

Section 7 - Method Statement

Distributed offshore substation platforms (OSP)

The following provides an illustration of one type of distributed OSP, plus the jacket substructure.

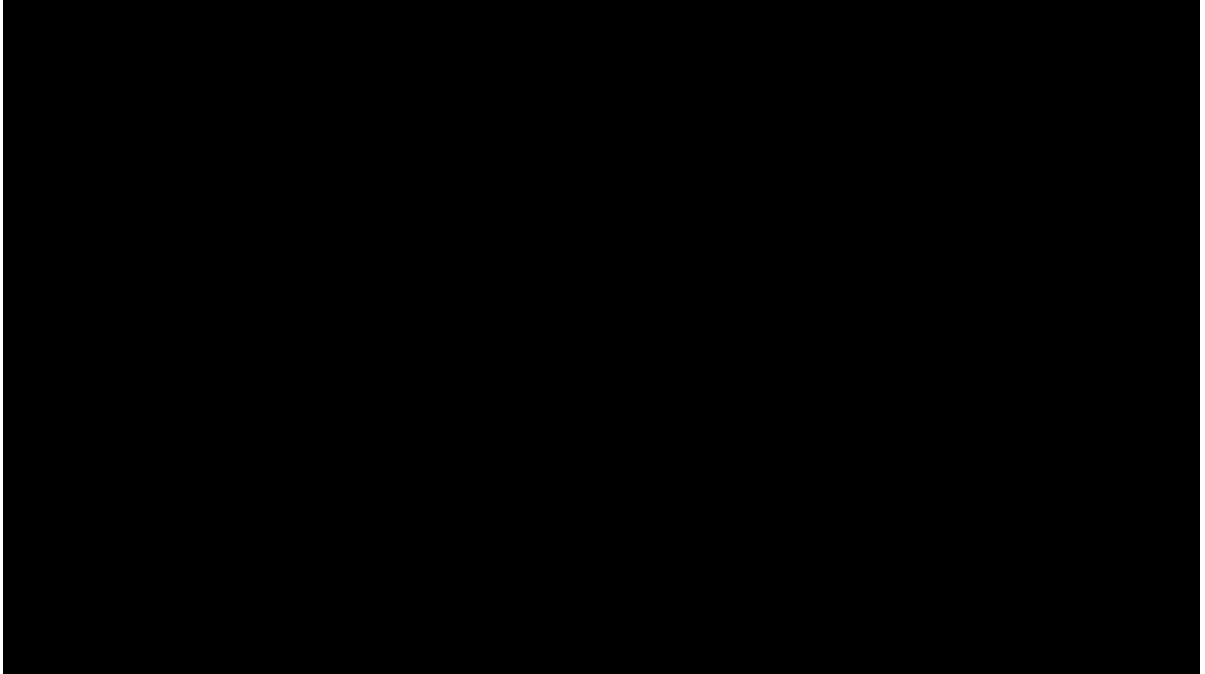


Figure a: Elevation

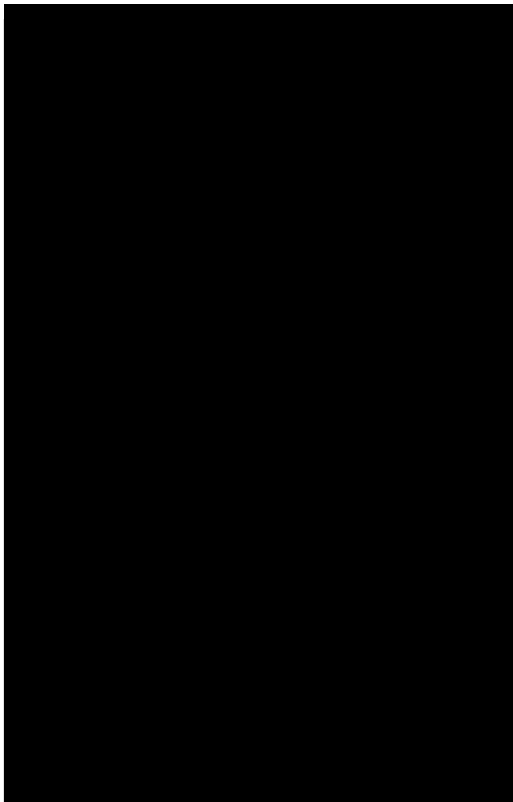


Figure b: Jacket substructure

Construction Works

The following information describes the installation procedures likely to be utilised for installation of the distributed OSPs. Final installation methods are subject to detailed engineering design and may be adapted based on the technology selected and technical advances.

A jack-up barge or other suitable lift vessel would be used to transport the jackets to site and a crane would be used to install the substructure. Piles may be installed before (pre-piling) or after (post-piling) the jacket is installed. For pre-piled foundations, a template is placed on the seabed to ensure the piles are installed in the correct locations. The template is then removed and moved to the next location and the jacket is landed onto the piles. For post-piling, the piles are installed through pile sleeves located at each corner of the jacket. Impact piling is the most common method of installing piles, using a piling hammer from a suitable vessel (e.g. jack-up). In some cases, it may be possible to drill the post-hole. Another option would be to combine the two techniques in a drive-drill-drive pattern. This is usually used in areas with very hard geological strata and it is not currently expected to be used unless piling alone has been unsuccessful. Where required, grout will be used to provide a strong connection between jacket and pile. The grout will be installed using the pile sleeve with ROV observation. After grouting, scour protection may need to be installed around each leg/pile depending on local conditions. This may be controlled rock placement, concrete mattresses or anti-scour matting.

The topsides will be installed independently of the substructures themselves. The topsides will be transported to site and lifted into position using a crane from a heavy lift vessel. The topsides may be installed as a single unit or in separate modules.

Operation and Maintenance

Operational activities, such as monitoring of OSP activity, will either be carried out primarily from a shore base or from an offshore location. Maintenance activities will include the following types of activities:

- Major interventions include overhauls of OSP equipment which may be required periodically during the operational life of the wind farms. Unplanned failures within OSP equipment may also require major repairs, which require the use of equipment and methods originally used to install the relevant infrastructure;
- Preventive maintenance comprising scheduled activities including plant and equipment scheduled maintenance, necessary safety inspections and testing of safety related equipment, inspections of primary and secondary structures, scheduled overhauls;
- Corrective maintenance to address equipment failures, primary alarms, or actions arising from results of inspections; and
- Opportunistic maintenance in cases where maintenance personnel and access vessels are available at site and some precautionary inspections or preventive maintenance can usefully be carried out.

The types of vessels that will be used during operation are yet to be decided and will be provided within a construction method statement that will be submitted in advance of works commencing.

Decommissioning

Under the Energy Act (2004), a wind farm and associated transmission infrastructure must be decommissioned at the end of their lifetimes. A decommissioning programme will be prepared in accordance with relevant legislation and guidance available at the time of decommissioning.

Section 8a – Permanent and Temporary Deposits

Type of Deposit	Nature of Deposit (P = Permanent, T = Temporary)	Deposit Quantity
Steel / Iron	P	c. 5,000 Tonnes per unit No. (if applicable) - 2
Timber	n/a	
Plastic / Synthetic	P	c. 500 tonnes (total weight) per topside
Concrete	P	c. 175 tonnes per substructure (total weight)
Silt	n/a	
Sand	n/a	
Stone / Rock / Gravel	P	Size range (mm) 50-200 Total m ³ : c.5,000 m ³ per substructure.
Concrete bags / mattresses	P	No. 100 Dimensions: 6m x 3m x 0.5m per bag/mattress Total m ³ : 1,000 m ³
Cable	n/a	