

MCC OFFICE TOWER REFURBISHMENT

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Manukau City Councils existing offices in New Zealand are located within the 12 story Civic Building in Manukau. It is the one of the first office refurbishment projects in New Zealand to be designed to achieve a Green Star Office Interiors Certified Rating.

The overall concept for the air quality and space conditioning and comfort centres are a significantly innovative mechanical ventilation system design that removes the need for air handling units but still provides 100% fresh air capability via a especially innovative through the façade ventilation system direct to the ceiling void.

This solution provides the lowest energy returns for air conditioning by taking advantage of free outside air cooling. The system also **removes** the space requirement for vertical risers, **removes** the need for the large vertical and horizontal ducts and **removes** the need for air handling units. Not only is the Mechanical system a total sustainable solution it is also a cost saving to the capital cost of the project.

Not only are the energy savings significant but the associated reduced capital cost, space reduction and embodied energy savings associated with the design provides instant pay back on the innovative sustainable solution.

Indoor Environment Quality

- 100% outside air, exceeding NZ Standard by 150%
- CO2 monitoring installed and 100% outside air capability
- Automated operable blinds with manual override for daylight glare control
- External views available to 90% of work settings
- Internal noise levels controlled and high frequency ballasts installed to improve occupant comfort
- External shading provided by innovative re use of existing façade.

Energy

- Chilled beams and lighting design enable the fit out to operate at or potentially above the 5 Star ABGR fit out rating
- Electrical sub-metering provided for light and power and other major energy uses

Water

- Base building fixtures replaced to further improve potable water efficiency

Innovation

- Exceeding Green Star benchmarks for outside air supply
- All refrigerants will have Ozone Depleting Potential (ODP) of zero
- Maximised daylight, dimming and lower overall lighting levels with increased uniformity