

12 Madden Street

Base building ★★★★★



Four years of 5 star NABERSNZ excellence

At the heart of one of Auckland's brightest green building hubs Wynyard Quarter, 12 Madden Street boasts sustainable credentials from its design, construction, and its operations. For many reaching a 5 star NABERSNZ rating is considered a fantastic achievement. For Precinct Properties, that achievement is now a repeatable, business as usual level of performance, and a guide for other assets and clients. With four consecutive years of 5 star ratings, we spoke to Precinct about their NABERSNZ journey.

Why did you choose to pursue a NABERSNZ rating?

Precinct is conscious that a sustainable building is not only defined by the design and construction process, but of the commissioning, tuning and ongoing performance during operation.

“Committing our assets to ongoing NABERSNZ Base Building Energy ratings allows our team to continue to track performance against an industry developed benchmark of excellent performance for energy in office buildings. We also choose NABERSNZ ratings to demonstrate to our stakeholders that we are on track to achieve our operational carbon reduction targets as part of the World Green Building Council’s Net Zero Carbon Buildings Commitment by 2030.”

What impact has benchmarking your energy performance had on your organisation? Has it contributed to any changes to performance targets over time?

12 Madden Street is one of many of our buildings that have targeted exceptional performance during design and construction and gone on to deliver annual results reflective of this earlier commitment and the ongoing exceptional management our property team provides.

Building owner: Precinct Pacific Investment Limited Partnership

Address: 12 Madden Street, Wynyard Quarter, Auckland Central

Previous ratings: 4.5 star NABERSNZ Base Building rating (2018), 5 star NABERSNZ Base Building rating (2020, 2021, 2022, 2023)

Assessors: Anthony Calderone and Arthur Cooke, Mott MacDonald

This building is part of our ongoing commitment to achieve a minimum 5 star Design & As-Built Green Star rating as well as minimum 5 star NABERSNZ rating in operation. Originally, the NABERSNZ rating outcome was 4 star for existing assets and through the performance of assets like 12 Madden, this policy was increased to a 5 star NABERSNZ rating outcome for development projects. In recent years, we have been embedding minimum energy efficiency benchmarks into our development projects to ensure operational outcomes. We have found the NABERSNZ tool is a great option to facilitate this.

“To demonstrate that a 5 star Green Star Design & As-Built rated building can also achieve a 5 star NABERSNZ rating is a great outcome for our team and our clients occupying the building. We feel we have supplied a superior and innovative office accommodation that continues to outperform its peers on completion and maintains performance over time.”

If your rating has improved over time, what changes have you made to contribute to a higher rating?

To move from 4.5 to 5 star we operated a tripartite tuning group (Motts/PCT/Pacific) to drive the contractor and key sub-contractors. We utilised analytics software (skyspark via Direct Control BMS Contractor) to identify abnormal operation, outside of normal zone control, and to optimise chiller staging to ensure peak performance. Lastly, we took some lessons from the neighbouring asset especially around air handling units operation and the requirement for dehumidification and applied that to 12 Madden. This approach demonstrated the importance of ensuring the project team are afforded time and resources to refine systems during operation to establish optimum performance in the early years of the asset lifecycle.

Do you have plans or targets to improve your rating? If so, what areas will you be focusing on?

Our next step is to support our Clients (tenants) with understanding their environmental performance by being transparent with data from a base building and tenancy level. Through regular reporting we’re hoping to continually promote great performance that can be driven by a broader range of stakeholders. We also hope to encourage the adoption of NABERSNZ Tenancy ratings with our Clients so they can understand and improve on their performance alongside us.

“Achieving a high NABERSNZ rating is a continual process and requires a huge team effort. For Grid AKL this started prior to the design phase through briefing with the building owner, and continued through the design and commissioning phases. Regular communication between the designers and operations team has also continued when any building or controls alterations take place which I think is a key reason that the rating has been able to be maintained.”

- Anthony Calderone, Mott MacDonald, NABERSNZ assessor



About 12 Madden Street

Completed in August 2017, 12 Madden Street is New Zealand’s first and largest purpose-built fully electric co-working space, designed to give innovative companies of all sizes the best possible working environment in which to thrive. It received a 6 Green Star Built rating in 2022

Part of GridAKL – the innovation precinct in Wynyard Quarter, 12 Madden Street is operated by Generator. Designed by Warren and Mahoney, 12 Madden Street offers an agile and exciting environment designed to attract New Zealand’s brightest talent and participating in a collaborative and energising culture. GridAKL is TATAKI AUCKLAND UNLIMITED’S innovation campus based in Auckland’s Wynyard Quarter, designed to maximise innovation by harnessing the power of collaboration. Creating pathways for entrepreneurial individuals and StartUp businesses to connect, share ideas and access the tools they need to help them grow. Designed with a focus on sustainability, occupiers of 12 Madden St have observed a reduction in water and power usage, alongside an increase in productivity and reduction in absenteeism.

Key features of 12 Madden Street that make it more sustainable and efficient

All electric base building design – no fossil fuels (e.g. gas) are used throughout the building.

Lighting

- An automated lighting system with intelligent controls allows zones to be easily re-configured to the tenants' requirements and switching based on occupancy.
- Light switching is positioned at the entry point to each level.
- Energy efficient LED luminaires
- The office areas have physical switched lighting zones not exceeding 100 m² to assist users in lighting only those areas that are in use.

Heating, Cooling and Ventilation

- The building's heating, cooling and ventilation is provided through a zoned fan coil unit system. Each zone is in the order of 50-100m² and is served by a ducted fan coil unit located in the ceiling space.
- Control of fan coil units is through the building management system. A temperature sensor for each zone either on the wall or in the return air grille at ceiling level allows fan speeds to change according to the heating or cooling load in the zone, decreasing energy consumption.
- A roof top plant room houses the central plant to provide heating and cooling to the building through a series of pipework with hot and cold water. Heating and cooling is provided by air sourced heat pumps.
- Outside air is provided through two large central air handling units. These units incorporate heat recovery systems to decrease energy consumption.
- In addition to the outside air ducted from the roof there are also openable windows installed in the building to enable natural ventilation. When a window is open the corresponding fan coil unit will be switched off through the building management system to save energy. Traffic light indicators have been provided for building users to help judge when they could open these windows. The LCD colour displays behave as follows:
 - If the internal zone temperature is greater than 22oC and the external temperature is greater than 18oC the LCD will turn green.
 - If the internal zone temperature is less than 21oC the LCD will turn red.
 - If the external zone temperature is less than 18oC the LCD will turn red.
 - If the wind speed exceeds 20km/hr the LCD will turn red.
- Carbon monoxide monitoring is incorporated in the carpark to reduce fan energy use. The fans can use less energy than if they were running at maximum speed to cater for the minimum exhaust rate prescribed by New Zealand Standards.
- All air handling units and pumping systems are provided with variable speed drives in order to facilitate system pressure reset and optimised energy consumption.
- The building management system is designed to optimise the starting and stopping of HVAC plant to operate only when required to control indoor temperature and air quality.