



LUXURY AIR SOLUTIONS

A building site positioned on a cliffs-edge, limited ceiling space, working around plumbing, plus long distances for air conditioning pipework to run from the apartments to the roof top were challenges Needhamair successfully overcame for the Aria Swanbourne development.

Needhamair designed, manufactured custom componentry, sourced and installed ducted air conditioning for each apartment, the gymnasium and common areas plus a complex ventilation car park exhaust.

“A challenge was coordinating with other trades in a small ceiling space in a very tight time frame. This was because the apartments had to have maximum ceiling heights to complement the luxury finish of these high end apartments” said managing director Brian Needham. “We individually measured and made all sheet metal ducting in our factory for the air conditioning and exhaust to ensure it fitted around the hydraulic plumbing in the restricted ceiling cavities.”

“We had to ensure each central ducted system provided airflows to supply generous living spaces plus two or three bedrooms from a single indoor fan coil unit.”

To add to the complexity, each access panel for future servicing of the mechanical services had to be “sympathetic to the apartments aesthetics” including working around the ceiling and lighting design. We achieved this by incorporating custom made floor and ceiling

grilles, along with temperature control utilising movement sensors and multiple room temperature sensors.

Outdoor condenser units could not be positioned on balconies, meaning refrigeration pipework and electrical runs ranged from 30m to 120m from the apartment to the roof top where the condensers were located. The best solution for this challenge was Mitsubishi Electric's comprehensive product range, which suited a one to one ducted system for single bedroom apartments right up to VRF (Variable Refrigerant Flow) multi-head ducted systems for the penthouses.

“We pro-actively brought in a consulting engineer to work with and assist with documentation and quality control, so we could deliver on time and budget, a high quality level of engineering and customisation to meet the developments overall luxury specifications. In doing so we have created a high end domestic finish on a commercial scale.”

Needhamair
MECHANICAL SERVICES

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