



CASE STUDY:

Queen Elizabeth & Prince of Wales Aircraft Carriers Project Value - £15 M

Addison Project were employed by Volker Stevin to provide a scope including the design associated with the provision of power and fire/drinking water for the QE Class Aircraft Carriers when in harbour. This also included the design of a purpose built substation.

We began design work in March 2015 with the final build in September 2019.



ADDISON SERVICES UTILISED :

- M&E and Civil Structural Design
- HV Design
- Principal HV and M&E Design Engineer
- HV and M&E Design Co-ordinator
- HV Energisation Engineers
- HV and M&E 3rd Party Checkers
- HV and M&E Project Management
- HV Commissioning Managers
- BIM Co-ordinator
- CDM co-ordination role.





SCOPE FOR THE PROJECT

Addison scope included the M&E and Civil Structural design associated with the provision of power and fire/drinking water for the vessels when in harbour.

Each jetty has a fully automated hydraulic cable boom to feed the HV cables to the carriers. This is designed to track the movements of the vessel by tides or currents.

The power scope included the installation of two 33kV feeds from Portsmouth Grid Substation, some 2 miles away, to a new substation at Middle Slip Jetty.



It included two 33kV circuit breakers that were adopted by SSE under our NERS accreditation agreement.

Two 14.1MVA rotary frequency convertors (RFC) were designed, built & commissioned, RFC A & B.

The starting of both RFCs is fully automatic as is both synchronising, de-synchronising and load sharing of both RFCs.