

# Case Study

Analytical Testing / Research & Development



## Te Ohu Rangahau Kai AgResearch / Massey University / Riddet Institute

**Completion Date:** 2020

**Location:** Massey University, Palmerston North

**Services:** Specialist Laboratory Architects



In collaboration with Warren & Mahoney, the new Te Ohu Rangahau Kai building is a joint facility for AgResearch, Massey University and the Riddet Institute within the Massey Turitea campus. Focusing on food research and development sciences the facility links to the existing food pilot plant of the Riddet Institute and provides a unified hub for AgResearch food-based functions from various sites around the country. Te Ohu is one of the largest agricultural food research centres in New Zealand and expands operations of the nationwide Food HQ innovation network.

The 3-storey facility comprises around 950m<sup>2</sup> of pilot plant space for meat, dairy and general foods and 1,700m<sup>2</sup> of research laboratories and support spaces in addition to offices, meeting rooms and administration spaces. The ground-floor food pilot plant spaces support the research programme development with industrial finishes and functionality, while the laboratories upstairs are generally adaptable and modular with some dedicated rooms for specific tasks.



From a small loading dock, product can be either transferred to the meat or dairy portions of the pilot plant. Dealing with different food materials these areas operate under different regulatory requirements. Meat research work-rooms are open for flexibility of equipment locations and operation. Within the meat area a gantry rail is employed to safely move raw or processed products around the spaces, including cold or freezer storage. Dairy research equipment is laid out in a logical process arrangement with space for future flexibility. With 10 temperature-controlled rooms (from -30 to +10 degrees) and a specialist environmental test chamber capable of -40 to +40 degree temperatures a wide-variety of food material can be studied or stored.

Controlled visibility for display and Health & Safety is achieved with considered glazing locations throughout the facility, with linkages through both pilot plant meat and dairy spaces as well as within the laboratories. Colour features have been used throughout to mark fixtures such as wash hand basins, safety showers and eyewashes.

Laboratory spaces are generic and modular in layout to promote maximum collegiality and adaptability of function. Specialist mass spectrometer and gas chromatography equipment rooms support the general laboratory functions. Fume cupboards have been placed out of sight-lines to enable larger views through the building and a central dumb waiter enables waste and material movement within the laboratory zone to the wash-up room autoclave. Hydrogen peroxide plug-in decontamination and UV sterilisation lighting has been provided in the cell culture rooms.

