



# TRANSPORT ANALYSIS TRANSITION PIECES

ALE was awarded a project to transport Transition Pieces (TPs). The TPs were to be transported via the River Tees from the manufacturer to the Able Port. For this project, ALE used two existing types of grillages for transporting the transition pieces on one of their new barges.

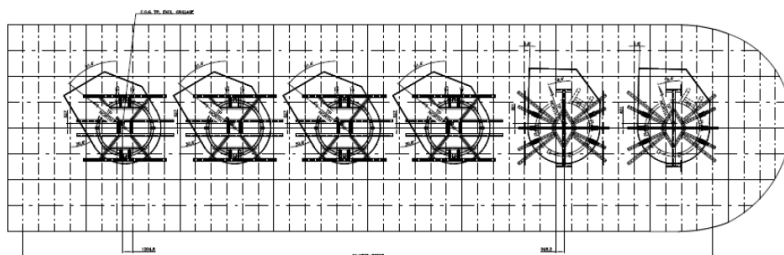
Conbit's structural engineering expertise was requested to check whether and how the existing grillages should be adjusted to suit the TPs for the Geosea Hornsea 1 Project.

The Hornsea wind farm, is world's largest offshore wind farm under development, located in the North Sea.



Picture: Barge with type 2 grillage

This project shows the strength of the ALE – Conbit collaboration, as we are now able to provide clients with the complete service package, from transport to engineering and stress checks.



Picture: Barge top view (4x grillage type 1, 2x grillage type 2)

## PROJECT

- ✓ ENGINEERING
- ✗ PROCUREMENT
- ✗ INSTALLATION

## Client

ALE  
GeoSea

## Project Name

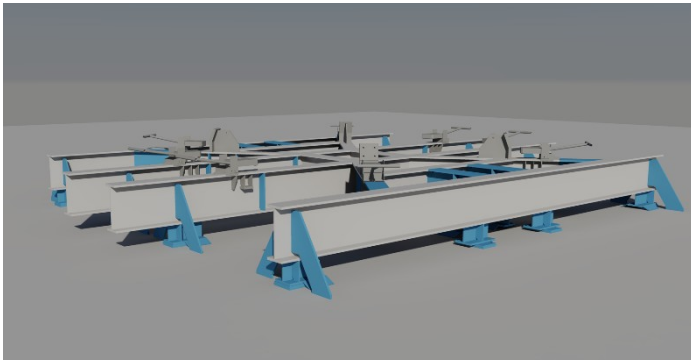
Hornsea 1 TP river fastening



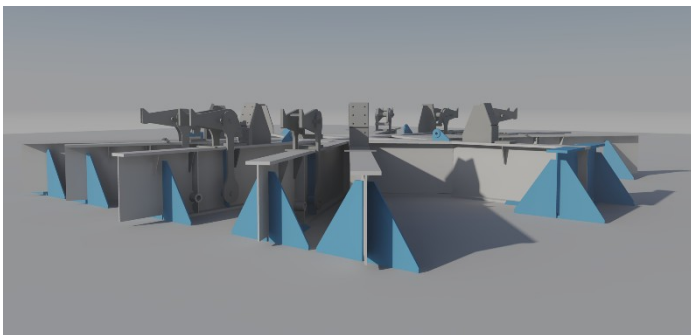
**GeoSea**

Geotechnical & Offshore Solutions





*Pictures: Grillage type 1. The blue parts indicate the modifications*



*Pictures: Grillage type 2. The blue parts indicate the modifications*

## STRUCTURAL ANALYSIS & DETAILED ENGINEERING

Conbit conducted a structural analysis for both type of frames, to verify the structural integrity. This included stress checks and local load introductions in the barge, TP and the grillage.

Furthermore, Conbit provided detailed drawings of the grillage including the adjustments that needed to be made to make the X-frames suitable for the TP transport.

The X-frames were also used with the saddle for the monopile transport, which were then stored on sand bunds.

*"COMBINING THE STRENGTHS OF BOTH ALE AND CONBIT WILL PROVIDE VALUABLE SOLUTIONS FOR OUR CLIENTS."*