

PROJECT SHEET

HORNSEA ONE EXPORT CABLE SUPPLY AND INSTALLATION

BOSKALIS

Royal Boskalis Westminster is a leading global marine contractor and services provider. With safety as our core value, we offer a wide variety of specialist activities to the oil & gas and renewables sectors. These activities include marine installation and decommissioning, seabed intervention, marine transport and services, subsea services and marine survey. In addition, Boskalis is a global dredging contractor, provides towage and terminal services across the globe and delivers marine salvage solutions. By understanding what drives our clients we are able to provide the solutions that enable them to meet their specific business goals. For this reason we are constantly looking for new ways to broaden and optimize our offering and are committed to expanding our proposition, supported by our financial strength. With our committed professionals in engineering, project management and operations, 800 specialized vessels and an unprecedented breadth of activities in 90 countries across six continents we help our clients in the offshore industry push boundaries and create new horizons.

INTRODUCTION

Hornsea Offshore Wind Farm Project 1 is located in the North Sea off the coast of East Yorkshire in the UK and it being developed as a UK round 3 offshore wind farm project owned by Ørsted. The offshore site will include three offshore substations and therefore also three export cables, Western, Central and Eastern circuit.

SCOPE

The scope for the installation of the Nearshore Export Cables sections of the Hornsea One Offshore Wind Farm project included loading of the cables onto the Cable Lay Vessel (CLV), transport of the cables to the work site and installing the three cables.

The three export cables were pulled through three pre-installed HDD's into the Transition Joint Bay (TJB) at the landfall site, where the cables were connected to the National Grid via a series of land cables. Once pulled in the TJB the cables were installed by the simultaneous lay and burial utilising the HD3 plough.

Scope of work also included the burial of the export cables in the intertidal zone, in the dry section this was completed with excavators and the wet section was buried with controlled flow excavation.

FEATURES

Client	DONG Energy
Main contractor	Deme
Location	Grimsby - UK
Period	2018
Contractor	Boskalis Subsea Cables
Kind of project	Export cables
Cable supplier	NKT



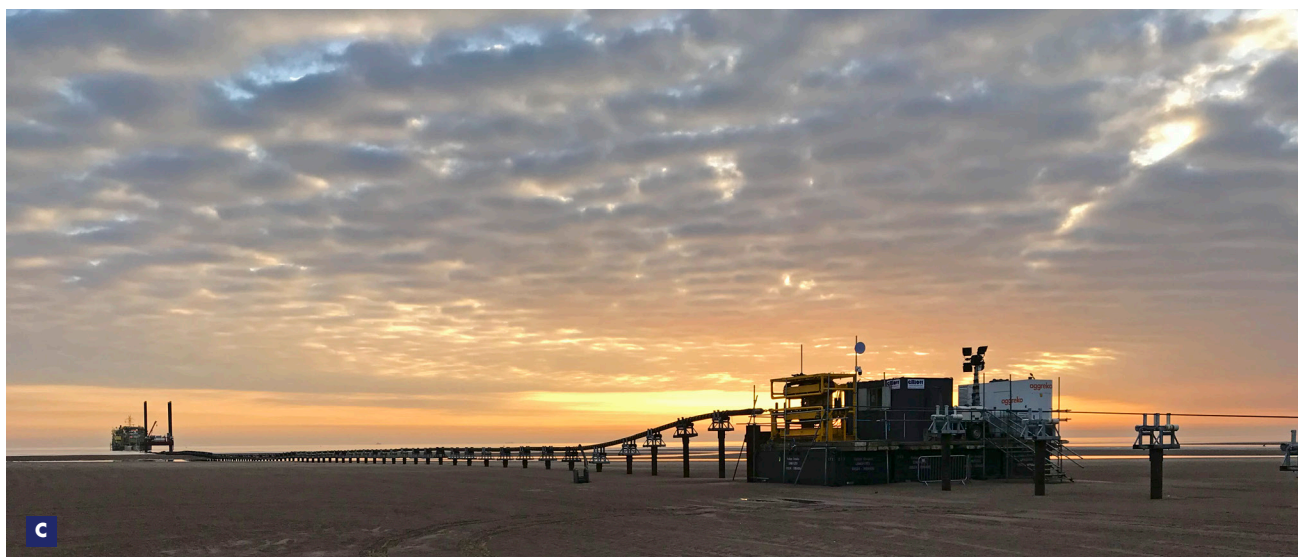
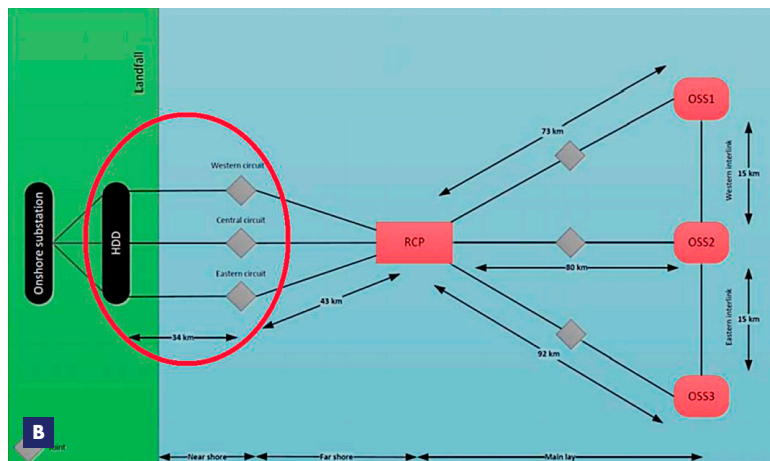
A Overview of the project location, Ndurance in the front

INNOVATIVE SOLUTION

Onshore landing operation required a highly innovative solution due to the fact the allowable pull force on the cable (s) was relatively low (20 - 23 t) for the 2.5 km long shore pull, for this we deployed a jack up barge where a 15 t tensioner was located and 2 x modular beached pontoons where a further 2 x 10 t tensioners were located.

FACTS & FIGURES

- Cable Lay Vessel
 - Support Vessel
 - Support Vessel
 - Support Vessel
 - Various Tugs
- Ndurance
Jack Up Barge
Transport Barge
DP2 MPV



- B** Schematic overview of export cables – Cable installation at the nearshore part, excluding the HDD and the joints, is within our scope of work, highlighted with the red circle.
- C** Onshore cable pull in