

LEMONWOOD GROVE PRIMARY SCHOOL

ROLLESTON, NZ

EDUCATION

OVERVIEW

Lemonwood Grove Primary School is a unique, state-of-the-art facility that offers education with luxury inside and out. The building is situated on a 4 hectare / 10 acre site in Rolleston, New Zealand and is designed for a capacity of 750 students plus administration, a hall/gymnasium, and playground spaces. The school provides open, flexible learning areas to enhance collaborative teaching and study. The architects, Stephenson and Turner, have used sound scholarship, research, and current teaching and learning principles to influence their thinking. The school's vision "The best of you, as you" has been chosen because it encapsulates the intended outcome for the learners at Lemonwood Grove School.

PROJECT DETAILS

Reliable Controls Authorized Dealer, IES Group Ltd. successfully completed this project for Lemonwood Grove School.

IES partook in the early development of Lemonwood Grove in 2016. In addition to the original structure, the company retrofitted a variable refrigerant flow (VRF) system to provide comfort cooling in 2019.

The network architecture for this facility included a MACH-ProSys™ controller, MACH-ProWebSys™ controller, two MACH-ProZone™ controllers, and four MACH-Pro2™ controllers, all connected through the building management system (BMS) using a graphical user interface. Three fresh-air handling units (AHUs) with heating coils, radiant heating, and high-level CO₂ indicator lights help control the CO₂ levels on all the floors.

The mechanical system included thirteen underfloor heating manifolds, a main heating plant, AHUs, VRF cooling, fresh air systems, extraction fans, and a mechanical services control panel located in each of the Learning Hub's. The main heat pump plant room contained the main mechanical services switchboard, two variable speed drive (VSD) pumps, and one hot water heat pump.

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

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PROJECT TYPE:

Retrofit

TOTAL AREA:

3,500 m² (37,674 ft²)

INSTALLATION TYPE:

CO₂ Monitoring, Heatpump, HVAC, Fresh Air AHU's

EQUIPMENT INSTALLED:

4 MACH-Pro2™
 1 MACH-ProSys™
 1 MACH-ProWebSys™
 2 MACH-ProZone™

NETWORK:

EIA-485, Ethernet, B/VPN, Wireless

PROTOCOL:

BACnet®, SMTP, MODBUS

BACNET:

Daikin gateway

POINTS:

254

RELIABLE CONTROLS® DEALER:

IES Group Ltd.

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