## **Inland and Coastal's**

# CREW TRANSFER VESSEL **PONTOONS**



Swedish Power Company, Vattenfall, commissioned a bespoke Heavy-Duty Pontoon for Aberdeen Harbour to provide a robust berthing facility for crew transfer vessels (CTVs) and working vessels during the commissioning and ongoing maintenance of the Aberdeen Offshore Windfarm.

Space in the busy commercial port is at a premium so we limited the pontoon's footprint on the quay wall by mooring it off the wall on tubular piles.

"We worked closely with Vattenfall and Aberdeen Harbour Board during the design phase to ensure we maximised use of space, while not compromising on the functionality and durability of the pontoons," says Vincent Carey, Inland and Coastal's Sales Engineer.

"The pontoons are equipped with electrical points to offer power to the vessels as well as high level mast lighting and an anti-slip GRP decking, allowing for year-round safe working conditions on the pontoon, day or night."

Finished in 2018, the 30m x 6m floating pontoon system with a 1m freeboard, matching that of the vessels', is now essential for operatives working on the offshore windfarms to safely gain access to their transport.

### **SERVICE OPTIONS**

Services are critical to the functionality of a Crew Transfer Vessel pontoon. We work with our clients to ensure the right level of services are installed to ensure safe and efficient operation. Options include:

- Single (230V) and three phase (400V) power outlets
- Water and fire hose reels
- Flood lighting to the required lux levels
- Fuel storage and dispensers
- Craneage
- Communications infrastructure
- Access control equipment
- Safety equipment



We've been engaged by Moray East Offshore Windfarm Ltd. (MOWEL) to design and build safe berthing facilities for CTVs, providing an "all-in-one" base for the daily servicing, refuelling and usage of the vessels during the ongoing maintenance of the windfarm.

Situated in Fraserburgh Harbour, on the East Coast of Scotland, the base will consist of 60m x 4m of our Heavy-Duty Pontoon with 1.0m freeboard, GRP decking suitable for commercial application, a 200mm rubber D-fender, 24m cranked access gangway with a cantilevered shore platform and a gate structure for secure access. The M&E package includes a 40,000L fuel tank and dispenser, water, electricity and lighting.

We've worked closely with MOWEL, the Harbour Commissioners and other partners to find a value engineered design, with all-weather operation and turnaround time for the vessels being the key drivers. The project is ongoing and due for completion Q3 2020.



There are a number of different types of pontoons on the market from standard leisure pontoons through to breakwaters, so what type of pontoon is suitable for berthing CTVs?

Given that CTVs generally have a displacement of over 100T and require all weather berthing, the Inland and Coastal products most suitable are our Heavy Duty Steel Frame Pontoon or our Concrete Breakwater Range.

The Heavy Duty Frame is manufactured from a comprehensive steel grid structure offering excellent resistance to lateral and torsional loads from berthing and environmental conditions. They can be decked with

GRP or GRC (Glassfibre Reinforced Concrete). Both offer excellent antislip properties and the GRC has the added benefit of additional weight making the pontoon more stable.

The breakwaters are a fully concrete unit with galvanised reinforcing steel and cover to meet saltwater splash/tidal zone requirements (XS3). The width and weight of these units means that they will be extremely stable even in the harshest conditions.

Determining which of these products fits your requirements best will involve our design team considering the following: vessel displacement, berthing speeds, environmental conditions (wind,



wave, current), pontoon exposure, fetch length, mooring system, pontoon size and freeboard. Every site and project is different so we don't take a one size fits all approach. We'll get to know your site, your requirements and make the right recommendation for you.

## SNAPSHOT OF THE OFFSHORE WIND MARKET

The global offshore wind market grew nearly 30% per year between 2010 and 2018, benefitting from rapidly evolving technology and economies of scale. Europe in particular has fostered the technology's development, led by the UK.

Yet today's offshore wind market doesn't even come close to tapping its full potential and the sector is set to grow.

Previously, taxpayer 'green tax' funded, the industry has gone from being a boom and bust subsidised sector to a commercially viable proposition. The commercialisation cost has dropped below £40 per megawatt hour and offshore wind is now the cheapest way to produce electricity at scale, even versus nuclear and gas electricity production.

The commercially viable and profitable windfarms are now attracting third-party investment. Pension funds and large companies are buying into windfarms as they are seeing a return on their investment.

Climate change is also having a positive effect. Governments are looking towards renewable energies to meet the climate change targets laid out in the Paris Agreement, making offshore wind a mainstay of the global energy mix. In 2019 the offshore wind sector and the UK government agreed a Sector Deal committing to 30GW of deployed offshore wind capacity by 2030 with 60% of the money spent on development to stay in the UK.

But there are challenges ahead. The pipeline of easy to develop, near shore, shallow water sites has all but been exhausted. Developers will have to move further offshore to deeper water sites further from shore while maintaining economic viability. Investment in Port Infrastructure will also be required for Crew Transfer and Service Operation Vessels facilities. A strong, focused cross market supply chain will be required in the future to meet the needs of this growing industry.



## TAKE THE NEXT STEP TOWARDS YOUR NEW FACILITIES

We offer solutions using existing infrastructure, for all types of craft and activity.

Email us on

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