Case study: Education

University of Bristol

Refurbishment of Hele-Shaw Laboratory, Queens Building

Services
A full strip-out of the Laboratory's existing equipment, internal refurbishment, steelwork and metal fabrication, M&E, plastering and redecoration.

Contract detail
A complete strip-out and extensive refurbishment of a disused Hydrology Laboratory that involved full electrical and mechanical services, structural engineering and metalwork fabrications.

What our client wanted
With knowledge transfer and technical innovations for industry being central themes for the University's Faculty of Engineering, reinstating the disused Hele-Shaw Laboratory to specialise in different areas of fluid mechanics as a teaching and research facility was a priority.

How we helped
This refurbishment project to modernise the University's Hydrology Laboratory, involved careful and detailed planning to remove and reinstall the existing Wave Flumes in addition to other items of equipment such as an industrial grade water pump, heating and two vertical, 15 meter high secondary steelwork structures for attaching experiments which run the height of the buildings stair core.

The project involved a complete strip-out of the old Laboratory; removing the existing ceramic wall tiles, plastering all surfaces, installing new partitioning and undertaking a full refit of the mechanical and electrical installations and Wave Flumes: one 15 meters in length and a 14 meter high, bidirectional, vertical multi-phase Flume fitted to new layouts.

We undertook modifications to widen the existing drainage gully that's formed within the concrete floor and refurbished all copper-linings, complete with new stainless steel grill to bespoke designs. Alto Unity safety flooring was fitted throughout to provide a slip-resistant surface to the Laboratory's 400 square meter floor area.

New electrics and lighting complete with 3-phase power to Laboratory machinery was installed throughout complete with industrial power sockets fixed to pillars and other areas future-proofed the Hele-Shaw lab for subsequent equipment relating to areas of research.

We managed and delivered the project mostly out of hours at weekends and early mornings via our own professionally qualified, multi-skilled trades and project management team.

The results
The Hele-Shaw Laboratory is now a fully operational teaching and research facility. It houses the University's capability in low viscosity liquids and multi-phase interactions between liquid and gas. The space is open-plan to jointly serve the needs of teaching and research.

The large permanent research infrastructure items are multi-use in particular the 15 metre flume which has the potential to be used as a density-stratified shear flume, a tidal flow tank, a towing tank, and a wave machine. It is also capable of being partitioned into smaller cubicles for undergraduate and graduate teaching.

Programme
23-weeks

Value
£395,000

PROFESSIONAL TEAM

Electrical Engineers
JAD Engineering

Mechanical Engineers
Envira-Mech Services Ltd

Steelwork
MJ Patch & Co

CONTACT US

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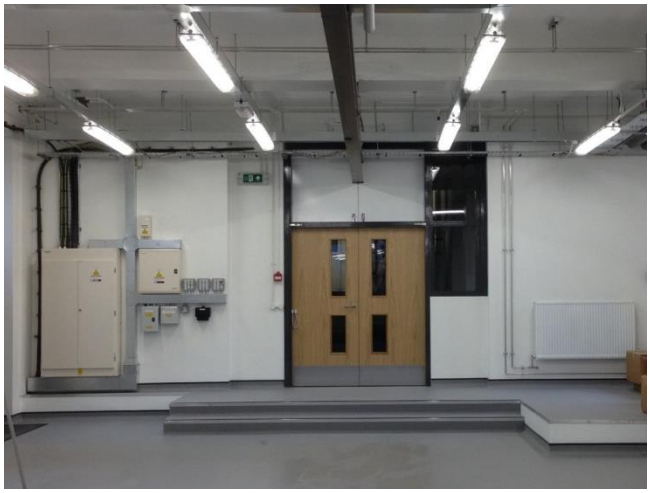
Main Laboratory: Before

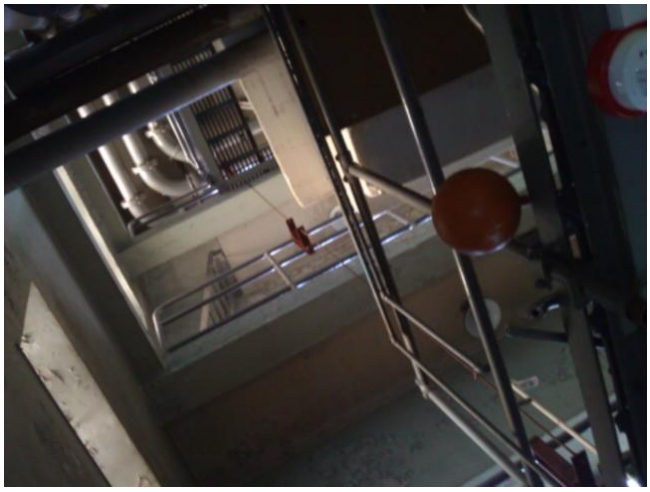
Main Laboratory: After

Main Entrance: Before

Main Entrance: After



Main Stair Core: Before



Main Stair Core: After