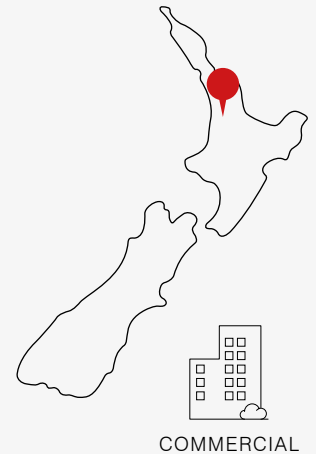


Project Showcase: Tamahere Eventide Home and Retirement Village



HAMILTON



Tamahere Eventide Home and Retirement Village is a Ministry of Health certified age care provider for the elderly in Hamilton. It features retirement units as well as a rest home including dementia wards, a hospital and respite care. This new build project required an effective HVAC system to provide heating and cooling throughout the facility.

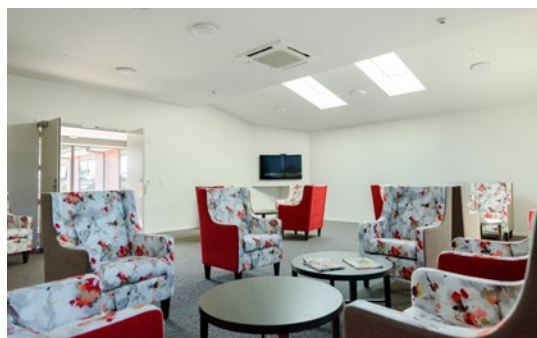
EQUIPMENT BREAKDOWN

- Ducted Units
- Cassette Units
- Hybrid Heat Recovery Outdoor Units

The Challenge

All Seasons Air Conditioning was engaged by the developer at Tamahere Eventide Home Trust, which is an outreach of the Methodist Church of New Zealand, to design the HVAC system for the new build complex. The property includes a 24 room hospital, 16 apartments, 36 units as well as sundry and communal spaces.

With the large number of small inhabited rooms and with many tenants that are restricted in their movement, all areas in this project are deemed occupancy class A by NZS 5149. Therefore, traditional VRF with its long refrigerant pipe runs was not a viable solution. As such, Mitsubishi Electric Hybrid was chosen as it removed the requirement for two forms of mitigation throughout the whole project.



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The Mitsubishi Electric Solution

Three Mitsubishi Electric City Multi Hybrid Systems, which serve mostly ducted units, supply milder air off temperatures to each room by utilising water as the medium. Furthermore, every unit can be controlled independently to meet each area's specific needs.

The Hybrid units are supplied with tempered fresh air by two air handler units (AHU) coupled with four PEFY Full Fresh Air Ducted indoor units. Using the full fresh air, the ducted system's minimum air changes per hour are able to be achieved while also controlling the temperature output of each unit.

A single traditional VRF solution serves the ducted, high walls and cassettes for the larger common areas.

A small number of single split systems serve the main reception, reception office, north-east offices, ground floor guest rooms, and apartments to overcome piping length or total refrigerant charge limitations.

All units are managed via local wall controllers with a touch screen central controller overseeing unit status and scheduling, which is accessible by the aged care staff.

Overall, the chosen solution met the budget requirements over a chilled water system for the Tamahere Eventide Home Trust.



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Full Equipment Breakdown

Total Capacity:

Heating Capacity: 333.8 kW

Cooling Capacity: 377 kW

Outdoor Units

2x PURY-P250YNW-A Heat Recovery Outdoor Units

1x PURY-P300YNW-A Heat Recovery Outdoor Unit

2x PURY-P500YNW-A Heat Recovery Outdoor Units

1x PUHY-P450YNW-A.TH Outdoor Unit

1x PUHY-P500YNW-A.TH Outdoor Unit

1x MXZ-2D52VA-A2 Multi Room Outdoor Unit

2x SUZ-KA50VAD2.TH-A Single Split System Outdoor Units

1x MUZ-GE25VAD2-A1 Single Split Outdoor Unit

Indoor Units

1x PEFY-P140VMA-E.TH Ducted Unit

1x PEFY-200VMH-E-F Full Fresh Air Ducted Unit

3x PEFY-P250VMH-E-F Full Fresh Air Ducted Units

3x PLFY-P50VBM-EBA Ceiling Cassette Units

2x PLFY-P63VBM-EBA Ceiling Cassette Units

1x PLFY-P80VBM-EBA Ceiling Cassette Unit

1x PKFY-P32VLM-E.TH High Wall Unit

1x PKFY-P50VLM-E.TH High Wall Unit

24x PEFY-WP32VMSi-E HVRF Ducted Units

14x PLFY-WP40VBM-E HVRF Ceiling Cassette Units

1x PLFY-WP50VBM-E HVRF Ceiling Cassette

2x SLZ-KF50VA3 Compact Cassette Single Split Indoor Units

3x MSZ-GE25VAD2-A1 High Wall Single Split Indoor Units

Branch Controllers

1x CMB-P1012V-JA Branch Controller

1x CMB-WP108V-GA1 Hybrid Branch Controller

4x CMB-WP1016V-GA1 Hybrid Branch Controllers

Wall Controllers

57x PAR-40MAA Wired Wall Controllers

Central Controllers

1x AE-200E Central Controller

1x EW-50E Expansion Module

Contractor:



ALL SEASONS
air conditioning