ICL - Quantum Hub

Higher Education / Refurbishment

Key Features:

- Refurbishment to create Quantum laboratories
- Works adjacent to 'live' research areas
- Out-of-hours works to protect research projects

Designed to create a suite of revitalised quantum technology laboratories for the College, this project involved complex refurbishment adjacent to highly sensitive research areas. Delivered across multiple floors, this project provided a new integrated optics laboratory, optomechanics laboratory, preparation / control laboratory and dilation refrigeration room.

Critically, works were restricted due to noise and reverberation impacts to the occupied college, difficult logistical access to two sub basements and working around other main contractors within the same building.

Intelligently coordinated design

The project was developed by the clients appointed design team to RIBA stage 3A. After our appointment, we took the design forward under the control of our Senior Contract Manager, Colin Hart. He coordinated our own structural, architectural and M&E team to ensure the client team received an aspirational yet achievable design.

Extreme accuracy was required to plan and plot the proposed design from tender stage, as the space to incorporate the laser laboratories, new data cabinets, plant and storage rooms was extremely limited. Owing to this challenge, our design team collaborated closely with the client, project team and end users to safeguard a seamless design.

New Mezzanine floor works

A new steel frame complete with a concrete mezzanine floor was formed at level zero. This was carefully planned to consider the procurement time frames, as well as the logistical difficulties around bringing in the plant and equipment down from the external ground level into the two sub basements.

Further to the aforementioned, we also had to thoroughly consider the risk of working in an occupied and operational college to form the structural floor, that subsequently received a new timber staircase from level 0 to level 1.

Further works to the Mezzanine floor included forming a new plant and equipment storeroom. Intrusive surveys were undertaken, following the removal of the existing M& E services, which revealed a deficiency in the existing steel frame floor construction. Owing to this, we proposed a new design not previously considered at Tender stage that required strengthening of the steel members with new steel beams. Such ingenuity was again spearheaded by our delivery team, under the control of our Senior Contract Manager Colin Hart.

Client:	Imperial College London
Project Value:	£950,000
Programme Duration:	31 weeks
Architect:	BGS Architects
Quantity Surveyor:	Mortimer Isaacs Consultancy LLP

ICL - Quantum Hub

Higher Education / Refurbishment

Key Features:

- Refurbishment to create Quantum laboratories
- Works adjacent to 'live' research areas
- Out-of-hours works to protect research projects

Architectural fit-out works

Comprising of bespoke new acoustic doors, frames, vinyl flooring, Trespa Laboratory work benches, storage cabinets and high-quality finish decorating. All works were treated with consideration to the ultimate end goal – to ensure this new research facility embodied the professional, clinical and benchmark values of the College.

Complex M&E provision

Services to facilitate the new laser equipment and plant were stringently reviewed prior to commencement. Thereafter, planning mitigated the challenges of bringing the plant and equipment down from the external ground level into the two sub-basements. Again, our focus was on ensuring the safety of working around in an operational college. Works included the provision of new power, lighting, fire alarm, data cabinets, mechanical heating and ventilation, compressed air, hot and cold water supplies, gas leak detection and building management system.

Out of hours working

A significant amount of night and weekend work was undertaken, in order to mitigate the noise impact to staff and students during the normal working day. Owing to the presence of highly sensitive equipment and research projects adjacent to the site area, this was vital to the successful delivery of this complex project.

"The project was successfully completed on the 27 February 2020. The Logan construction team delivered fit for purpose, highly serviced Physics research laboratories set over two floors to a very high standard. I would rate as one of the best refurbishments in the Department of Physics in the last decade. The end users and I are extremely satisfied with the end result and we have a Quantum Technologies laboratory facility to be proud of.

I was particularly impressed by the high quality finish and fully coordinated mechanical and electrical installations that was so needed for space. The Logan site team including sub contractors and design team worked very closely and collaboratively throughout the project to achieve all deliverables. It was a challenging project especially during term time with the site in close proximity to a live lecture theatre and Laser laboratories. I was impressed by the Logan site team approach to design challenges and incorporating innovative solutions. A productive lessons learned workshop was also undertaken post completion.

Finally, I would like to extend a genuine overdue thank you to all of the Logan Quantum Technologies team in particular Colin Hart and Marc Terry who were indispensable and professional throughout the project and an absolute pleasure to work with."

Doug Hudson, User Coordinator, Imperial College London