

BUILDING THE ORIEL PROJECT (OFFSHORE)



Offshore wind turbines use advanced technology to harness the power of ocean winds. The basic design of a wind turbine is quite simple. Each wind turbine is comprised of a foundation, a tower, a nacelle – which contains the gear box and generator – and the turbine rotor blades.

A monopile foundation is being considered. The foundation is installed into the seabed through drilling and driving. The monopile is then cemented into place. The final installation method will be determined after further site investigations and engagement with installation contractors.

The turbine tower, blades and nacelle are visible above the water. Under the water, the turbines are connected by cables to an offshore transformer station. This is linked to a landing point by a cable which is buried under the seabed or, where the seabed is rock, it is laid on the bed and covered by rock protection.

The components of the wind farm are transported to the site by ship. They are installed at sea, using vessels, called jack-up barges, or by floating platforms with cranes capable of lifting heavy loads. The offshore cable is installed using a special cable laying vessel.

