

NZ POST AUCKLAND MAIL CENTRE

By Graham Hepburn



Changes to the way people are using the postal service were part of the reason NZ Post undertook a review of its operations.

The advent of email, the rise in internet shopping and the growth of courier services have radically altered the landscape.

Coupled with the company's desire for greater use of automated mail processing, it soon became apparent that NZ Post needed to upgrade and expand their mail sorting centres.

The company decided to upgrade three premises and build three new mail processing centres at Hamilton, Christchurch and Auckland.

The new mail centres would provide the company with purpose-designed premises, capable of housing new and more efficient mail sorting machines that could process up to 70 per cent of mail – as opposed to the 30 per cent automation the old machines were achieving. The



decision was made to bring in six new sorting machines from Japan, with three going to the Auckland site.

The Auckland Mail Centre at Highbrook Estate in East Tamaki was the biggest project at 15,700sq m and with a processing hall of 8000sq m, about the size of two football fields.

Created with sustainability in mind by architects Warren and Mahoney, the Auckland Mail Centre was finished in June and shares a similar plan to its sister buildings, which vary only in size.

Warren and Mahoney director Peter Marshall says using the same model for all three centres created efficiencies for everyone involved. "In essence, we saw that the form of the building was dictated by the need to find a cost-effective solution to New Zealand Post's needs within a tight timeframe. The function of the three buildings was the same, so in planning terms the same model was appropriate."

Time was of the essence due to the impending arrival from Japan of the new mail sorting equipment and installation teams.



Principal project manager David McLernon, from Octa Associates, says working with the same plan for three different buildings is "not the norm", but worked effectively for NZ Post.

"They wanted the same national design with a single architect and, where possible, national subcontractors as well." In accordance with Warren and Mahoney's principles, the buildings were designed along sustainable lines, aiming for a four-star green rating.

Warren and Mahoney used an in-house matrix to analyse sustainable features according to cost, practicality, appropriateness, benefits and philosophical fit. Marshall says while many sustainable elements can be introduced with little cost, achieving a high green rating can add up to five percent to the cost of a building. Although that cost can be regarded as an investment in the future. "In another generation, a building will depreciate more quickly if a good green rating is not in place."



Prominent acrylic panels at the entrances outline the building's sustainable features, which include unpainted Zinalume® cladding for the roof and Colorcote® ZR8™ wall cladding.

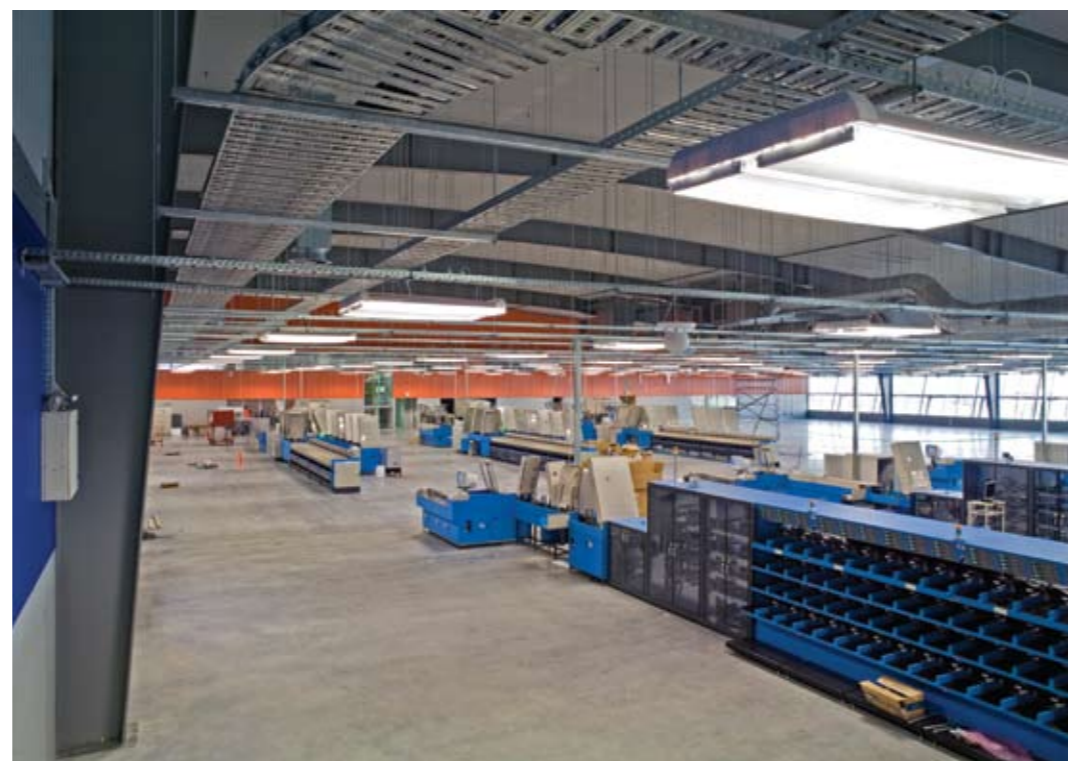
The centre has an area where mail trucks drop off mail, which is then transferred to a staging area and taken by trolley into the large sorting hall. Offices occupy a mezzanine level. A draped curved Zinalume® roof gives a clean, modern profile. A break-out area was created on the opposite side of the building from the cafeteria, to enable workers on that side to relax without having to trek across the vast floor.

To allow for more natural light in the processing hall – and a view outside during the day – one entire wall of each building is glass. Inside, lights are zoned, with sensors, timers and switches to ensure lights only come on when needed.

Cheerful blocks of bright blue, green and orange help break up the large space. "Getting the right colours was very important to the client," Marshall says. "Blue is associated with the process leaders area, and picks up the colour off the sorting machine, green is associated with relaxation in the cafeteria and breakout area, and orange signifies administration." Post-tensioned concrete ensures a crack-free floor, critical in a facility where trolleys must be able to move smoothly. A perforated metal acoustic ceiling absorbs sound.



Other elements that contribute to sustainability and low maintenance include the use of solar water heating, low energy equipment such as dishwashers, fridges and light fittings, Environmental Choice paint systems, linoleum instead of vinyl wherever possible, and recyclable carpet tiles. The buildings are not only sustainable but are also 'maintenance friendly' to allow NZ Post to concentrate time and money on their core business.



Warren and Mahoney

Established in 1958 as a partnership, Warren and Mahoney has grown over the years to become one of New Zealand's leading architectural practices. In that time the company has won many awards for its new buildings as well as refurbishments for large commercial and government organisations. Warren and Mahoney has become New Zealand's first accredited CarboNZero architects and has developed a plan that involves monitoring carbon emissions, lowering them where possible and encouraging staff to think about ways to reduce the company's carbon footprint. The firm is a founding member of the New Zealand Green Building Council (NZGBC) and has, over the last 10 years, become increasingly focused on environmentally sustainable design, developing protocols that cover materials, waste management and energy efficiency. Two recent projects involving Warren and Mahoney – the Meridian Energy building in Wellington, and the BNZ building in Auckland - became the first buildings in New Zealand to be awarded a 5 Star Green Star rating by the NZGBC.

*Designers: Warren and Mahoney, Christchurch
Telephone: 03 961 5926
www.wam.co.nz*

*Construction: Haydn & Rollett,
Telephone: 09 444 7379*

*Roofing Manufacturer:
Roofing Industries, Auckland
Telephone: 09 414 4585
External Raking profile:
Zinalume® Maxispan*

*Wall Cladding Manufacturer:
Roofing Industries, Auckland
Telephone: 09 414 4585
External Horizontal Profile:
Multirib™ Colorcote® ZR8™
Pre-painted in Gull grey and
Grey Flannel
Internal Vertical Profile:
Ribline® Colorcote® ZR8™
www.roof.co.nz*

*Roofing and Cladding installers:
Steel Roofing Ltd.
Telephone: 09 415 8060*

When New Zealand Post signed the Warren and Mahoney protocol, they committed to taking on, as a minimum, 12 significant items associated with environmental sustainability: As a result the three new buildings included many, if not all, of the following features:

- 1) Modelling of building to determine benefits/paybacks of insulation levels.
- 2) Horizontal shading of windows to office areas.
- 3) Maximising natural light to the processing hall with glazed wall, while taking into account low afternoon sun.
- 4) Roof lights to the staging and interchange area
- 5) Fast acting doors to the staging area.
- 6) Low energy light fittings
- 7) Zoning of lights, with sensors, timers, and separate switching as appropriate.
- 8) Natural ventilation wherever possible
- 9) Low energy equipment such as dishwashers, fridges
- 10) Solar water heating
- 11) AAA rated plumbing fittings
- 12) Rainwater harvesting for "grey water"
- 13) Permeable paving to selected carpark areas.
- 14) Recyclable carpet
- 15) Linoleum in lieu of vinyl wherever possible.
- 16) Sustainably sourced timber
- 17) Environmental Choice paint systems
- 18) Zinalume® unpainted roof
- 19) Ceiling tiles with high recycled content.
- 20) NZ manufactured hardware
- 21) Waste separation to kitchens; recycling
- 22) Rain gardens and drainage swales wherever possible
- 23) Bike stands for staff