

Future-Proofed Office Makes Sustainable Sense

An SBN Case Study on Daines & Associates Architects Ltd

Director: Alisdair Daines
Focus: Architectural, Interior Design, Urban Design, Consulting

Daines & Associatesⁱ believe that if they're committed to energy efficient, sustainable design principles for their clients then they must practise them themselves. They want their clients to enjoy the design process, to benefit from the added value that an architect brings to a project, and to gain financial advantages that are achieved through good design and sustainable building practices. Their premises, Waimea House, demonstrate these principles to their clients.



BACKGROUND

Waimea House, which houses Daines & Associates, was designed by Alisdair Daines. His vision was to design a building that was environmentally responsible and, as an owner/occupier, protected their long-term investment. It also had to make an architectural statement, be a sound investment, and make economic sense. The construction of this building and how Daines & Associates conducts business is intended as a living example to their clients of energy efficiency and sustainability, and also to provide their team with an inspiring place in which to work. They wanted to demonstrate that 'green' buildings make for a better investment through higher returns, satisfied tenants, better cashflow, and a more valuable building.

The building has been fully designed using the principles of the Green Star rating system. They are now in a position to have the building rated and are aiming for a 5-star rating, which would recognise the building as a 'national leader' in sustainable construction.

QUOTE

"We see it (sustainability) as a logical way forward, not only for our business but also our clients' businesses. While it has a nice feel good factor we always look at it from the business and business strategy point of view. Almost without exception it is better business and more profitable to use sustainable principles."

Alisdair Daines, Director, Daines & Associates Ltd

ACTIONS

Some of the unique features of Waimea House are:

- An independent water supply from a rainwater collection system with pump, filter and UV treatment, which produces savings of up to \$600 a year.
- Solar hot water heating provided by a solar-panel system to provide hot water.
- Levels of insulation well above code requirements to reduce heat gain and heat loss.
- A centralised power supply with separate check meters rather than individual connections for each tenancy, saving about \$6-\$8 a day.
- Double glazing windows using high-efficiency glass and argon gas-filled centre.
- The use of low VOC paints and products (normal paints and finishes release low-level toxic emissions into the air for years after application. The source of these toxins is a variety of volatile organic compounds (VOC)).
- Exterior louvers limit direct sun into the building over spring to autumn and the careful position of windows promotes natural ventilation and cooling in summer. Heat pumps are used for winter heating only.
- Recyclable carpet floor tiles.
- High-efficiency light fittings that have a much lower energy consumption (all are T5 fluorescent fittings or similar).
- High efficiency self-controlling lighting so lights automatically dim and switch off as natural daylight levels increase.
- Centralised rubbish removal and recycling; water saving toilet flushing system; Green-tick products.

RESULTS

Energy

A recent energy usage survey showed Waimea House has used 47kWhr /m² per annum for the first 1 ½ years of full occupancy. A study completed by Lincoln University in 2010 says the average NZ commercial office building uses 150kWhr /m² per annum. The electricity usage for hot water heating since October 2009 has been 22c.

Running Costs

The new office has twice the floor area but uses half the energy. It costs ¼ to ⅓ per square metre of what it cost to run their old 1970's-built office.

Future-Proofing

Daines & Associates used a plain business commonsense approach towards the design and build. Building the office in a sustainable way that exceeded current standard building codes means that they've future-proofed against having to upgrade in the future e.g. 10 years ago double-glazing in residential was optional; now it's mandatory. Waimea House is future-proofed 15 or 20 years into the future.

Higher Rents Achieved

Daines & Associates have lower running costs for the whole building VS a regular building and because it's a high-spec office, they can charge higher rents. One tenant has told them that although he is paying a high rent per square metre in Waimea House versus his previous office his total operating costs are still lower overall. This is because although he's paying a higher rent to Daines & Associates, he's paying less on energy, water etc.

Staff Satisfaction

Staff enjoy working there; the building is solid and sound. Satisfaction levels have increased and subjectively, productivity has increased. Being a detailed-oriented business the natural light has increased the degree of accuracy.

Awards/Recognition

- Finalist in the 2009 Sustainable Business Network Awards Emerging SME category
- Finalist in the 2009 Tasman Nelson Environment Awards
- Nelson Registered Master Builders 2010 Commercial Projects Silver Award

ⁱ Daines & Associates has now morphed into Daines Consulting and operates from the Marlborough Sounds.