



90MVA 33kV CONTESTABLE CONNECTION

Somerset, UK



POWER

Value	Multi-million
Voltage	33kV
Client	Undisclosed
Duration	On-going
Market Segment	Industrial and Commercial

- 33kV cable systems
- Substation design
- Primary transformers
- Switchgear installations

- Highway engineering
- Bridge crossings
- Earthing and civil engineering
- Testing and commissioning

PROJECT SUMMARY

JSM is delivering the design and construction of a 90MVA, 33kV contestable connection for a major advanced manufacturing facility. The works combine an approximately 10km off-site cable route with new on-site 33kV and 11kV substation infrastructure, including primary transformers, switchgear, protection and control systems, associated civil engineering and commissioning.

PRE-CONSTRUCTION

Pre-construction activities include cable route and joint bay design, civil and electrical substation design, plant specifications, earthing and lighting design, protection coordination, cable sizing and wider power system studies. The route-specific engineering also includes design development, surveys and approval submissions for the two M5 crossings and Crandon Bridge.

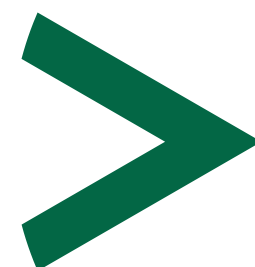
CONSTRUCTION

Construction covers the off-site 33kV duct and cable route, joint bays and fibre infrastructure, together with the on-site 33kV and 11kV compounds. The works include piled switchroom foundations, transformer bunds and firewalls, modular buildings, transformers, switchgear, cable systems, drainage, roads, fencing, earthing, building services, protection and control installations. The highway scope includes specialist crossing solutions at two separate M5 locations and at Crandon Bridge over Kings Sedgemoor Drain.

POST-CONSTRUCTION

Planned completion activities include functional and protection testing, cable circuit testing, commissioning, energisation support, as-built information, health and safety file preparation and handover to the adopting IDNO.

CHALLENGE



SOLUTION



Two separate M5 motorway crossings

Crandon Bridge crossing over Kings Sedgemoor Drain

Long cable route through highways and third-party interfaces

Develop location-specific engineering proposals and coordinate the required design, specialist delivery input, approvals and construction planning with National Highways and the wider project team

Surveys, trial holes, structural assessment and bridge-specific design development to produce an approvable solution coordinated with the local planning authority, IDNO and affected utility stakeholders

Plan the works in sections with coordinated traffic management, access arrangements, route-specific risk controls and ongoing liaison with the client, authorities, land interests and utility providers

ENVIRONMENTAL, SOCIAL AND GOVERNANCE

Environmental and governance considerations include controlled drainage and oil containment within transformer areas, traffic and delivery management, protection of watercourses and existing utilities, waste controls, secure work areas, documented design risk management and CDM-compliant handover.

