

FAVOURABLE WIND FOR ULTRA-DEEP-WATER QUAY

Lerwick Port Authority’s project to develop an Ultra-Deep-Water Quay (UDWQ) at Dales Voe, giving the UK unique capability and competitiveness, has received a further boost with a positive response from the renewables sector.

Identified in an independent study for the Scottish Government as the optimal UK site for an UDWQ, originally for decommissioning offshore oil & gas structures, Dales Voe is now recognised as a key location for assembly and deployment of large-scale floating installations for offshore windfarms.

The Scottish Government will contribute £9 million under the UK/Scottish Governments’ Islands Growth Deal towards the estimated £38 million cost.

Maximising the advantages of the deep-water, sheltered voe and its proximity to oil and gas fields and future offshore windfarms, including the nearby NE1 sites, the 100-metre quay at Dales Voe Base will have an initial water depth of 21 metres alongside, with an option to dredge further to 24-25 metres, plus additional laydown.

With its offshore industry experience and strategic location, Lerwick’s advantages include reduced time to windfarms. It will be the only UK port with alongside water depth to accommodate the world’s largest crane vessels and the ‘tow to port’ option for operators to bring turbines in one piece, including substructures, at full operational draft. The UDWQ potential includes eventual decommissioning of turbines.

DIVERSIFYING ACTIVITY

Supporting renewables projects will play an important role in diversifying Lerwick Harbour’s contribution to the UK energy mix and activity generally at the Shetland port.

“The range of users across various sectors has always been one of Lerwick’s main strengths and servicing renewables adds another key strand to operations,” said Captain Calum Grains, Lerwick Port Authority’s Chief Executive. “We have already been the gateway for the turbine components for Viking Energy Windfarm’s onshore project.

“As we transition to net zero, offshore wind has the potential to expand our input to the country’s energy mix. The UDWQ will be ideally positioned to fulfill a pivotal role in development, maintenance and decommissioning. Through our discussions with operators, there are encouraging prospects for Lerwick having a major involvement in the development and operation of the neighbouring offshore NE1 sites.”

SHOW BUSINESS

A hat-trick of energy exhibitions are central to Lerwick Port Authority’s ongoing marketing efforts targeting the energy industries this year post-covid.

It has already participated in **All-Energy** in Glasgow, aimed at renewable and low carbon energy industries. The oil & gas sector and renewables are the focus of the Authority’s **stand 3G30** at **Offshore Europe** from 5-8 September.

It will join Shetland Islands Council on **stand A57** at **Floating Offshore Wind** on 4-5 October, with both events in Aberdeen. **ORION** (see page 4) features at all three.

Please join the Authority at the latest events for an insight into operations, facilities and plans.



FLOATING OFFSHORE WIND



~ Scan here for UDWQ flyover



~ Scan here for Bight of Vatsland flyover

DECOMMISSIONING FIRSTS WITH NINIAN NORTHERN



Lerwick Harbour's reputation at the forefront of decommissioning offshore oil & gas structures has been reinforced by the disposal of the Ninian Northern field production platform topside and jacket in separate successful, record-setting projects in Dales Voe.

The world's largest offshore construction vessel, Allseas' *Pioneering Spirit*, entered a UK port for the first time, delivering in single lifts the topside in 2020, returning in 2022 with the 8,500-tonne jacket when it initially manoeuvred alongside Dales Voe base, working at quayside in another UK first to remove equipment from the facility.

Pioneering Spirit ballasted to 28 metres draft where the jacket was then transferred mid-voe to a barge and loaded-in to a heavy-duty pad,

developed at the base by the Port Authority. It was decommissioned by the international partnership, Veolia Environmental Services/ Peterson (UK), as was the topside, with load-in weight of 14,200 tonnes.

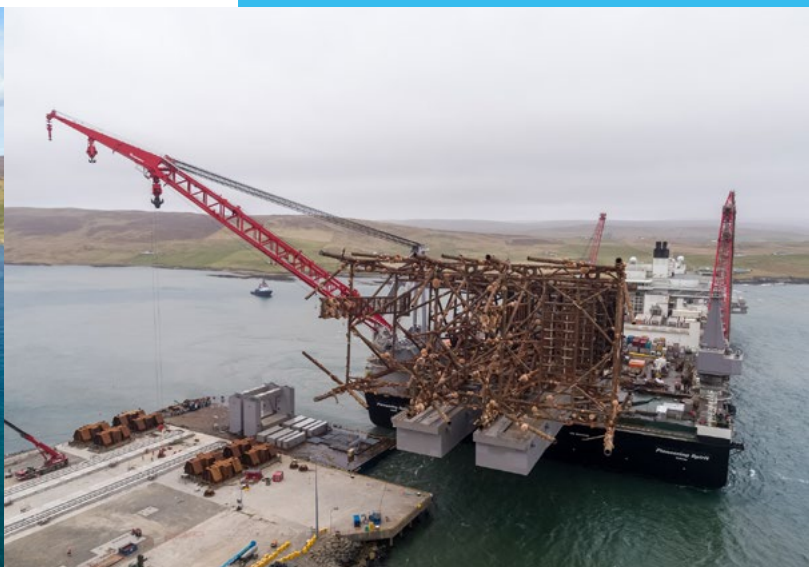
Captain Calum Grains. Lerwick Port Authority Chief Executive said: "The capacity of the deep-water voe to accommodate the 382-metres long and 124-metres wide *Pioneering Spirit*, with its support fleet, and the successful operations to load-in and dismantle the two Ninian Northern structures were another demonstration of why Lerwick is a leader in the decommissioning market. It is a reputation which will stand us in good stead in the future, not only in oil & gas projects, but also eventually renewables."

PHOENIX ARISES

Lerwick Harbour's extensive and experienced supply chain has been expanded with newcomer Phoenix Decom creating a permanent presence at Greenhead Base with a purpose-built facility targeting subsea decommissioning waste at berths 6 and 7.

It gives the port a third fully licensed quayside facility, with the required environmental permits.

Craig Smith, Managing Director, said: "Lerwick is a strategically important location for subsea decommissioning, and we can only see this growing in the coming years. We look forward to working with the Port Authority and continue to grow our service offering."



VIKING WINDFARM DEVELOPMENT

Lerwick Harbour has been the gateway for the delivery of components for the onshore 103-turbine Viking Energy WindFarm (VEWF), a £580m project owned by SSE Renewables.

Towers, nacelles and blades for the 4.3MW Vestas V117 turbines were delivered to Greenhead Base. Peterson's Shetland team provided offloading, storage, and transportation services, with 21 vessel deliveries and more than 1,000 turbine components safely discharged.

Chris Coull, Managing Director for Scotland at Peterson Energy Logistics, said: "This has been an extremely well-planned and executed project by our team and an excellent example of collaboration with local partners to ensure safe and efficient delivery of all turbine components.

"Geographically Shetland is ideally placed to support future onshore and offshore renewable projects and Lerwick port's deep-water harbour facilities provide an attractive option for oil and gas decommissioning

activities. There are some very exciting upcoming prospects for Shetland, and we look forward to being involved and building on our successful track record in collaboration with Lerwick Port Authority and local partners."

The final turbine was erected in August. Projected for completion in 2024, the farm will produce almost 2TWh of energy each year – enough to power almost half a million homes and reduce carbon emissions by half a million tonnes annually.



GAC SUPPORT FOR PROJECTS

Member of a global shipping, logistics and marine services company, GAC UK's recent support to Lerwick Harbour's supply chain by its experienced agency team included two major energy-related projects.

For a large decommissioning project Phoenix Decom was handling, GAC UK was appointed by the main subsea contractor to provide support to the various vessels involved. GAC UK was also appointed by the turbine contractor to provide support to all

the vessels delivering the components to Lerwick Harbour for the onshore Viking Energy windfarm for the entire duration of the project.

Adrian Henry, GAC UK - General Manager UK Agency, said: "GAC has been delivering support to the energy industry at Lerwick for many years. The port is ideally located to handle projects to the east and west of Shetland and is ready to service the rapidly growing renewables sector.

"The port infrastructure means that several projects can be delivered concurrently, providing operators and contractors with proactive solutions to manage their work scopes. It's always a pleasure for our team, and our customers, to work on projects at the port."



SHETLAND'S CLEAN ENERGY POTENTIAL

Lerwick Port Authority is a strategic partner in the ORION Project, established to provide Shetland with clean, affordable energy by developing the potential for renewable generation. Objectives include creating and sustaining skilled jobs and a buoyant, diversified economy.

Lerwick Harbour's Dales Voe and Greenhead bases are among potential sites for port facilities supporting the lifecycle of energy transition projects.

Membership of ORION is a logical extension of the Port Authority's initiatives to reduce carbon emissions in its operations, facilitate access

to clean energy and protect the environment. It seeks to make a major contribution to securing Shetland's transition to Net Zero, develop related infrastructure and encourage a strong supply chain.

Direct actions include future shore power for vessels and systems for clean bunkering. The measures to protect the environment include supporting marine waste and waste oil recovery, emissions reductions, electrification of plant and equipment, and planting trees to offset paper usage.



COMBINING SUPPLY CHAIN EXPERTISE

Recognising the scale of opportunities is often greater than individual firm's capabilities, four established local companies have joined forces to deliver cost-effective partnering in engineering, fabrication and logistics support.

NORN Shetland Engineering Alliance represents a collaboration between Shetland-based LEF, Malakoff, Ocean Kinetics and Voar Energy, with in-depth knowledge and experience of working in the offshore industry.



DECOM TRACK RECORD

Lerwick Harbour's track record as a leader in decommissioning offshore structures - from the northern, central and southern North Sea and the Atlantic - is now more than 130,000 tonnes of materials dismantled and recycled.

With the international partnership of Veolia Environmental Services and Peterson (UK) in the lead role, and the Port Authority's two bases at Dales Voe and Greenhead both involved, the lengthening list reads like a history of the offshore industry:

- ~ Frigg Field TCP2 MSP
- ~ Fife, Flora, Fergus & Angus + Ivanhoe & Rob Roy
- ~ Schiehallion
- ~ Murchison
- ~ Buchan Alpha
- ~ Leadon
- ~ Dunlin
- ~ Markham ST-1
- ~ Ninian Northern

LERWICK'S UNIQUE PACKAGE

With more than 50 years' experience and facilities and supply chain which continue to evolve, deep-water Lerwick Harbour's strategic advantages are complemented by extensive resources, including:

- ~ Deepwater berthing to 12.5 CD
- ~ Strength, depth and capacity unmatched in the UK
- ~ Over 4,500 metres of quayside
- ~ 60 tonnes per square metre quay loading
- ~ 800 tonne per metre line loading on the quayside
- ~ 3 quayside decommissioning locations
- ~ 130,000 square metres' laydown

