



Welland Subsea Protection Structure Removal Frame North Sea

Sector: Offshore
Client: Red7 Marine
Value: Unknown
Completion: 2013

Technicus Consulting were appointed by Red7 Marine to provide structural design and engineering consultancy services for the design of a well-head protection structure removal frame.

The lifting frame was required to remove a sub-sea, tubular steel protection frame as part of the Welland platform decommissioning works. The protection frames weighed approximately 105te and, to minimise the number of lifting operations, it was proposed to lift it in a single piece.

Technicus Consulting produced detailed design calculations for a cruciform lifting frame that would attached to the protection frame via hydraulically actuated pins.

Once the lifting frame was attached the conductor legs supporting the structure were able to be cut using explosive charges that would allow instantaneous disengagement of all supports.

Due to the vessel crane hook height, it was not possible to use an inclined 4-point sling set to lift the frame and payload. Therefore, a single lift point frame was designed with a central lifting padeye to suit a 200te safe working load shackle.

All design was undertaken in accordance with Det Norske Veritas Standard for Certification No 2.7-3 for the Offshore Portable Units.

