

Ao TAWHITI UNLIMITED DISCOVERY SCHOOL

CHRISTCHURCH, NEW ZEALAND

INTRODUCTION

Ao Tawhiti is a special character state school in Christchurch that operates with the tenet that the child is central in directing their own learning. Students have the flexibility to choose from a variety of interchangeable classes and subjects to create their own learning program. The four-story facility is designed to serve up to 670 students, with technology and drama classes, science and music areas, a gym, a commercial-grade kitchen, and a central atrium for assemblies and performances.

PROJECT DETAILS

Authorized Dealer [IES Group](#) installed a Reliable Controls building automation system during construction of the school. Mechanical services contain heating and cooling systems, variable refrigerant flow and volume conditioning systems, air-handling units fitted with a rotary heat exchanger and reversible heat pump, package units, a fume cupboard, a dust collector, exhaust and supply fans, smoke fans, and air curtains. The main switchboard is housed in the plant room, and each floor has a dedicated mechanical service switchboard. Atrium smoke spill fans are powered from an essential mechanical services switchboard in the plant room.

IES Group installed 44 Reliable Controls SPACE-Sensor Temperature devices with CO₂ sensors to control fresh-air motorized dampers on the variable refrigerant flow units. A MACH-ProWebSys controller with a browser user interface is networked to one MACH-ProCom controller, four MACH-Pro2 controllers, and two MACH-ProZone controllers.

RC-Archive software provides facility managers with a robust record of building performance by delivering continuous downloads of data logs to a SQL database.

Reliable Controls and IES Group are pleased to be part of New Zealand's first vertical school and to provide a simple, flexible, sustainable building automation system that will empower student learning at Ao Tawhiti for years to come.

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MARKET SEGMENT:

Education

PROJECT TYPE:

New construction

INSTALLATION TYPE:

HVAC

PROTOCOL:

BACnet, Modbus, SMTP

TOTAL AREA:

5,420 m² (58,340 ft²)

INSTALLED EQUIPMENT:

- 4 MACH-Pro2™ controllers
- 1 MACH-ProCom™ controller
- 7 MACH-ProPoint™ expansion modules
- 1 MACH-ProWebSys™ controller
- 2 MACH-ProZone™ controllers
- 44 SPACE-Sensor™ Temperature devices
- RC-Archive® software

TOTAL SYSTEM OBJECTS:

300

RELIABLE CONTROLS® AUTHORIZED DEALER:

