



Capability Statement

Floating and Fixed Offshore Wind

Quoceant are engineering consultants specialising in offshore renewables and technology innovation.

Our Services

Quocean have a long background in the marine renewable sector, and our team has a rare combination of hands-on experience, knowledge, and capability. Our multi-disciplinary team of engineers can provide consultancy services from concept through to detailed design and review.

- Primary and secondary structures
- Marine connection systems
- Numerical modelling and simulation
- Engineering design, analysis and review
- Tooling and temporary works
- Marine Operations Support

Engineering Design & Support

Our team are experts in marine structures. We understand the complex loading and challenging conditions the ocean environment brings.

We are experienced in designing to offshore codes and standards through each stage of design.

Our expertise covers:

- Primary and secondary structures
- Temporary works equipment & tooling
- Transition piece design
- Fatigue and wear analysis
- Linear and non-linear FEA
- Fabrication drawings
- Owners' engineer / Client representative
- Design review

Marine Operations Support

Quocean have extensive design and practical experience across a range of offshore technologies. We understand the interactions between the cost of offshore operations, weather limits, and availability – and how to design operations and supporting equipment to manage risks and minimise overall costs.

Our services include:

- Storyboard and concept evaluation
- OrcaFlex simulation
- Cost-benefit modelling of O&M strategies
- Marine connector design
- Temporary tooling design for installation

Modelling & Simulation

We have expertise applying a range of analysis, modelling, and simulation techniques and software, including: OrcaFlex, Abaqus, SolidWorks Simulation, and MATLAB Simulink.

Our expertise includes:

- Dynamic analysis of marine structures, moorings, subsea cabling, and marine operations.
- Structural analysis and optimisation covering ultimate loading, accidental loading, fatigue life, wear, operational loading.
- Operations and maintenance (O&M) system effectiveness modelling.
- Systems and Control modelling and development.

Our Experience

“Quoceant have provided engineering services to support Ocean Winds across both our Moray East and West projects. I’ve found the team to be highly knowledgeable in structural analysis and design. Responsive, professional, and open – they have been straightforward to work with.” – Teit Schoenberg, Ocean Winds

Fixed Wind – Engineering Support

Moray West Offshore Wind Farm: Ocean Winds

Quoceant are working with Ocean Winds on the design of temporary structures for the installation of their 14.7MW wind turbines, and to provide general third-party engineering support and analysis of the substructures and occasional onsite support during construction. The work comes on the back of Quoceant's previous support to Moray East Offshore Wind Farm which commenced its first power export in June 2021.



Floating Wind – Engineering Support

Marine Power Systems (MPS)

Marine Power Systems (MPS) are developing a flexible modular technology for the deployment of floating offshore wind at industrial scale. Quoceant have been providing engineering support to MPS including input to the platform design and offshore installation systems. Our services have included a mixture of review, design, analysis, and simulation modelling work.



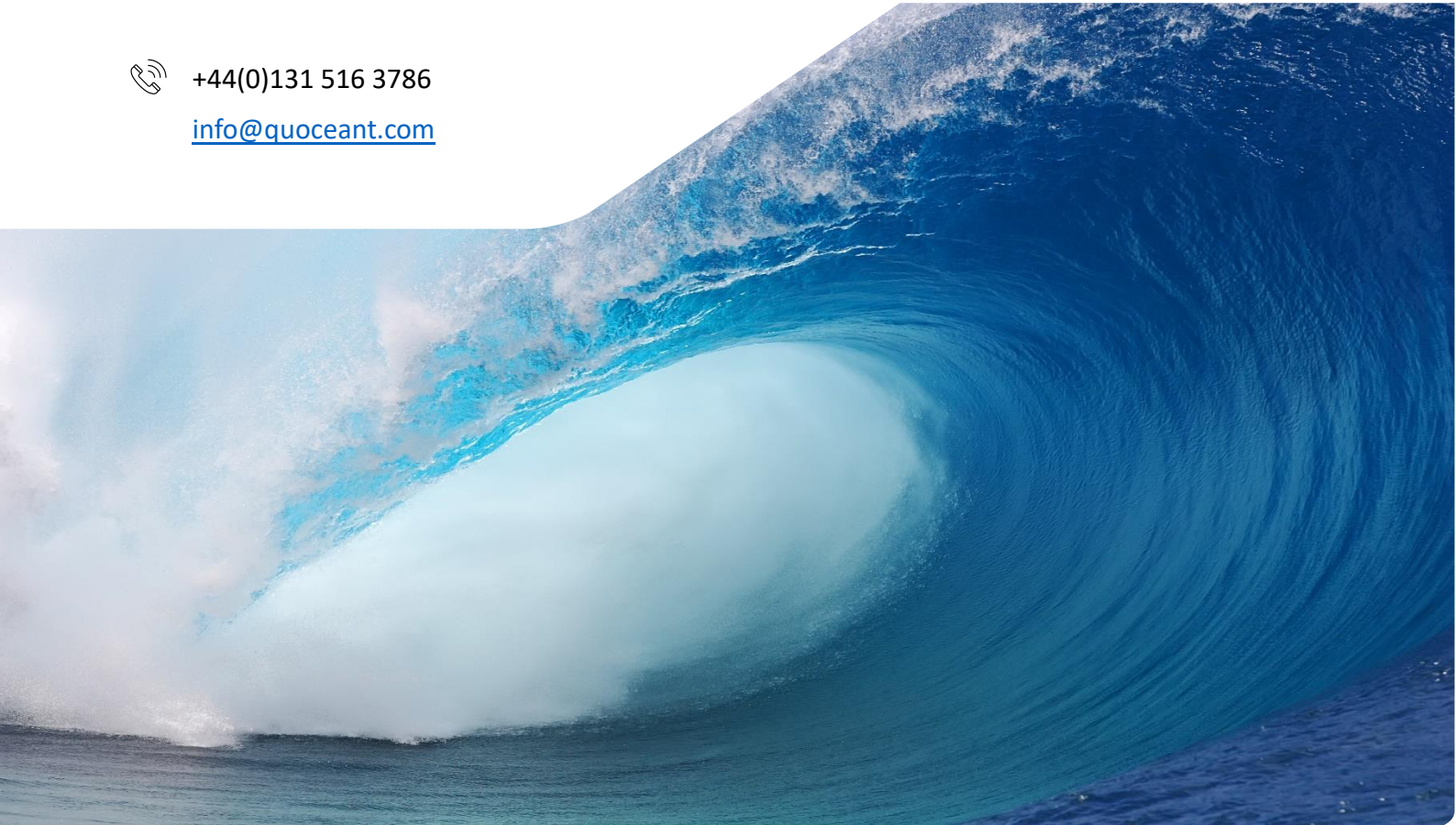
Marine Renewables

Quoceant started out in the wave and tidal sector and much of the experienced gained has been transferable to the offshore wind sector. In particular, hydrodynamic analysis of floating structures, moorings and marine operations, engineering design and analysis of fatigue driven structures, material selection for the marine environment, electrical connection control systems, design of mechanical systems. Some examples:

- **Quick Connection System Design: Minesto.** Quoceant were contracted by Minesto to design a subsea quick connection system for use on their tidal kite technology. The design solution provides dual mechanical and electrical connection between the kite system and its bottom mounted foundation and subsea cable. The system was successfully installed and operated in the Faroes Isles in 2020.
- **Engineering Support: AWS Ocean Energy.** Quoceant provided support to AWS from feasibility through to detailed design and demonstration phases. Our work included input across PTO, environmental control, structural hull design, and availability analysis.

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Find Out More

Meet Our Team:

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Our Projects:

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