

33kV SOLAR FARM CONNECTION

Braintree, Essex



POWER

Value	Multi-million
Voltage	33kV
Duration	12 months
Market segment	Renewable

Principal Designer	33kV Cables & Duct installation
Principal Contractor	LVAC supplies
Compound Construction	Jointing & Terminations
Compound earthing	Hot and cold commissioning with Energisation
3.6km cable route	
Civils	

PROJECT SUMMARY

This project involved the design, installation, and commissioning of a 35MVA 33kV DNO switchroom and cable route. Works included detailed design and approvals, installation of a 3.6km 33kV cable route, and post-construction commissioning and energisation.

CONSTRUCTION

Supplied and installed a 33kV DNO switchroom including battery chargers and a metering room, along with 3.6km of 33kV cable duct installation, cable pulling, and jointing.

PRE-CONSTRUCTION

JSM completed the detailed design which included single line diagrams, protection and interface design – Power System and G99 Studies - Cable route design and cable calculations, ducting, cable install and jointing - earthing design, report, soil resistivity test, earth mat installation and fall of potential test.

POST-CONSTRUCTION

Works included cold and hot commissioning, energisation and providing As-Built records.

CHALLENGE > SOLUTION



DNO Design approval

UK Power Networks Design Approval.

Adjacent third-party project

Adjacent 3rd party project required excavation of the same route, high probability of disruption to residents.

Worked closely with the client (and their contractors) and UK Power Networks to achieve an acceptable design for approval.

JSM assisted in arranging a collaborative shared trench arrangement with the host DNO to facilitate a joint 132kV and 33kV duct installation.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE

As part of our community engagement in the Braintree area, the JSM team took a proactive approach to protecting the region's local heritage during works near an archaeologically sensitive site. When the cable route for a nearby project was found to pass through the edge of a historically sensitive field, the JSM team coordinated with specialist archaeologists to ensure the site was properly investigated before any ground disturbance took place. A formal 'strip and record' exercise was carried out across an area of approximately 4 metres wide and 20 metres in length, professionally identifying and preserving any subsurface remains for the historic record. This initiative reflects JSM's commitment to respecting and safeguarding the local environments in which it operates, ensuring that the progression of clean energy infrastructure does not come at the cost of the communities and heritage it serves.

