

# UK Resources Tunnelling Project - Containerised Substation

## Customer

International Infrastructure and Tunnelling Contractor

## Location

North Yorkshire, United Kingdom

## Background

Ampcontrol have been contracted as the sole supplier for a large resources tunnelling project and are set to deliver a range of equipment, cable and maintenance services throughout the construction phase of the project.

Designed to supply power to tunnel surface operations including a welding factory, the containerised substation, designed and built by Ampcontrol will act as the main distribution system on-site. Stepping down the voltage from 11kV to 433V the substation will power on-site manufacturing facilities and all low voltage plant equipment.

Designed to fit within a 20ft steel container with separate personnel access, the substation included: Alphalite MAX LED lighting, 230V IP rated power points, an expandable single phase distribution board and dry powder fire extinguishers. The unit includes a 1000kVA 11/433 ONAN DYN11 transformer, a medium voltage ring main unit was also included, along with a tee-off circuit breaker, MV cable test access, self-powered VIP300 transformer protection relay, phase protection and earth leakage protection.

## Achievements

Some of the successful outcomes of this project included:

- Design and manufacture of a medium voltage containerised substation, tailored to meet customer specifications. This included the development of a detailed engineering package, including comprehensive management of the project from design and manufacture through to delivery on-site
- Safe and reliable step down of 11kV medium voltage electricity supply to 433V
- Fabrication and testing of the substation at Ampcontrol's workshops, prior to shipment on-site
- Delivery of a mobile and cost effective solution, resulting in reduced installation times for the customer



→ Offering customers a cost effective alternative to traditional concrete, brick and mortar substations