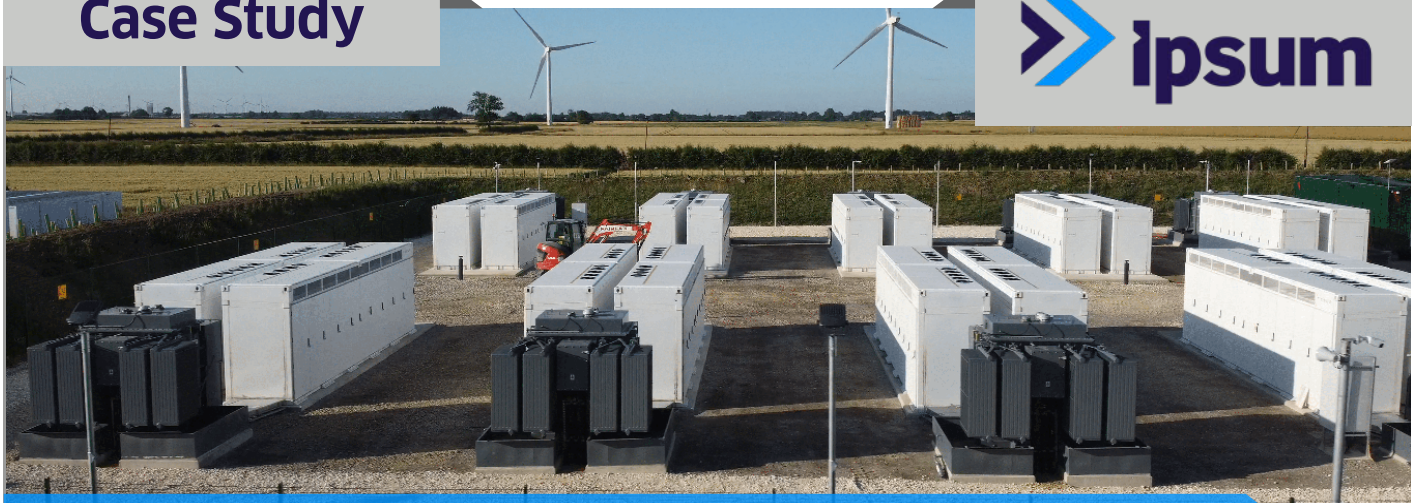
Case Study



Tesla, Rusholme Connection BESS
Ipsum Group

Overview of works

Ipsum was appointed Principal Contractor to deliver a high profile connection project in partnership with Tesla, offering a combined output of over 80MW. Rusholme was a 66kV connected site, including offsite 66kV cable works. The full scope included supply, build, construction and commissioning of a 66kV switchyard, 66 33kV primary transformer, and Northern Power Grid contestable works.

Ipsum, as a HV specialist, has in-house teams with the capability to work all the way up to 132kV. This means we are able to complete the full turnkey scope installation, to facilitate the connection site at Rusholme.

Approach

Ipsum was responsible for turnkey design, installation and commissioning of the connection project, including:

- Full **Principal Contractor** scope, namely: site setup, site welfare, site security, site management and project management, including interface with other CDM duty holders (inc. Principal Designer).
- Complete **civils** package, including; site surveys & clearance; site grading; base installation for all Substations, Tesla Megapacks and Control Stations; construction of 66kV Switchyard bases and primary bunded transformer base; offsite 66kV cable trenching; site-wide earthworks; Northern Power Grid substation works; and all site finishing and landscaping.
- **Installation** of all major equipment, inclusive of: 66kV Switchyard, primary transformer, switch rooms, MV Skids (TX's) and Tesla Megapack units.
- Full **site services** packages, inclusive of all site lighting, security and fire systems.
- Site-wide **cabling** works, inclusive of all HV & LV cabling, control cabling, data cabling, DC cabling, associated containment, as well as off-site 66kV cable installation works at the Rusholme site.
- Site-wide **commissioning** of all major equipment, such as: HV switchgears, MV and primary transformers, control systems, SCADA, 66kV switchyards, as well as testing of all cabling installs.

Feasibility and early-stage engineering:

We undertook site and engineering investigations to de-risk the installation of LV auxillary systems within an HV substation environment. These included:

- Topographical surveys;
- Statutory utility searches and GPR survey;
- Borehole investigations and targeted trial holes;
- Early LV load assessments for auxillary supplies;
- Initial routing studies for LV and HV duct cable systems.

The outputs of this phase directly informed constructability, earthing strategy, LVAC capacity requirements and the detailed design of auxiliary power systems within the HV compound.

Certified Tesla Megapack Installer

Ipsum is a certified Tesla Megapack installer, a testament to our ambition of leading the way in the clean energy revolution, further demonstrating our capability to deliver multiple Connection projects via our in-house energy and connections division.

"We are thrilled to be supporting Tesla in the delivery of these large-scale, grid-connected Connection projects. It is a testament to our team of specialists who were instrumental in securing this contract and will be executing its roll-out, as well as to Ipsum and our ever-evolving working methods and our adaptable and sustainable nature."

Lee Maxwell, Managing Director (Power)
Ipsum