

33kV SOLAR FARM CONNECTION, DEVELOPMENT

Basildon, Essex



POWER

Value Multi-million

Voltage 33kV

Duration 8 months

Market segment Renewable

Principal Designer

Principal Contractor

Compound Construction

Compound earthing

4.2km cable route

Civils

33kV Cables & Duct installation

LVAC supplies

Jointing & Terminations

Hot and cold commissioning with Energisation

PROJECT SUMMARY

This project involved the design, installation, and commissioning of a 15MVA 33kV DNO switchroom and cable route. Works included detailed design and approvals, supply and installation of the switchroom with battery chargers and metering room, and 4.2km of 33kV cable ducting with cable pulling and jointing.

CONSTRUCTION

Supplied and installed a 33kV DNO switchroom including battery chargers and a metering room, along with 4.2km of 33kV cable duct installation, cable pulling, and jointing.

PRE-CONSTRUCTION

33kV DNO switchroom and cable route design - JSM employees 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



Congested route

Cable route crossed the busy A127 highway route into London

Adjacent third-party project

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

HDD was selected as the excavation method to avoid disturbing the landfill. Comprehensive environmental and geotechnical surveys were conducted to ensure safe and compliant installation.

JSM were aware of both schemes happening at a similar time and facilitated a collaborative route sharing exercise to avoid the same busy road being excavated twice.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE

As part of community engagement during Volunteers' Week, the JSM team volunteered at Fair Havens Hospice to support the upkeep of its grounds. The team spent the day weeding and clearing key areas, including the ambulance bay, walkways and car park, helping to create a more welcoming environment for patients, families and visitors. This initiative supports the hospice's vital work providing free, compassionate care to those living with complex or incurable conditions. The day highlighted the value of corporate volunteering, with the team finding the experience both rewarding and impactful. It also reflects JSM's ongoing commitment to giving back, with employees offered paid volunteering days and 128 hours contributed so far in 2025.

