

PROJECT SHEET

KINCARDINE FLOATING WIND T&I PROJECT, UK
MOORING SYSTEM PRE-LAY, HOOK-UP, DRY & WET TRANSPORT

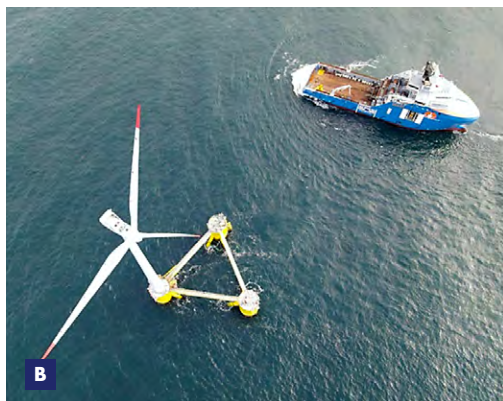
BOSKALIS

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

In 2020, Boskalis was contracted by Cobra for the transport & installation of a floating wind farm 15km off the coast of Aberdeen, UK. With five V164-9.5 MW Vestas wind turbines supported on floating foundations by Principle Power Inc (PPI), this is the largest floating wind farm installed to date. The water depth in the field ranges between 60 and 80 meters. Since 2018, the Kincardine field comprises a 2 MW Vestas unit on a similar PPI floater.

The floaters were built in Spain, the wind turbines were integrated in The Netherlands and from there towed to the offshore site near Aberdeen.



FEATURES

Client	Cobra Wind International Ltd.
Location	Offshore Aberdeen, UK
Period	July 2020 - July 2021
Contractor	Boskalis Offshore Marine Services



- A** Floater on semisubmersible barge Fjord, towed by AHT Seraya
- B** 2MW Floating Wind Turbine during disconnection works

SCOPE

Boskalis was responsible for the project management, engineering and execution of the works. The project consisted of six phases:

- Phase 1: Receipt, storage and assembly of mooring components.
- Phase 2: Pre-lay of the mooring system.
- Phase 3: Disconnection of existing 2MW FWT, including tow to shore and recovery of mooring components.
- Phase 3: Preparation of the floaters in Spain.
- Phase 4: Dry transport of the floaters from Spain to Rotterdam.
- Phase 5: Berthing, ballasting and preparation of the floaters in Rotterdam during wind turbine integrations.
- Phase 6: Wet-tow of the FWT's to Aberdeen, including hook-up of the mooring system.

All required survey works were managed and executed by our in-house survey department.

The complex mooring system comprises drag embedment anchors, chains, clump weights and HMPE ropes.

OFFSHORE EXECUTION

Boskalis mobilized AHT Horizon Arctic for the pre-lay of the mooring system. Dry transport of the floaters was done on the semisubmersible barge Fjord, which was towed by AHT Seraya. Wet tow of the fully assembled FWT's was done by AHT Manta, supported with AHT Princess for station keeping while AHT Nicobar recovered the pre-laid mooring lines from the seabed for connection to the FWT's. The installation of all FWT's was divided over 2 years (2020 & 2021), due to the harsh weather conditions during the winter period.

CONCLUSION

Despite the challenging situation due to COVID-19, this project has been successfully completed in time and to the satisfaction of the client. Boskalis has once again proven to be a suitable partner for execution of versatile floating projects, where multiple assets and disciplines are required.



- C** Moorings pre-lay campaign
- D** AHT Nicobar during hook-up of Floating Wind Turbine
- E** AHT Manta towing the fully assembled Floating Wind Turbine (FWT)



Watch the project movie at:

<https://vimeo.com/589874524>