CUBIS
SYSTEMS

Templeborough Biomass Power Plant - Case Study

STAKKAbox™ Ultima Connect

Industry Experts

STAKKAbox™ ULTIMA Connect provides specialist chamber access solution

The new Templeborough Biomass power plant situated between Sheffield and Rotherham is one of only 15-20 similar sized plants that are currently under construction in the UK.

The new biomass plant will generate clean, green energy using waste wood as fuel. The plant will generate over 41MW of electricity which is enough to supply 78,000 homes and save over 150,000 tons of CO2 every year.

The Biomass plant which started construction in 2015 is currently in the final stages of completion with an extensive testing and commissioning process currently taking place. The new Biomass plant has installed approximately 4.5kms of cables to carry the generated electricity to the national grid for distribution across the UK.

The sites construction is being undertaken by Babcock & Wilcox, Volund & Interserve with the groundworks being subcontracted to Moortown Group Ltd. Cubis Systems was approached back in 2016 to provide a specialist chamber access and cover system for the use around the new site.

The construction site had a number of unique features including the need for the distribution of water for the hydrant system, power and general utilities. Cubis' STAKKAbox™ ULTIMA Connect access chamber system enabled these unique features to be easily accessible. The ULTIMA Connect chamber system had to be adjustable onsite with one of the major features being the installation of a new bridge over the River Don.

The new bridge was the only access for new utility services and the national grid power cables. Four (4) ULTIMA Connect access chambers where constructed at each corner of the bridge allowing for the distribution of the cables across the bridge from the ground at one side and then back into the ground at the other. The ULTIMA Connect access pits also offered the function of integrating with the architecture of the bridge with the use of Cubis' AX-S™ B125 Concrete access covers becoming part of the bridges walk way and steps.

Due to the limited site space, time and complexity, the reduction of deliveries was of paramount importance to the contractors. Preliminary specification work was undertaken to determine the appropriate access pit and cover combination. This resulted in the use of concrete cover slabs and D400 ductile iron access covers to reduce the size of the pits access point. This was due to the large size of access pit systems needed to house sizable valves and cables and reduce costs for large bespoke access covers.

The ULTIMA Connect pit system also enabled the delivery to be supplied using 'flat pack' components reducing delivery costs unlike comparable concrete access pit systems that would have required heavy lifting equipment during delivery. The individual 150mm deep sections of twin-wall GRP that make up the ULTIMA Connect pit system provided added extra flexibility to contractors with the ability to drill duct entries on-site where required, once installed, as pre-drilling wasn't possible due to the extensive number of utility and power cables required to pass through the access pits.

Cubis supplied over forty-five (45no.) STAKKAbox™ access pits to site ranging from 750 mm x 750 mm to 3000 mm x 3000 mm with depths of up to 2400 mm. Added features included cable management and step iron kits

Connecting Australia.
through innovation, design & development.

Driven by Innovation

Cubis Systems is Australia's leading manufacturer of innovative, lightweight structural access pit and cable protection systems used in the construction of infrastructure networks for Rail, Telecoms, Water, Construction and Power markets.

Cubis has developed an innovative approach in an old-fashioned industry. This has been achieved by developing quality products which replace traditional construction materials, like bricks and concrete, with lightweight plastics incorporating intelligent design features. These can then be installed faster and ultimately save our customers both time and money.

Cubis manufactures preformed network access pit systems STAKKAbox™, cable protection systems MULTIduct™ multiple duct system, RAILduct™ cable trough and AX-S™ access covers at its manufacturing sites throughout the UK and Ireland these products are exported to more than 25 countries throughout the World. With additional manufacturing facilities located throughout Australia, Cubis provides customised, highly engineered underground access solutions with quick installation capabilities.

At Cubis we pride ourselves on delivering technical customer support, new innovation, product quality and the highest levels of customer satisfaction.

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