



DEEP-WATER LOCATIONS

At the top end of Lerwick's capacity and flexibility to handle oil-related projects large and small is its ability to accommodate the biggest heavy-lift vessels within port limits.

Both the north and south harbour areas have water depths over 50 metres, providing optional locations, depending on weather conditions, used for deballasting, mobilisation, lifts and support operations.

Expanding Dales Voe facilities

Work is underway at Dales Voe Base to expand the Port Authority's already extensive laydown area to facilitate the handling of a range of offshore-related projects.

There is 12.5 metres water depth alongside the 52 metre quay, which is suitable for very heavy lifts, more than 20 metres' water depth in the approaches to the quayside and direct access to the North Sea.

Warehousing is also available from the Port Authority.



Largest yet



The capacity and capabilities of Lerwick Harbour to undertake major decommissioning projects is highlighted by the successful handling of the TCP2 modules support frame (MSF) from Total E&P Norge AS's Frigg Field .

At almost 8,800 tonnes, it was one of the biggest single decommissioning lifts yet in the North Sea. The S600 transport barge was the largest yet to berth at Lerwick's Greenhead Base - when trailered on grillage across the quayside, the total weight of the load-in was around 11,000 tonnes.

Logistics, engineering, planning and preparation were managed by Peterson SBS who also supplied cranes, haulage, cargo handling and labour, with Veolia Environmental Services carrying out staged

decommissioning. The contract was completed on schedule without significant incident or lost-time injury.

With nine metres' water depth alongside, Greenhead Base is suitable for decommissioning structures delivered by barge, and for use by construction and diving support vessels , as well as the range of supply vessels.

The multi-purpose base includes fabrication and engineering facilities, dedicated decommissioning pad, open storage and laydown, offices and warehousing.

Development opportunities provided by Lerwick Port Authority's reclamation of land to the north include additional laydown. Two new quays to the south are also in planning.



Supporting offshore projects

Lerwick Harbour continues to add to its track record as a centre of support for offshore projects, with its ongoing role in exploration, development and production expanded to include the range of services required to back-up decommissioning.

From a skilled and experienced workforce to ships agencies, stores to bunkering, warehousing to waste management, engineering to environmental services, and the infrastructure to handle everything from reels to umbilicals, modules to subsea structures and pipes, Lerwick can meet the requirements of the industry.

Scheduled transport services by sea for freight and crew complement specialist vessels and Shetland is also served by good scheduled air connections.

Barge traffic

Lerwick Harbour's capacity to handle large barges has been enhanced by the Port Authority's dredging project in 2008 providing improved access to and movement within the harbour.

Several berths – including at Greenhead Base, Holmsgarth and Dales Voe – are suitable for barges, whether mobilising, delivering cargo or for lay-by.

The Port Authority's tugs, *Knab* and *Kebister*, with 21 and 24 tonne bollard pull respectively, can assist barges in manoeuvring in the harbour.

Lerwick has long experience of accommodating a range of barges, with a track record in supporting the development of fields in northern waters and now in relation to decommissioning.



Deep-water Potential

Lerwick Port Authority is looking to the future by planning to further reinforce the harbour's facilities and reputation as a centre of support for offshore operations, including decommissioning structures.

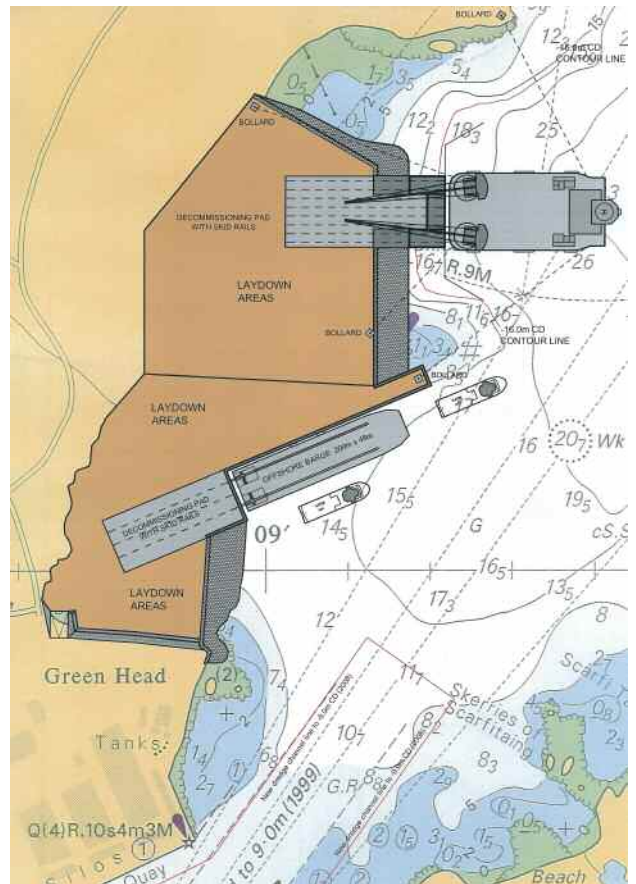
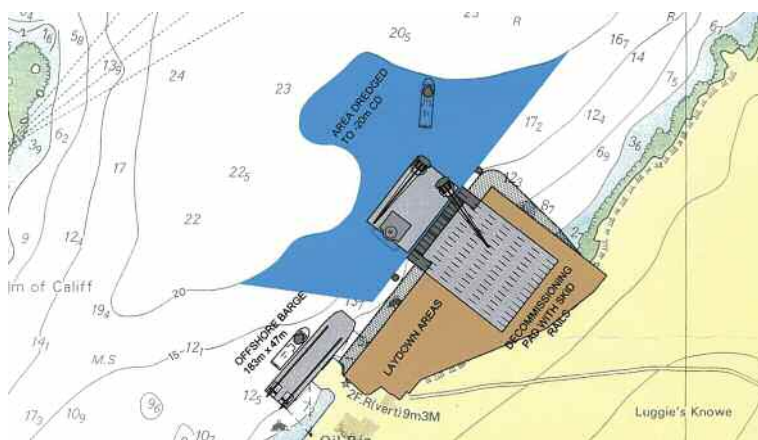
Concepts have been drawn up for deep-water port infrastructure capable of accommodating the largest heavy lift vessels.

They include 20 metre deep berths adjacent to the established Dales Voe facility or alternatively next to North Greenhead where over 10 acres of land has been reclaimed as part of the port's recent major dredging project.

Sandra Laurenson, the Port Authority's Chief Executive, said: "We recognise the need to plan ahead and meet the industry's upcoming requirements. Lerwick is one of the few UK ports which can offer this deep-water capability which would be a significant facility in close proximity to so many offshore oil and gas fields.

"The conceptual plans highlight the tremendous potential of Lerwick to the industry and will help identify its exact requirements.

"While substantial investment would be required, it would be only a very small percentage of the cost of decommissioning a field in the UK sector and therefore represent good value for all."



Shipshape support

Whether undertaking development or decommissioning work, the largest construction and diving support vessels now operating in the offshore industry can be accommodated at Lerwick Harbour where access has been enhanced by the recent dredging project.

For example, Greenhead Base has 600 metres of berthing with up to 9 metres' water depth and a heavy lift area is located at the quayside. There is also ample lay-down area.

Experience to date includes handling subsea modules and reels.

Additional quays scheduled

An area south of Greenhead Base was dredged in 2008 to provide 9 metres' water depth for two new berths.

Construction is due to start in 2010 and will provide an additional 180 metres of quays, increasing the berthing capacity at Greenhead by a third.

A heavy lift pad, capable of handling a 1,000 tonne lift, has been designed into the proposed quay structure.

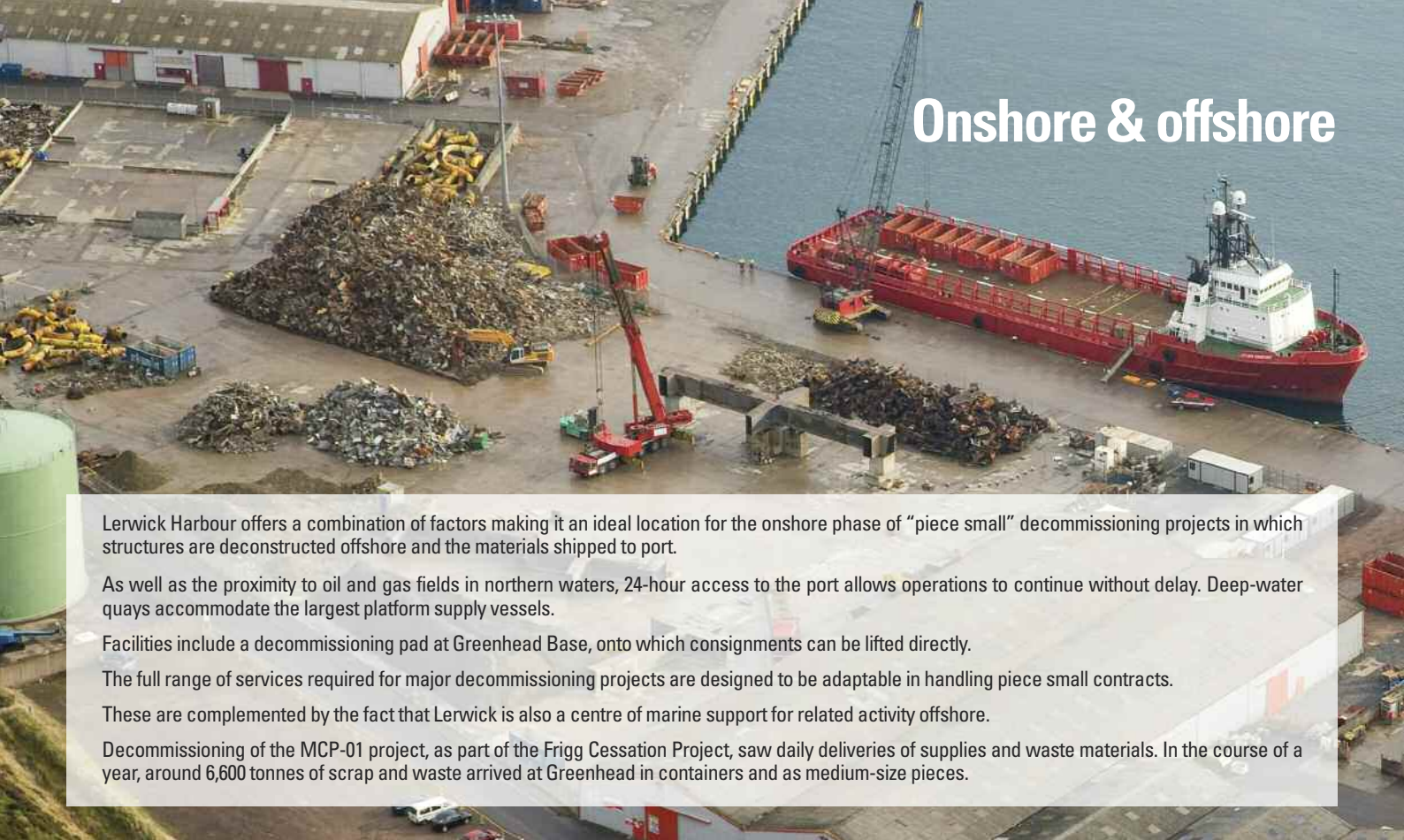
Improved port access



With Lerwick already established as one of the principal deep-water harbours in the northern North Sea, a primary aim of the Port Authority's £12 million dredging and land reclamation project was to keep pace with the increasing size of vessels now operating in the offshore industry.

As well as significantly deepening and widening the north channel, the north entrance and the basin at Greenhead Base were widened and there is also now a minimum of 9 metres' water depth from north to south through the twin entrance harbour.

Onshore & offshore



Lerwick Harbour offers a combination of factors making it an ideal location for the onshore phase of “piece small” decommissioning projects in which structures are deconstructed offshore and the materials shipped to port.

As well as the proximity to oil and gas fields in northern waters, 24-hour access to the port allows operations to continue without delay. Deep-water quays accommodate the largest platform supply vessels.

Facilities include a decommissioning pad at Greenhead Base, onto which consignments can be lifted directly.

The full range of services required for major decommissioning projects are designed to be adaptable in handling piece small contracts.

These are complemented by the fact that Lerwick is also a centre of marine support for related activity offshore.

Decommissioning of the MCP-01 project, as part of the Frigg Cessation Project, saw daily deliveries of supplies and waste materials. In the course of a year, around 6,600 tonnes of scrap and waste arrived at Greenhead in containers and as medium-size pieces.

Comprehensive capabilities



The strategic proximity of Lerwick Harbour to the many oil and gas operations in the northern North Sea and Atlantic is complemented by well-developed facilities and services at the 24-hour, all-weather access port, including:

- Over 900 metres of deep-water berthing (7.5 metres+)
- Licensed decommissioning pad
- Waste management and drill cuttings recycling
- Heavy lift capability
- Engineering & fabrication
- Project support
- Laydown areas, open storage and warehousing
- Environmental services
- Skilled workforce
- Logistics

Marketing decommissioning

Lerwick Port Authority is a core member of the Shetland Decommissioning Consortium which is marketing the advantages of the islands, with their skills, facilities and experience, as a location for supporting the decommissioning of structures, from subsea to topsides, and in servicing activity offshore.

QUALITY ASSURED

Lerwick Port Authority follows a policy of continuous assessment, improvement and development in relation to quality of its performance and the environment, based on a fully integrated Management System which links the Environmental Standard BS EN ISO 14001:2004 and BS EN ISO 9001:2008 Quality Assurance System to which the Authority is accredited.



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