

Overview

Modular Security Solutions were delighted to be awarded the contract to work with a prestige clean room builder in providing a CL3 clean room environment to a UK pharmaceutical facility.

The project brief called for an area within an existing large laboratory to be divided and security hardened following a containment category upgrade of some of the pathogens being handled.

The new secure area footprint was approximately 20,000 x 17,000mm which provided approximately 550m² of our high security composite panel system in total. The secure area also required two secure transitional airlock spaces for containment and airflow purposes.

The facility required optimal air leakage rates despite significant integration of services such as pipework and cabling

Outcome

Despite several unforeseen challenges and an extremely tight schedule, the project was designed, and the materials delivered in six weeks. Our client installed the system in three weeks, meaning that the clean room environment was handed over one week ahead of schedule.

The area provided a secure, sterile and aesthetically pleasing CL3 working environment to our pharmaceutical end user.



LOW
AIR LEAKAGE



HYGIENIC



DEMOUNTABLE

Approach

Due to the highly confidential nature of the site, project surveying activities were restricted to one site visit with no allowances provided for a follow up. Over the course of a single day a 4-person team meticulously dimensionally surveyed the site which was made more complex due to size variances of the overhead steelwork and occasional discrepancies between 'as built' and 'drawn' on-site steel frame dimensions.

The collected dimensional data was marked onto a live design system and communicated to the dedicated design engineer for capture and amendment.

The smaller airlock areas were designed as internal walling abutments to the perimeter secure area with an integrated secure ceiling area. The interfaces between the perimeter walls and the airlock walls were sealed and flashed using a hygienic flashing piece. Both airlock walls incorporated a secure door aperture to act as an interface between the heavy security door and the panelling system. This was achieved using the MSS door post and header panel support channel arrangement, providing additional structural integrity to those specific areas of walling.

The panel facings were supplied in a hygienic laminate, which needed to be entirely smooth and flat, allowing for the application of a specialist 2mm thick glued hygienic vinyl with continuous heat welded seams

Cable and pipe penetrations were cut off-site, taking advantage of the MSS Precision Cutting Service to prevent dust and debris contamination on-site. The secure service penetrations were designed to integrate specialist clean room penetration seals, supplied by MSS, which are airtight, watertight and resistant to gas pressure/fumigation.

A section of perimeter security walling was designed between two MSS Inline posts, which are demountable from the non-attack face by specialist contractors. This allowed for a degree of project future proofing, meaning that large equipment and machinery can be transported in and out of the area at a later point in time with minimum disruption..



Modular Security Solutions

Buildings You Can Trust