

Ao TAWHTI UNLIMITED DISCOVERY

CHRISTCHURCH, NZ

EDUCATION

OVERVIEW

Formed in 2014 by the merger of two schools, the Ao Tawhti Unlimited Discovery School is a four-storey building constructed for grades 1-14 and located in Christchurch, New Zealand. Students are given the flexibility to pick from a variety of interchangeable classes and subjects to design their own customized learning program, including working on individual projects as an alternative to total classroom learning. They also have the option to learn subjects which are not traditionally taught in New Zealand secondary schools, such as philosophy, video game design, DJing, and music production.

PROJECT DETAILS

This school project was successfully completed by Reliable Controls Authorized Dealer, IES Group Ltd.

The network architecture consisted of SPACE-Sensor™ Temperature units with CO₂ to control the fresh air motorized dampers on the variable refrigerant flow (VRF) indoor units. A MACH-ProWebSys™ controller and its browser user interface were networked to a MACH-ProCom™, four MACH-Pro2™ controllers, seven MACH-ProPoint™ expansion modules, and two MACH-ProZone™ controllers. RC-Archive® was incorporated into the design for data collection.

Mechanical/electrical equipment included VRF air conditioning systems, air handling units fitted with rotary heat exchangers, a reversible heat pump, a fume cupboard, dust collector, extract/exhaust/supply fans, smoke fans, air curtains, a dedicated mechanical service switchboard per floor and a main switch board in the plant room. The atrium smoke spill fans were powered from an essential service switchboard in the level-five plant room.

Reliable Controls and IES Group Ltd. are pleased to have played an important role in the construction of this school merger.

To learn more about projects using Reliable Controls® visit
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PROJECT TYPE:

New Construction

TOTAL AREA:

5,420 m² (58,340 ft²)

INSTALLATION TYPE:

CO₂ Monitoring, Fume Hood, HVAC, Smoke

EQUIPMENT INSTALLED:

4 MACH-Pro2™
 1 MACH-ProCom™
 7 MACH-ProPoint™
 1 MACH-ProWebSys™
 2 MACH-ProZone™
 44 SPACE-Sensor™ Temperature 3 w/CO₂
 RC-Archive®

NETWORK:

EIA-485, Ethernet

PROTOCOL:

BACnet®, SMTP, Proprietary Gateway, MODBUS

BACNET:

Daikin gateway
 Swegon AHU

POINTS:

300

RELIABLE CONTROLS® DEALER:

IES Group Ltd.

