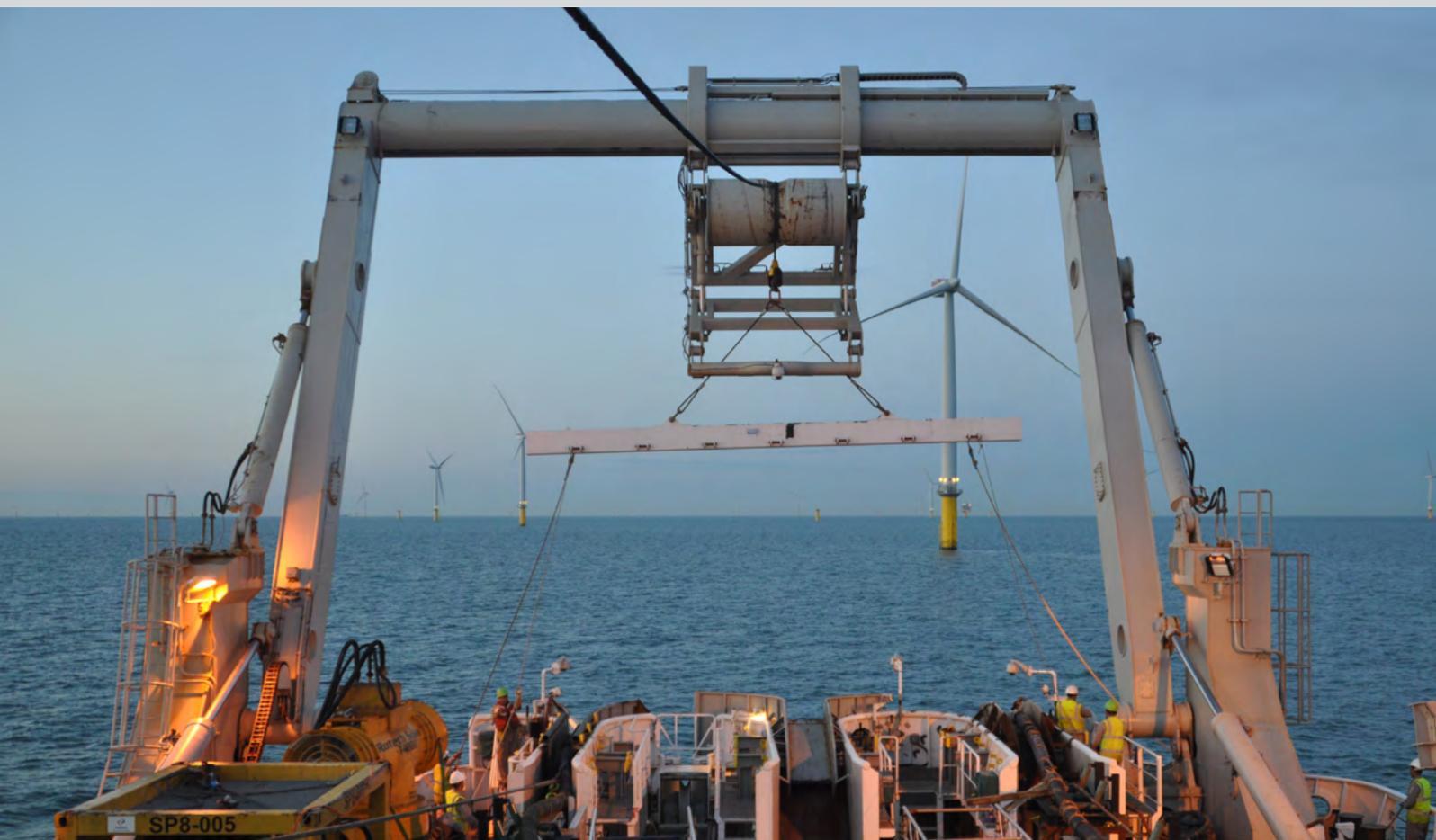


Project

LONDON ARRAY HV3 EXPORT CABLE REPAIR



Pharos Offshore completed cable repair and burial for the London Array offshore wind farm on a section of damaged subsea export cable. Pharos Offshore delivered a work package with the rapid mobilisation of engineering, fabrication and operational teams to locate, recover, re-lay and re-bury the power cable off the Kent coast.

Rapid Mobilisation of Vessel and Equipment

Response time is critical as lost revenue mounts from any cable fault. Spot market DP-2 vessels with suitable cable handling equipment are expensive and in short supply. The Pharos team quickly secured and converted a conventional telecoms cable ship to accommodate the loading, storage, lay, splicing and safe handling of the large diameter cable. Our subsea cable operational experience, along with our engineering design and fabrication capabilities, allowed us to manage the entire project - from initial assessment to final demobilisation and reporting after a successful job completion.

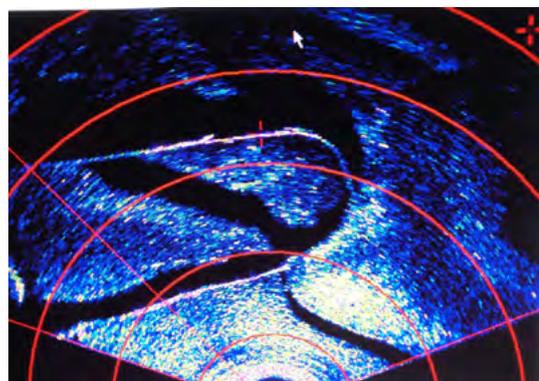
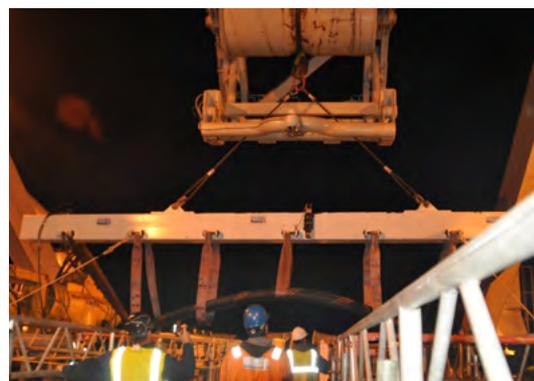


Design Fabrication and Implementation of Specialty Tooling

The 800mm² HVAC cable has a 218mm diameter and weighs over 150kg/m in water and 86kg/m in air. Tools for handling the large stiff cable did not readily exist in the market and standard grapnel operations were not possible due to nearby cable routes. In addition to securing a trenching ROV and mass flow excavator, Pharos Offshore was able to expedite the fabrication and modification of commercially available off the shelf technology to meet the unique projector requirements. This specialty tooling included: remote actuated spreader bar, cable grabber, cable tank loading arm, cable cutter, stern chutes, rollers, powered quadrants and more.

Cable Location, D-Burial and Recovery

Pharos developed multiple operational plans that not only met the client's tight schedule, but allowed for the infield flexibility to deal with as-found conditions. These procedures included Safety Practices, Risk Assessment, Mobilisation, Demobilisation: as well as Cable Loading, Testing, Acceptance, Recovery, Route, Engineering, Installation, Burial and Final Survey. Once located, the cable required non-invasive de-burial with special excavating equipment so that both ends could be captured and recovered to deck. The special cable grabber was fitted with positioning, proximity switch, camera and lights to aid in low visibility, high current conditions without the need for diver assistance.



Cable Re-Lay, Re-Bury and Final Survey

To optimise future accessibility of the tower as well as the cable itself, Pharos was able to reroute cable and final bight away from the original route to an area within the planned cable corridors. To our knowledge, this is the first diver-less operation to de-bury, retrieve and repair a wind farm cable of this size and weight. The plans, procedures, equipment and practical experience developed for this repair will work for other repair situations; especially those where increasingly congested cable corridors preclude anchoring and grapnel runs and when conditions are unfavourable for human divers.

Get in touch

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