

Make the move

# CIVIL ENGINEERING

to MARINE CONTRACTING



Interested in the exciting opportunities in the marine contracting sector but not sure how to match your education, experience and skill set to a relevant career? This **make the move** series aims to explain just where you might fit in.

Many civil engineering students or practitioners don't realise that a wealth of opportunities awaits them in the marine contracting industry.

Their skills and training are immediately transferable to three key aspects of the marine contracting industry:

## ■ Piling of offshore structures

Today's industry uses ever bigger piles and hammers to secure increasingly large oil and gas platforms in ever deeper water. Piles may be over 100m long and up to 3m in diameter, while smaller ones are driven in up to 2,000m water depth. This experience will be invaluable for the next generation of energy-providing structures such as offshore wind farms. Piles to fix a windmill in place are generally shorter than those used for oil platforms but can be up to 10m in diameter.

## ■ Placing of structures on the seabed

Gravity-based oil and gas platforms and jack-up rigs need to be designed and constructed to be lowered to rest on the seabed. Stability, weight and balance and are all crucial factors in success. In the case of jack-up rigs, the footings sit on or penetrate the seabed soils and need to be removable so that the rig can be moved easily from place to place.

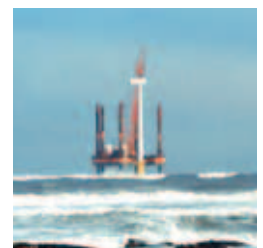
## ■ Soils calculations

Detailed soils calculations have to be undertaken at construction sites and all quaysides where vessels may moor to take on and offload heavy structures. The transfer may be made using a crane or it may be skidded across on purpose-built equipment. In all cases it is essential that the quayside is strong enough to support this activity.

These three examples are classically civil (below soil level) but civil engineers will also analyse a multitude of (above soil level) structures in offshore projects.

This is just the start. Civil engineers can move on within the industry using their skills and experience to solve many other varied engineering and project management challenges.

These jobs are by no means all based offshore. The planning is generally undertaken in offices all over the world, wherever the project is based.



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