

WIGRAM ARCHIVES

CHRISTCHURCH, NEW ZEALAND

GOVERNMENT

OVERVIEW

This purpose-built, 3,000 m² archives facility in Wigram ensures that important material and records with which Christchurch Archives is entrusted, will be preserved in highly secure and environmentally controlled premises.

PROJECT DETAILS

Reliable Controls Authorized Dealer, IES Group Ltd., successfully completed this retrofit project for Wigram Archives.

The 2,000 m² archive storage stack portion of the facility maintains constant conditions through the use of three variable-speed air handling units (AHUs) with chilled and hot water coils, dehumidifiers, and humidifiers. MACH-ProAir™ controllers are used to control the outside air to each AHU.

Installed mechanical equipment includes gas-fired boilers; air-cooled chillers; primary and secondary chilled water pumps; primary and secondary heating water pumps; dosing pumps; AHUs with hot/chilled water coils, valves, and actuators; dehumidifiers; variable air volume boxes with hot water coils, valves, and actuators; outside air variable air volume boxes; fan coil units; exhaust fans; return air fans; and a mechanical services switch board.

BACnet MS/TP networks were used in the integration of two chillers while BACnet/IP integration was used for the dehumidifiers.

A resolved challenge of this project was successfully networking the controllers through firewalls on different network layers.

The key drivers for the facility design are security, environmental controls with minimized energy use, flexibility for future expansion, and achievement of a facility in accordance with the New Archives Standards as an approved repository.

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PROJECT TYPE:

New Construction

INSTALLATION TYPE:

Boiler, Chiller, Fan Coil Unit, VAV

TOTAL AREA:

3,000 m² (32,392 ft²)

NETWORK:

Ethernet, WAN

PROTOCOL INTEGRATION:

BACnet®, SMTP, Proprietary Gateway, MODBUS

POINTS:

800

EQUIPMENT INSTALLED:

MACH-Pro2™
MACH-ProAir™
MACH-ProZone™
MACH-ProSys™

SOFTWARE INSTALLED:

RC-Studio®
RC-Archive®

RELIABLE CONTROLS® DEALER:

IES Group

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