



CLIENT
Tosoh Quartz

PROJECT
Increased HV Supply Capacity to
Factory

LOCATION
Greencroft, County Durham

SERVICES PROVIDED

- HV and LV design
- ICP 20kV connection comprising:
- GRP substation accommodation
- 20kV metered ring main unit
- 500kV transformer with close coupled LV board HV and LV cabling
- Customer replacement LV switchboard
- Construction to the adoptable standards of NPg

OVERVIEW

IUS delivered this work under our as an accredited Independent Connections Provider (ICP). Therefore, the works were carried out to the adoptable standards of the Distribution Network Operator, Northern Powergrid (NPg). The scope included the design, procurement, and installation of a 20kV distribution substation, low voltage sub-mains cabling, and a replacement customer low voltage switchboard to provide an increased supply capacity to the Tosoh Quartz factory in Greencroft, County Durham. The facility produces quartz glassware for the semiconductor industry for use in the processing of integrated circuits.

DESCRIPTION

IUS project managed the installation of the substation building to specification. The 115-meter feeder route encompassed 2 x 185mm aluminium 20kV XLPE Triplex cables to the point of connection onto the NPg network. Cable trenches were excavated on both private land and the public highway. IUS HV electrical fitters completed the installation of a 20kV ABB safe plus ring main unit, 500kVA transformer with close coupled LV cabinet, earthing, protection, and metering cabling. IUS HV Jointers carried out the HV cable terminations. An IUS protection engineer conducted the pre-commissioning and witness testing for NPg. The IUS Senior Authorised Person provided the necessary safety documentation and oversight of the works. Customer LV sub mains cables were installed from the substation into the factory on high-level containment to supply a new low-voltage switchboard. Existing factory supplies were reconnected to the new switchboard during a planned outage giving the customer scope for their future expansion plans.