

Case Study: Data Centre



Data Centre Move - Week 1

About

Together Housing Group are one of the biggest housing associations in the North of England with over 38,000 homes mainly across the Yorkshire and Lancashire areas. Together Housing is a non-profit making organisation and any money they make is invested back into the association for the benefit of our residents and local communities. As well as houses to rent, they also build and manage homes for sale, sheltered accommodation and extra care. You can find more about Together Housing Group here.

Challenge

Together Housing Group requested that UPS Systems plc move their existing data centre from Halifax to Wakefield. We were chosen because of our extensive knowledge surrounding data centres and backup power. Cheaper quotes were supplied from other companies but when these companies looked at the site and the structure they didn't appear to have the necessary experience to do the job correctly. Our proposal was designed around Together Housing Group's specific needs and the unique solution we proposed was most suitable for them.

The new set up is using 5 server racks and 1 communications rack with InRak air-conditioning units sitting on each end of the IT equipment. This will all be supported by N+1 40kVA UPS system and a 110kVA Standby generator in the event of a power cut. In the event of a fire, there is also fire suppression installed inside the data centre. This will prevent localised fires and stop larger ones from spreading. Any potential problems will be picked up by the environmental monitoring system that will also be in place, which will monitor air conditioning, overheating or UPS failures. The security of all of the equipment will be monitored by surveillance systems that will be put in place to look after the data centre. The specification of the data centre is for top quality equipment to be used at all times.



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UPS



Generators



Maintenance

Week 1

Work began on the data centre move on 26th February 2018 when the site in Wakefield was prepared. After being passed a blank room, ready for installation, our engineers got underway preparing the initial electrical infrastructure of the data centre. The first step was to do all the cable runs from the distribution board located downstairs and up into the data centre room on the second floor. The incoming supply is in the corner of the room to ensure ease of installation with a direct run of cable between the two floors of the building.

Whilst a couple of engineers started to work on the cable runs, it was down to others to start preparing the cable tray. All of the cables will be tied into the cable tray, making it an important part of the electrical infrastructure. Cable trays are used as an alternative to open wiring or electrical conduit systems. This system will provide the data centre with complete security and safety because it covers all of the wires and protects them from any kind of damage.



Before continuing with the cable work all of the LED panel lights were all fitted. The main reason for using LED lighting is because of the reduced amount of heat they generate when compared with more traditional forms of lighting. This project is based on a 36kW energy room and with 5 server racks and 1 communications rack. All this equipment produces a lot of heat, therefore it is important that the lights give off as little as possible. The other factor in using LED lighting that they will consume less energy, reducing the monthly costs of running the data centre.

The final steps taken in week one was to start running the cables for the distribution boards and cables to run out to the sockets. This is where the power will be supplied to the server and communication racks and fed back to the distribution boards. The end of the week should have seen more progression, but due to the Beast from the East and Storm Emma, there were a few delays. The whole project included extra time for unplanned disruption, so the final completion date of the project should not be affected.

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