

## REPLACEMENT OF HAEWENE BRIM FPSO MOORING SYSTEM

### General

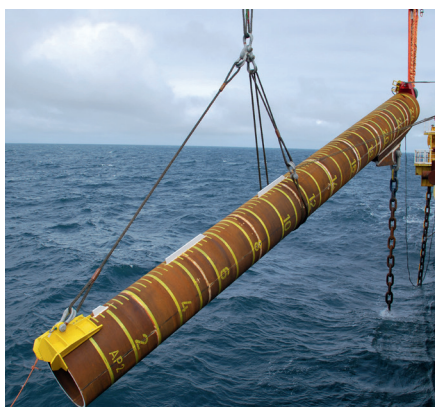
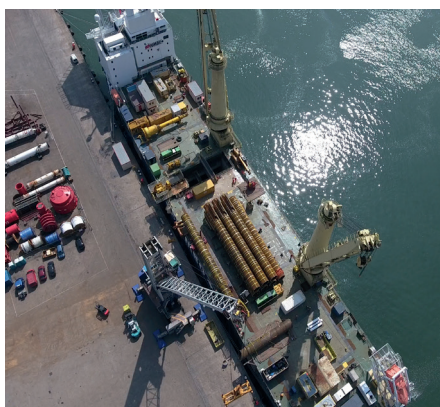
Project	Haewene Brim Mooring System Replacement
Location	Pierce Field, Central North Sea, UK Block 23/22a and 23/27
Water Depth	86m
Operator	Shell
Client	Bluewater Energy Services
Award date	Q1 2016
Installation date	Q2 2016

### Technical data

Quantity / Size / Weight	8-leg FPSO Mooring System comprising of: 8 x 84"x 25.5 m Driven Anchor Piles 1,290m of 147 mm Chain 2,300m of 152 mm sheathed Spiral Strand Wire
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### Equipment Resources

Installation Vessel	Fairplayer and Olympic Zeus
Key Equipment	<ul style="list-style-type: none"> <li>• Menck MHU-500T Hammer</li> <li>• ILT</li> <li>• Pile Guide Frame (purpose-built)</li> <li>• SSW Reel Drive System</li> <li>• 2x Working Class ROVs</li> <li>• Survey Spread</li> <li>• Passive Heave Compensator (PHC)</li> <li>• Gypsy winch for chain handling</li> </ul>



### Scope of Work

The existing mooring system of the Bluewater owned FPSO Haewene Brim had to be replaced as part of an ongoing lifetime extension program. Jumbo's scope of work for this extremely short-track project consisted of the Transport and Installation of 8-off anchor piles coming from Germany and driven in the seabed in the Pierce field (offshore Aberdeen) including installation and pretensioning of 8-off bottom chain segments (200t tension at seabed). Finally, 5-off Spiral Strand Wires had to be connected to 5-off bottom chain segments and abandoned on the seabed.

### Project Highlight

Apart from a safe and fast offshore installation – all achieved in 3 months after contract award and within the given installation window – Jumbo has successfully built and used a pile guide frame to install the anchor piles within the tolerances given by the client.

