

# Case Study

Analytical Testing / Universities & Education / Research & Development



## Faculty of Engineering / Te Herenga Mātai Pūkaha (B405) University of Auckland



2020 Winner  
Auckland  
Architecture Award

**Completion Date:** 2019

**Location:** Auckland

**Services:** Specialist Laboratory Architects

**Awards:** NZIA Auckland Architecture Awards 2020 - Education Award & Resene Colour Award. 2020 Property Industry Awards - Education Property Award (Excellence)

Lab-works Architecture were the specialist designers for the “wet laboratories”, to upgrade and replace the existing Engineering School buildings at the University of Auckland City Campus.

The upper three floors are for laboratory-based research where a central corridor divides the specialist spaces on the western façade from the other workspaces. These highly serviced areas are directly below the plantrooms on the roof, minimising the services running through the building.

The laboratories are based on a modular layout, with ceiling mounted “services shelves” suspended over the benches, allowing for flexibility of services and benching which can be reconfigured or even removed entirely if research changes in the future. The laboratories already allow for many different research streams: from chemistry and material engineering, with scaffolded lab spaces for small scale process engineering; through to environmental research areas with growth rooms





and UV sterilisation systems. A specialist clean suite for microfabrication and photolithography work was also included. Support offices for technicians are located close to the laboratory spaces, with views into the associated workspaces.

The lower levels contain teaching laboratories, designed to be highly flexible for “plug and play”. Services connections were set up at central points within the laboratories but keeping as much open floor space as possible. Adjustable mobile benching and multiple services connections allow students to move equipment in and out of each space, or set up long or short term experiments which can later be demounted and stored. Smaller specialist teaching spaces are adjacent to these, where more permanent infrastructure is required.

The lower floors also contain rooms for specialist equipment, which are on separate isolated structural slabs to minimise vibration.

A dedicated chemical storage area was located adjacent to the delivery dock, meaning hazardous chemicals does not need to be stored within the laboratories themselves and can be more easily managed by the Faculty.

Each laboratory was designed to be as open as possible, with visibility into every space for both safety, and to ensure that the research work going on inside each area could be highlighted. This embraces the theme of “engineering on display”, a marked change from the dark and enclosed rooms these laboratories replaced.

Lab-works Architecture worked as the specialist laboratory architects for this project, in collaboration with overall project architect Jasmax.

