



Case study

Blackburn with Darwen Borough Council

Location: Blackburn

Project Value: £1.5 million

Data Centre: 200m² approx.

Duration: 3 months

About

Blackburn with Darwen Council is a forward looking public body who encourages the wider community to make greener choices. They provide an extensive variety of services that touch the lives of everyone in the borough from street cleaning to schools or trading standards to transport.

The brief

The Council introduced a new project targeted at building a new, high performance data centre in consideration of new Government initiatives for high sustainability.

This required a new Tier II facility to host their server and storage hardware, which would provide future growth in IT services and reinforce commitment to sustainability and regeneration.



The Sudlows solution

Sudlows were successfully commissioned the new data centre project through submitting a strong, innovative design proposal.

By conducting intensive consultations, Sudlows could recommend the latest in data centre technologies and guide the Council on how to become active participants in advocating energy efficiency. This included Flywheel UPS and Free Cooling technology as the latest products to radically reduce their carbon footprint. The new secure data centre structure also uniquely integrates an external Disaster Recovery Centre for effective support in the instance of any critical IT and technology system crisis, which ensures future business continuity, support and protection.

Flywheel Technology

Sudlows particularly sourced an integrated Flywheel Genset designed by KST Rotary Solutions, a leading manufacturer at the forefront of dynamic UPS systems. Flywheel technology distinctively uses renewable kinetic energy as an alternative option to conventional battery operated methods. At 96% efficiency and with a lifespan of up to 20 years, the Flywheel is proven to be a real investment for the future of the Council's services. By working closely with KST Rotary Solutions, our engineers devised a way to divide the electronically coupled Flywheel UPS Genset for purpose-built technology designed to perfectly fit the physical size of the room.

Free Cooling

An analysis of the cool ambient air temperatures in the surrounding North-West location was carried out with results that supported the installation of Free Cooling technology.

Airedale Smartcool glycol-free cooling ventilates the server racks and generates 46% less energy than standard cooling systems. This calculates a low ROI for the Council and considerably reduces environmental impact.

Specialist Projects Director at Sudlows, Andy Hirst commented;

"Months were spent sourcing the most accurate equipment to combine this with high resilience and redundancy. This means we have offered the Council a far more cost-effective and environmentally sound alternative to traditional systems in order to achieve their high environmental targets. We completely understand the need to protect the environment and, as a sole supplier and local service partner, we always endeavour to minimise impact."

Mike Zammit, Director of Business Transformation & IT at Blackburn with Darwen Council, said:

"The new data centre provides extra capacity for Blackburn with Darwen Borough Council to plan for future growth in IT services. It will improve our energy efficiency, saving the Council money through the latest green technology, and provide a secure and resilient facility away from our main operational hub."

The conclusion

The recommendation of enhanced design features sets the facility to achieve a minimum annualised Power Usage Effectiveness (PUE) of 1.4, as defined by the Uptime Institute, resulting in an eco-friendly solution.

The integration of new technologies ultimately demonstrates how, on a restricted budget, investment in greener infrastructures can improve efficiency, build resilience and reduce long-term operational costs.

Overall, this project acts as an example to the wider community in how renewable power resources and modern IT infrastructure can be employed to generate high power efficiencies.



"It will improve energy efficiency, saving the Council money through the latest green technology"