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THE CLIENT

Xtera – specialists in the design and installation of submarine cable systems, with a focus on the simulation of undersea optical systems, highly specialised modelling tools and a dedicated optical test-bed, allowing Xtera to optimise transmission solutions to individual networks. Xtera has deployed its optical networking solutions in more than 60 countries across five continents.



Optical



Temp: 20+/-3 C
Humidity: 35+/-5C



100m²

“We’re really pleased with the finished product...”

Guardtech Group Project Manager Florence Whitehead said: “This might’ve been a pretty standard modular cleanroom build, but it was still such a pleasure to see all the different aspects of the project come together so seamlessly. “We’re really pleased with the finished product and wish Xtera well as they continue to do such amazing work in the field of submarine optics. I do hope our paths cross again in the future.”

Florence Whitehead
Guardtech Group
Project Manager



THE BRIEF

Xtera were looking at adding a medium-sized cleanroom to a new premises at an industrial estate in Romford. The new cleanroom was designed to be supported from an existing mezzanine, tucked neatly within a tight footprint – not just from the top down, but also around the perimeter of the cleanroom. The new controlled environment would support Xtera’s world-leading submarine cable network installation services.



OPTICAL MODULAR



THE TECH SPECS

A controlled environment designed, installed, cleaned and commissioned by Guardtech built to the following specification:

◆ **Structural:** GT Shell Plus 60mm Quadcore insulated wall panels, GT Lid Plus 60mm Quadcore insulated ceiling panels, GT Deck Lite ESD vinyl flooring – coved and capped, GT Access Plus single doors, GT Rise Plus PVC rapid roll doors on two-way interlock with push button activation, double glazed window units, edge protection, integrated hollow core air return and low level grille for transit back to duct spigot.

◆ **Electrical:** GT Lux Pro LED Lights surface mounted – delivering 500 lux and operating via PIR activation, 13amp double sockets in three-compartment curved profile trunking around room perimeter, RJ45 Ethernet Sockets fed back to network switch, doors on electromagnetic interlock system, 32amp outlets.

◆ **Mechanical:** GT Air Plus Upflow Air Han-

dling Unit with Digital Display controller on the AHU for setting target temperature, humidity and fan, GT Flow Lite H14 HEPA Fan Filter Units delivering up to 40 air changes per hour.

◆ **Monitoring:** GT Scan Lite Environmental Monitoring System measuring Temperature, Humidity & Pressure.

THE CHALLENGES

Contract negotiations: This was a relatively straightforward project on the whole, but there were some highlights in terms of the way the Guardtech Cleanrooms #modsquad approach the build.

Because multiple subcontractors were all due to be site at various times, a pre-build site meeting was staged to ensure everything was strategically co-ordinated during the installation – including HVAC specialists, flooring contractors and builders. This included the delivery of the large upflow Air Handling Unit and dehumidifier, which both had to be placed in position earlier than usual because of the tight layout of the facility.

Cut above: The cleanroom ceiling was suspended from a new mezzanine that had been specially constructed which meant the team needed to cut out parts of the plaster boarding to fit our suspension kit, rods and other elements. The Guardtech team worked seamlessly with the other building contractors to ensure a smooth installation occurred.

“The team worked seamlessly with other contractors to ensure a smooth install...”

Keep it tight: The void space underneath the mezzanine was extremely tight, with the ducting allowing just 20mm clearance in some areas. Whilst suspending the ductwork and cabling, installing the ceiling panels became really intricate work, but the team utilised all their experience to ensure a good job was done. Project Manager Florence Whitehead said: “We had to get reduced duct pieces for the beams, as a lot of the beams drooped lower than the actual plasterboard, and also carry out some neat work to accommodate the beams.”

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THE RESULT

Guardtech Group Project Manager Florence Whitehead said: "This might've been a pretty standard modular cleanroom build, but it was still such a pleasure to see all the different aspects of the project come together so seamlessly.

"We're really pleased with the finished product and wish Xtera well as they continue to do such amazing work in the field of submarine optics. I do hope our paths cross again in the future."



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Contact Us



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