

# MEMO

**Topic:** Mechanical Rooftop Plant

**Date:** 2025-12-04

**Attention:** Jim McBirnie

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The intent of this memo is to confirm the proposed preliminary mechanical rooftop plant strategy is adequate in size and location to serve the development. The mechanical rooftop plant serves the residential buildings A, B, C and D, the aged care in building A and essential life safety systems for all buildings.

## Air-Conditioning Systems

The air conditioning systems serving the various building spaces have been summarised in the table below.

Area Served	System Type	Size and Adequacy	Location
Apartments (Building A, B, C & D)	Side Discharge Mini-VRF per Dwelling	Preliminary sizing based on AIRAH W/m2 loads. Provision made for full load cooling at this stage of design.	Condensers located in the rooftop plant area with visual screening above the spaces served.
Apartment Corridors (Building A, B, C & D)	Side Discharge Mini-VRF	Preliminary sizing based on AIRAH W/m2 loads.	Condensers located in the rooftop plant area with visual screening above the spaces served.
Aged Care Facility (Rooms and Common Spaces)	Centralised Top Discharge VRF	Preliminary sizing based on AIRAH W/m2 loads. Condenser allocation based on similar orientation/usage of spaces.	Condensers located in Building A rooftop plant area with visual screening.

## Ventilation and Life Safety Systems

The ventilation systems serving the buildings have been summarised below:

**Life Safety Systems:** Mechanical stair pressurisation and lobby relief fans are located on the roof above each core as required. Size of fans is as per DtS ventilation requirements. A spatial provision has been made for an attenuator to be located between the fan and the shaft in each core.

**Commercial Kitchen Exhaust:** Commercial kitchen exhaust has been provisioned for the aged care kitchen and cafe spaces within Buildings A and C. An allowance has been made for a standard kitchen exhaust flow rate based on previous similar applications. Kitchen consultant to confirm required commercial kitchen exhaust flow rates during detailed design phase.

## Conclusion

We certify that the preliminary sizing and allocation of plant space is adequate to serve the development's design at this stage to achieve all necessary comfort and life safety requirements.

Should you have any queries please feel free to contact me to discuss.

Kind regards,

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