Guardtech group

MEDICAL DEVICE

CLIENT CASE STUDY

ISO Class 7

THE CLIENT

Biocomposites – manufacturers and engineers of world-leading products for use in infection management in bone and soft tissue, pioneering calcium compound devices to regenerate bone and carry antibiotics.

With more than 30 years' experience in manipulating the surface chemistry and crystalline properties of calcium compounds, Biocomposites engineer and manufacture products at the forefront of calcium technology.

THE BRIEF

The client required a new cleanroom suite featuring four process rooms, a clean corridor and both Personal and Materials Airlocks to be built in an existing storage area to strengthen the capacity for their innovative Medical Device manufacturing.

Medical Device

17+/-2C – 50% +/-10% RH

300m²

"Excellent project management..."

Chris McGuinness, Strategic Projects Director at Biocomposites Ltd., said: "Guardtech has proved to be a supplier of the highest standard throughout the whole process of providing a new manufacturing facility to support the growth of our product range. Excellent project management was demonstrated in design, build and commissioning phases.

"Site safety was managed effectively and disruption to neighbouring tenants was kept to a minimum. The extensive knowledge and experience of the teams involved aided our decision making to ensure all requirements were met. The success of this project has given us the confidence to contract Guardtech's turnkey arm Cleanroom Solutions to provide further manufacturing capacity and construction of another suite is now underway."

Chris McGuinness
Strategic Projects Director
Biocomposites®

Guardtech cleanrooms

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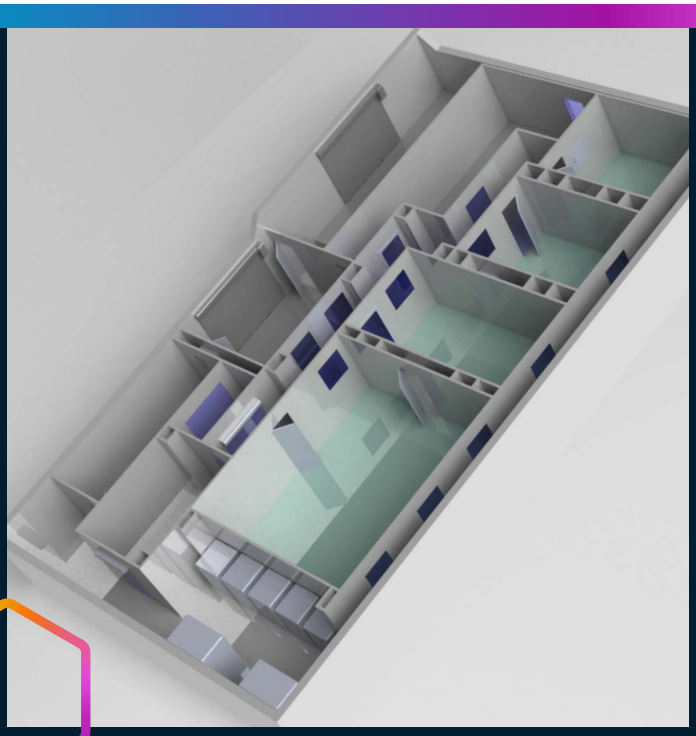

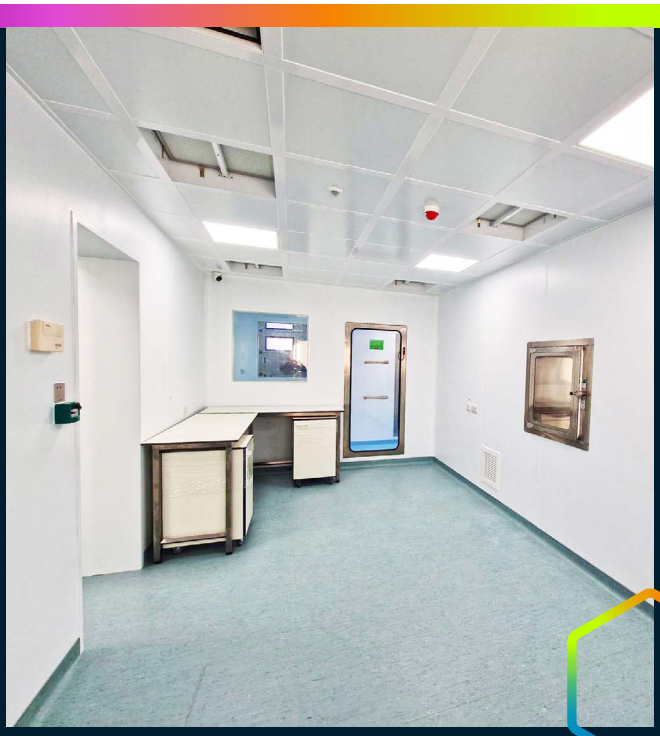

THE TECH SPECS

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

- **Structural:** GT Shell Pro de-ended wall panel system, GT Shell Lite cladding, GT Lid Pro de-ended ceiling panel system, GT Access Max rapid rise doors, GT Access Plus semi flush single doors with vision panels and door interlocks, status indicators and break glass.

- **Electrical:** 13amp double sockets, PVC conduit in void behind panels, electromagnetic door interlocks on all cleanroom doors, CAT6 data sockets, 12-port network switch, GT Lux Plus LED lighting achieving 500 lux on average at 7,800 lumens per LED.

- **Mechanical:** GT Flow Plus H14 HEPA Fan Filter Units with G4 Pre-Filters achieving 50 air changes per hour, GT Flow Pro Upflow CRAC Units ducted to a clean plenum.

- **Monitoring:** GT Scan Plus environmental monitoring system (EMS) with in-room stainless steel LCD panels measuring temperature, humidity and pressure connected back to client PC, with audio alarms at panel.

THE CHALLENGES

Tetris tussle: This project was something of a 'game of Tetris' for the Design team, as there were a defined number of process rooms (four) and airlocks (PAL and MAL), as well as corresponding and supporting CNC areas that had to be factored into an intelligently plotted layout.

Careful consideration had to be given when accounting for personnel flow and material flow through both classified and unclassified zones in the facility design. A constant dialogue had to be maintained between the Guardtech Cleanrooms Design and Install teams and the client.

Available plant space: There were severe space restrictions when it came to installing the GT Air Pro CRAC Upflow Air Handling Units (AHUs) and so extra care was taken to achieve close control – with carefully designed ductwork runs to minimising the footprint.

Happy campus: This build was conducted on a university campus, so representatives of the institution needed to be heavily involved through the design stages, while regulatory approvals and health & safety considerations were critical. Guardtech worked diligently to maintain a strong working relationship with all stakeholders involved to ensure the project finished on time and on budget to the client's satisfaction.

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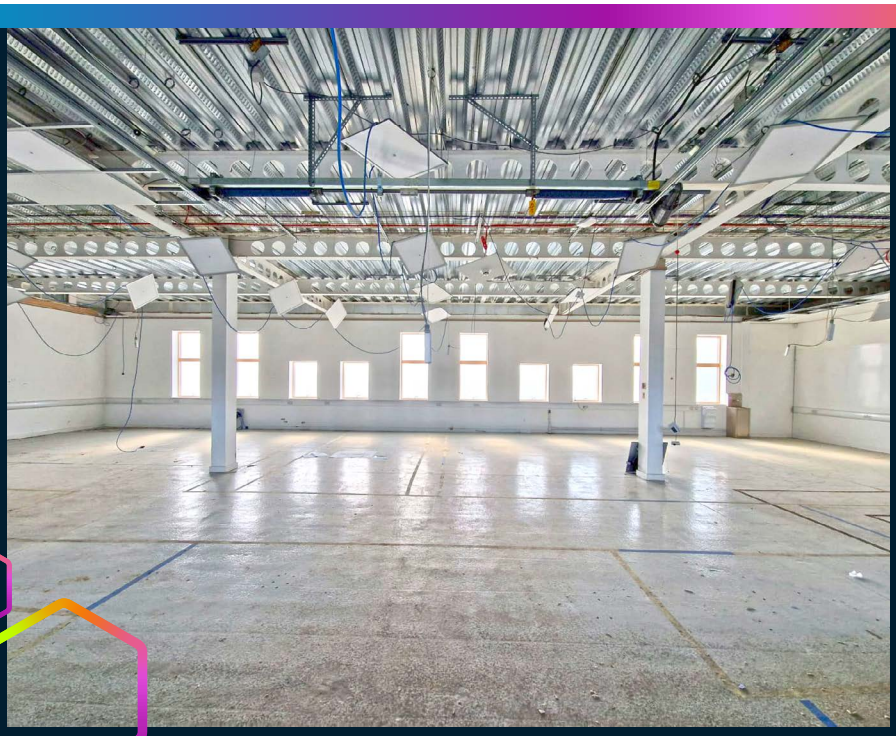
Unit C The Brocks,
Homefield Rd,
Haverhill, CB9 8QP

0330 113 0303

sales@guardtech.com

www.guardtechgroup.com



THE RESULT

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