as where this track is being built at Scar Quilse. The Loch of Voe can be seen in the distance.

The first concrete batching plant in the new temporary North Compound, south of Voe.

From the main site access point at Sandwater, a network of tracks now reaches through South Nesting into North Nesting, approaching Dury, while in the western part of the wind farm, the roadbuilding is progressing in the hills high above Aith and Gonfirth from the access point at Kergord.

In the coming months, work is expected to start at the south-west tip of the wind farm, up the Scord of Sound, where an access track and smaller work compound will be built on the steep hillside.

With the bird nesting season ongoing, work has not been taking place in some localised parts of the site until the chicks have fledged, including where Shetland's newest hill-breeders, the geese, have established nests.

The new Sandwater Road has been in use for construction traffic for about three months, keeping it off the narrow old B-road. Work has been ongoing on the cutting between Sandwater and Kergord and landscaping the roadsides. The permanent bridge on the new road, which crosses Petta Water Burn, is expected to come into use in August, allowing removal of the temporary bridge.

A fleet of tractors towing water bowsers is in action to dampen down the road and track surfaces, augmented by the use of perforated hosepipes laid along the roadsides in places such as the new Sandwater Road and the busy access track to Upper Kergord.

Floating track being laid in North Nesting, which avoids having to dig up the peat.

Turbine bases

In addition to pushing on with the network of tracks, RJ McLeod is busy forming hardstanding areas for some of the 103 consented wind turbines and digging out their bases down to the underlying rock. By mid-June, 11 of the circular bases had been excavated along the length of the Mid Kame ridge.

Concrete blinding is poured to form platforms for the turbine anchor cages to be assembled before teams of specialised steel-fixers construct the reinforcing bar (rebar) structures of the bases, ready for mass-pouring of ready-mix concrete.

The anchor cages are arriving but turbine components themselves won't be here until early 2023, shortly before the arrival of the fleet of large cranes to put them up.

One of the turbine base excavations on Mid Kame.

Rock-blasting is a common feature of road construction to undertake 'cut and fill' operations removing obstacles and using the stone to fill the hollows necessary for transporting large wind turbine parts up and through the hills. By late-June, three borrow pits had been opened up to provide rock for the tracks, avoiding the need to lorry it in over public roads.

A fourth borrow pit was being prepared to the south of the Voe-Laxo road with two more planned near Skellister Loch in South Nesting and near Maa Water, between Aith and Weisdale.

Road stone is won from borrow pits like this one near Scalla Field, above Kergord.

At times material for building the tracks, and in coming weeks concrete for the turbine bases, has to pass between the different geographical parts of the overall construction site.

The passage of slow-moving lorries crossing the public road between the eastern and western sides of the wind farm has been made safer with the advent of a 40mph zone brought in by Shetland Islands Council.

NEED SOME PEAT RESTORED? **BETTER CALL DAVID!**

A specialist local firm has been brought in to landscape the roadsides of the new Sandwater Road and sow a bespoke Shetland seed mix to restore the natural environment with native vegetation.

North Roe man David Murray established Shetland Peatland Restoration Services three years ago, having evolved from his previous agricultural contracting business.

The standard of his team's previous peat work can be seen from a two-year restoration scheme between Girlsta and Stromfirth, down the valley from Sandwater. It was part of a government national Peatland Action scheme run through NatureScot and Shetland Amenity Trust.

David is using three excavators on the Sandwater Road site with local operators – crofters like himself – who are used to the challenges of working on soft ground. The diggers sit on lightweight mats they made themselves from recycled materials.

Work had to be halted on one side of the road for a while due to a shalder nesting – these birds couldn't resist a nice new roadside verge!

Taking a break on a sunny day, David said: "It's fine to be involved in this. This is what SSE will be judged on at the end of the day – how tidy the job is when it's finished."

His landscaping team have made an excellent job of reinstating the verges since the floating road surface was laid at Sandwater. As the work progresses, David is keen to get the seed down to start the process of recreating a heathery moorland look. It can be sprayed on in a mulch which sticks to the ground or can be sown dry on a lightly harrowed surface.

The seed mix is of Shetland provenance using seed harvested late in the year from croft land at Girlsta, which includes species found naturally on acidic local peatlands.

The senior ecological clerk of works on the wind farm, Andy Mackenzie of MBEC, selected the NatureScot-approved seed mix required for the site, which he said is intended as a nurse crop to provide initial cover on the peat. Over time, the natural vegetation comes out and dominates the grasses.

David will have to wait a while to complete his job because the slopes of the large cut through the hill, half-way along the Sandwater Road, will not be landscaped and seeded until cabling works programmed for later through that area have been completed.

ADTs SHOULDER **THE BURDEN**

The heavy lifting required to build a network of tracks is mainly the day job of a fleet of super-tough off-road articulated dump trucks or ADTs, sometimes still referred to as Moxys after their original Norwegian manufacturer.

These days one of the manufacturers is Doosan, the Korean company, but with many still built in Europe by Volvo and others. It is quite a sight to see over 50 tonnes of rock, steel and rubber advancing towards you in the hills, albeit at the restricted maximum site speed of 15mph.

These Scania-powered 370hp machines are in permanent six-wheel-drive and are theoretically capable of 35mph once you get through the eight gears, but they're restricted to 15mph here. The truck has good stability for extra safety on undulating work sites.

Perched high in the cab, the driver has a bit of comfort for the long days, thanks to low-vibration design, air-suspension seat and armrest, climate control air conditioning and Bluetooth radio.

Back at the base, each truck is monitored to see what it's doing, how heavy its loads are, and what speed it's been doing.

Yell man Euan Henderson decked out his new Garriock Bros DA30 ADT with Shetland flag bunting

Fun in the fresh air – the bairns of Sandness Primary School. Photo: John Coutts Photographer

NOT JUST WORK **BUT PLAY TOO!**

Children at Sandness Primary School are enjoying their new adventure play park after a helping hand by a team from VEWF's principal contractor RJ McLeod who brought in local businesses S Malcolmson Plant and Nigel Flaws' Vatna CRM, sub-contracted by Ness Engineering.

The school bought the adventure play equipment with a grant from Tesco but needed professional contractors to erect it to comply with insurance requirements.

Among the team was Sandness man John Nichols, who has been working on the wind farm as a skilled excavator operator for S Malcolmson Plant. It was his suggestion to ask VEWF and RJ McLeod to help out.

The RJs team was delighted to receive hand-written letters from the bairns expressing their thanks for the work done. These are now proudly displayed in the entrance foyer at the main wind farm office block.

TEAM VIKING

"Viking offered me the opportunity to extend my love affair with Shetland and to use my skillset to ensure the best environmental outcome possible"

David

"I have embraced the opportunity to work in Shetland - working with new people in a new location on the most challenging wind farm project I've been part of to date"

Gerry

Construction on the Viking Energy Wind Farm is well underway, and the team is hard at work to ensure things progress safely and meet all the agreed conditions and requirements. Being part of this project means different things to different people but the one thing we all have in common is a love of Shetland! It is because of this that we are working with discipline and respect for the landscape and feel a responsibility for the project delivering on its promises.

The SSE team consists of 15 people, 12 of whom are local residents and are part of an around 80 strong local workforce. We have a wide range of different skills and experience but a collective belief that this wind farm will bring positive opportunities and economic diversification to Shetland.

"As a proud Shetlander I was happy to join local workers and play a part in delivering a project that will provide new opportunities to our young folk and support a sustainable future for our Islands"

Stuart

"Working for VEWF has enabled me as a young Shetlander to return to my home roots, joining a forward-thinking team on an exciting and challenging project. I am proud to contribute towards Shetland's future in renewables and the employment opportunities and community benefits it will offer"

Andrea

"Having been directly responsible for the construction of wind farms in all four parts of the UK over the last 10+ years, Viking offered me the opportunity to return home and spend meaningful time with family and friends. I'm happy to be able to use that experience together with my connection to the landscape, culture and heritage to deliver on this project and the team effort and standard of construction to date is something, in my opinion, everyone concerned should feel proud of"

Paul

"Viking is a prestigious project for me, I was in awe of its scale even from the early design stage and it is especially fulfilling seeing the time and effort put in, then translating to the project being built"

David H

This team is undertaking a significant challenge in building this flagship wind farm which provides the case for strategically connecting Shetland to the UK's national electricity grid for the first time. It has required the use of leading-edge technology and much expertise. When complete it will provide green energy to power Shetland's needs and export power to a huge number of homes south from Shetland's immense and permanently renewable wind energy resource.

With any project of this size it evokes a range of feelings and a differing in public opinion. But most can agree that green energy is a central part of the solution to our energy crisis. We are all able to do our bit to help protect the planet for future generations and power change as the planet strives for net zero by 2050.

So, this is us and the feelings of responsibility for the project, what this means to Shetland and for being part of a carbon-net zero future means a lot to us all. As we progress through the build to get Viking operational, we will work together and deliver something we can all look back on with pride, and say I was part of that!

I've always been interested in different forms of renewable energy production, Viking has been an excellent opportunity to be involved in a major renewable project, with the benefit of being able to remain working locally"

Andy

"Renewable energy is key for meeting the rising global demand for clean energy. Viking provides a great opportunity to be involved in a leading onshore Scottish renewables project."

Haydn

"I came to Shetland to work at the start of the oil era and it seems apt to finish my career at the start of the renewable era."

Al

"I am proud to be part of the emerging renewables industry in Shetland which will hopefully afford my children the opportunity to live and work in Shetland when they grow up. Without future industries in Shetland our children might not have that choice.' – **Ronald**

BIRD UPDATE

The Viking Wind Farm's environmental and habitat management plans set out detailed requirements to preserve the natural habitat of native breeding birds throughout the construction and operational phases of the project. The Wildlife and Countryside Act protects, in law, all wild birds, their nests and their eggs.

To ensure compliance with the Act, years of data on breeding bird habitats within Viking's development area has been collated by independent ornithologists. Now in the construction phase, this information is supplemented by daily surveys of the breeding areas carried out by the Environmental Clerk of Works' specialist team. This team is comprised of local ornithologists and visiting ecologists who have a long term understanding of the development area, Shetland and its wildlife. All construction operatives on the project are briefed to report any nesting behaviour to increase the number of "eyes on the ground".

This year many species have been a little late in returning to Shetland, possibly due to the prolonged cold snap we all experienced through April. In late May we saw many species beginning their yearly rituals with many nests built or being built. Species range from the humble "Stirlin" to the intimidating "Bonxie" and include some species which are given additional protected status. (e.g. Whooper Swans, Whimbrels and Red-Throated Divers). Irrespective of their importance, all species are given full consideration under the legislative requirements. Locally, we are all aware of the problems caused by starlings nesting in vehicle engines. To deter this, the project has erected nest boxes to try and encourage the Starlings to choose a cosy alternative in and around compound areas where vehicles are parked.

The wind farm track design has taken into consideration bird breeding hotspots, especially for those with additional protected status, and their routes have been adjusted accordingly. Ahead of the construction work, our specialist team carry out surveys for courtship behaviour and note where a breeding pair have established an active nest. Locations are recorded on sensitive, confidential maps and compared with the track route. The team have data which allows an accurate prediction of the incubation and fledging period for all breeds and, using this information, the construction team can assess the course of action to take regarding construction progress. Options include:

- Establishment of disturbance buffer zones to minimise or exclude work within the zone where disturbance is observed.
- Deviation of the proposed track route (micro-siting) to avoid the nest area.
- Construction of visual screens between the work site and the nesting birds.
- Halting of works in the nesting area and divert operations elsewhere until the fledglings have left the nest.

Whilst the nature of wind farm construction projects invariably brings about changes to the natural habitat for ground nesting birds, all efforts are made to minimise the impact of the work. Where a nest site poses a constraint to progress, it is the protection of the bird that takes precedence.

Red-throated diver

Severe peat erosion on the wind farm site near Runn Hill, North Nesting.

PEAT **MANAGEMENT**

The management of peat, including handling, storage, reuse, and reinstatement throughout construction of the Viking Energy Wind Farm (VEWF) is a key priority for the project. Much of the VEWF site is located on heavily eroding and degraded peat. Naturally eroding peat emits stored carbon.

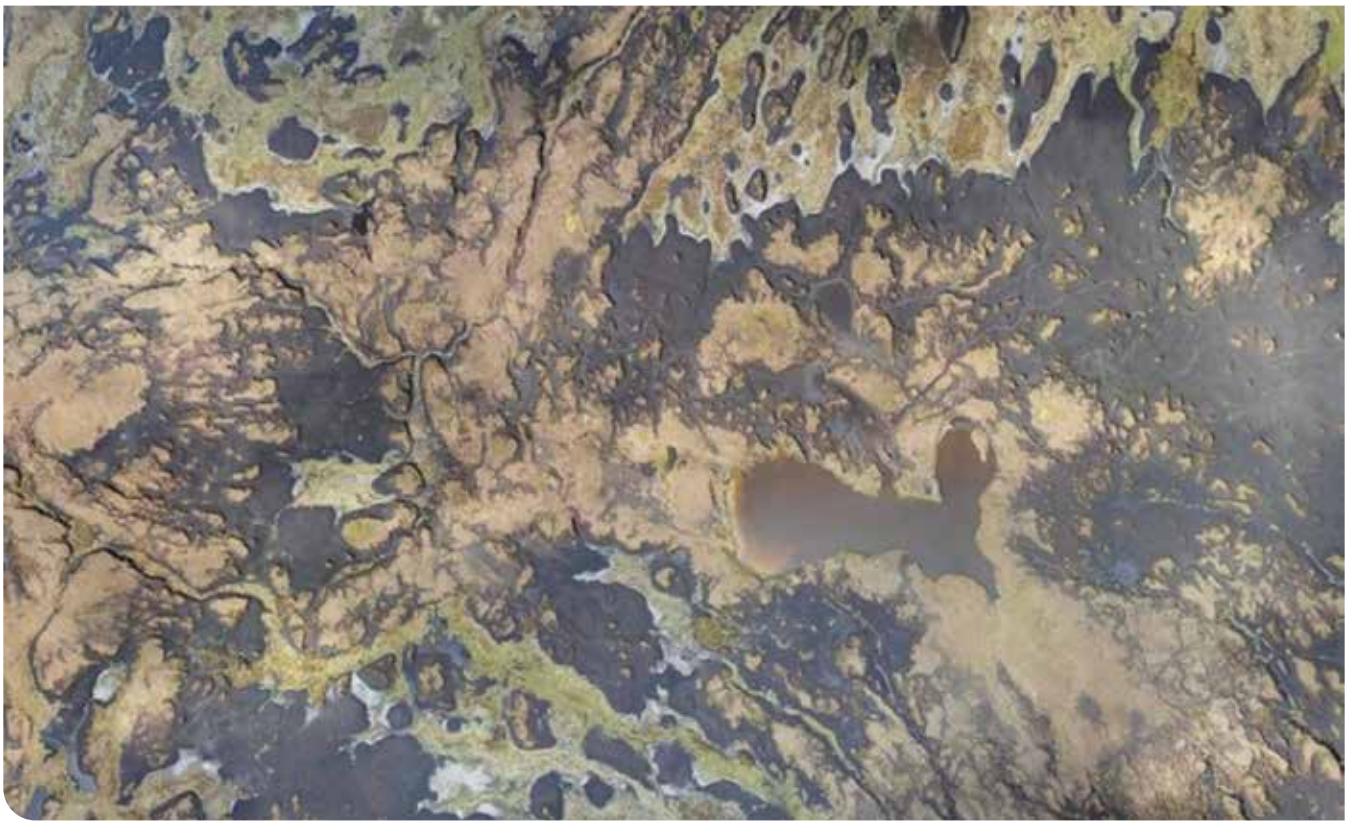
Viking Energy remains committed to working in accordance with the approved peat and habitat management plans, and to working alongside the Shetland Windfarm Environmental Advisory Group (SWEAG), established to support the project through the sharing of knowledge and promotion of learning.
Viking Energy's Habitat Management Plan (HMP) has been approved by SEPA, NatureScot and Shetland Islands Council. SWEAG acts as an independent expert advisory group to oversee the comprehensive programme of conservation measures, which include extensive peat restoration over 260 hectares of significantly damaged and eroded habitat.

The extent of the work planned provides an opportunity for Shetland to become a leader in peat restoration techniques and habitat management, and Viking Energy looks forward to playing its part in that.

On the Dud of Flamister, Nesting, the rate of peat erosion (above and below) is so severe there is little left in many parts.

Reversing decades of serious erosion and degradation, evidenced in the pictures above, is a central priority of the ongoing construction works. Extensive effort is being applied to peat and blanket bog restoration and all handling and storage of excavated peat on site is part of a wider plan for its reuse and reinstatement to achieve these restoration goals.

Viking Energy will continue to work with all its partners, the advisory group and the wider academic community in the coming years and will seek to ensure that Shetland becomes a centre of excellence and recognised leader in peat restoration techniques and habitat management.



Drone image of the severely eroded Hoo Kame area near the Lang Kames.

Crane from local sub-contactor Tulloch Developments Ltd being used in the assembly of a turbine foundation anchor cage on Mid Kame. A pickup truck from local supplier Bolts Car Hire can be seen in the background.

COMMUNITY BENEFIT **AND LOCAL SPEND**

As part of the commitment to the Shetland community, a Viking Community Fund worth c£72m over the project lifetime and run by Shetland Community Benefit Fund (SCBF) has been launched to support local projects. This fund is run completely independently of both SSER and Viking Energy supporting a range of different initiatives since the launch in February 2021. These initiatives have been far reaching and cover the length and breadth of Shetland. Some of the most recent awards are highlighted below.

In Fair Isle, £1,500 has been awarded to go towards buying a fuel bowser and trailer which will allow fuel deliveries around the island. Meanwhile at the other end of Shetland, £500 is going to the Unst Partnership for its community skip scheme and the Wild Skies Shetland charity is also receiving £500 towards the cost of a short film 'Unst the Asteroid'.

Added to this, Lunnasting Public Hall has been allocated £11,000 to replace two fire doors and repair exterior blockwork and £7,400 has been provided to replace the fire alarm system at the Voxter Centre. The South Mainland Kindergym also made a successful application for help with outdoor play equipment and clothing and have received £500.

The Papa Stour History and Community Group have plans to develop the island's kirk to promote the island's history and heritage, so have been awarded £3,000 to help support the project. Foula's local electricity trust is to receive £2,055 for a survey to collect evidence that the island's wind turbines can be left running during the bird breeding season without impacting on the protected SSSI species there.

There are huge number of people working with VEWF as the build progresses. Since June 2020 over £9.6m has been spent with 20 local contractors and 28 local suppliers all supporting the Shetland economy during difficult times. Over the coming years, there will be many more opportunities for local businesses of all sizes and tradespeople in Shetland to enter the supply chain as the project progresses. With the emergence of new state of the art supplier portals there is no further need for a public sector-run portal and it has therefore been decided to close the Open4Business (O4B) procurement portal on 30 June 2021. Interested companies can now contact vikingwindfarm@sse.com to discuss how they can work directly with the Viking Wind Farm Project.