

## Data Centre, Saughfield Building

The Saughfield Building – Data Centre located at the University of Glasgow is built on a compact site on the university's campus and is part of a £1 billion redevelopment programme. The data centre now houses the university's ScotGrid servers (used for a collaborative project between particle physicists and computer scientists at universities and scientific institutions in the UK and at CERN in Switzerland); and the IT infrastructure running the university's physics, astronomy and IT departments. There is also enough room inside to accommodate many more systems the university may need to add in the future.

It is a state of the art, resilient facility which relies on the electrical and mechanical infrastructures built, installed and all systems commissioned, tested and witnessed.

### Project Highlights

- The key practical problem that affected every aspect of the job was the physical limitations of the site, with the only access to the building via a narrow access road, during which deliveries could only be made at certain times to avoid disruption to the day to day running of the University.
- The project encompassed every aspect of electrical and mechanical services within the building, starting with an extension of the university's existing 11kV switchboard with two fully rated, oil-filled 11kV/400V 1600kVA transformers and two close-coupled 200A ring main units.
- The mains supply is backed up by a 1600kVA standby generator that can support the whole facility if necessary, powering the LV switchboards automatically in the event of a mains supply failure; and able to complete a soft transfer back to the mains at the end of an outage.
- Other electrical systems installed on site included internal, external and emergency lighting systems (the latter equipped with automated self-testing capabilities, removing the need for manual testing); fire detection, alarm and response systems; fire suppression systems and security measures including alarms, CCTV and card/fob-based physical access control.
- Mechanical systems installed on site included DX air conditioning, ventilation, plumbing & heating, BMS and leak detection.
- Following testing and final commissioning of each of the individual systems, we completed a programme of integrated systems testing, including testing resilience and controls against various load and failure scenarios.
- The project featured in the NICEIC Connections magazine.

### Key Facts

**Client**  
University of Glasgow

**Main Contractor**  
Graham Construction

**Architect**  
HLM

**Consultant**  
TUV SUD

**Services**  
Mechanical & Electrical

**Duration**  
9 months

**Value**  
£5,000,000

**Location**  
Glasgow, Scotland

