

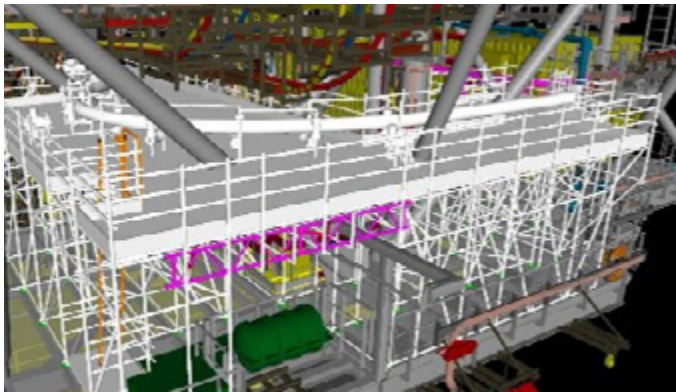
BESPOKE 3D DESIGN ACCESS SOLUTIONS

PROJECT INFORMATION

Date: November 2023 – March 2024

Location: Offshore Wind Farm – North Sea

Scope: Completed on time and within budget



PROJECT INFORMATION AND SCOPE

Stork was contracted to design and construct two specific scaffolding structures for use during the installation of an offshore wind farm substation. The solution had to allow for subsea cables to be pulled across the scaffold deck using integrated winch mounts, with bespoke winch arrangements before being split and routed into termination points on the level above. The structure also had to accommodate independent towers for access to overhead cable trays.

THE SOLUTION

Using 3D modelling software, our experts designed a bespoke solution which incorporated cable support rollers and winch mounts both built up from the working platform to facilitate cable pulling and termination works.

The rollers enabled the cable to be effectively pulled in while creating minimal wear and stress to its sheath. The winch mounts, which were designed, fabricated and supplied by Stork, were incorporated into the structure to pull the cable along the working platform, as the structural steelwork could not be used.

By incorporating winches at specific locations, this ensured accurate cable routing across the scaffold deck. This method also maximised the length of cable on-board at any given time, while not exceeding its minimum bend radius.

In addition to this, two Stork-designed scaffold access towers and a mobile aluminium tower were provided to allow for the onboard team's access to overhead cable trays. They also enabled flexibility to access unplanned areas that could not be accessed from the main scaffold structure.

OUTCOME AND BENEFITS

- All resources, scaffolding and materials were provided by Stork.
- The scope was completed within the allotted time frame, which involved several operational delays due to inclement weather.
- Two bespoke scaffold designs were engineered to account for the slight differences between the two platform's geometries.
- Each design was created with exact parameters, utilising data gathered during the construction phase and on-site surveys as well as, a digital model provided to Stork by the client. This allowed for easy design workarounds to avoid clashes with structural members and emergency liferaft stations. This can be seen in the 3D rendered images.

