

Now Home is under construction!

Beacon's first 'live' research project, the NOW Home, is under construction in New Lynn. It is exciting to see the house taking shape given that the NOW Home is the culmination of a research programme which commenced back in 2002. The project focuses on how we can build an affordable, sustainable home with current technology. The project set strict criteria for improvements in:

- Affordability – capital cost; fuel and electricity cost over life of building; water and waste-water cost; maintenance and operating costs.
- Desirability – ergonomics; aesthetics; resale potential; functionality; marketability.
- Performance – structure; durability; quality; weatherproofing; ability to meet future needs – design flexibility.
- Personal Well-being – injury prevention; indoor pollution; moisture; crime prevention; temperature; light; noise; air quality; fire protection; accessibility.
- Community Well-being – urban design; privacy; transport; employment; neighbourhood character.
- Environmental Well-being – air emissions; waste generation; material manufacture; resource renewability; resource sustainability; toxicity; water and waste resource management.
- Energy – amount of energy used in the home; amount of energy used in materials manufacture and transportation; type of energy used (renewable vs non renewable).

With these criteria in mind, the NOW Home was designed using only current building practices, materials and technologies. Based on the philosophy of 'lifetime housing', the design aims to meet not only the occupants' needs of today, but the needs of occupants as they progress through the different stages of their lives.

Progress on the NOW Home so far:

A building site was provided by Waitakere City Council on park land and the building of the house commenced in April. The builders, GJ Gardner Homes, have worked closely with the research team during construction as building site waste had to be measured and the most sustainable practices used.

Currently the NOW Home is fully enclosed with roof, walls, joinery and doors in place. The gib fixing and stopping is complete and painting is about to start. The solar panels have been installed on the roof and wiring is being installed to enable ongoing monitoring. At a celebratory roof shout, visitors to the house remarked on how roomy it feels and how well-planned the layout is, with no hallways. Although a relatively small house, the living areas are large and designed for maximum sun.

Looking from the northwest to the living areas of the house.



A co-operative effort

Many stakeholders have joined with Beacon to contribute to the progress so far. Building materials and services have been donated by the following suppliers to whom Beacon would like to express its gratitude:

- Fletcher Aluminium
- Winstone Wallboards
- Carter Holt Harvey
- Laminex New Zealand
- Tasman Insulation / Pink Batts
- Ross Roofing
- Resene Paints
- Energy Efficiency and Conservation Authority
- Pilkington Glass
- Fisher & Paykel
- PlaceMakers
- Glover Real Estate MREINZ

What next for the NOW Home?

As the construction phase finishes, work is underway to select tenants, ideally a family, for the NOW Home. Michelle Kaczor, from URS Corp, has been appointed project manager to oversee this phase. She will be working with Glover Real Estate MREINZ to find suitable tenants who will be comfortable with the ongoing monitoring and media interest. Glover Real Estate will provide their property management services for free over the two year rental of the home.

Once construction is finished and the landscaping is complete, the big Opening will be held. Beacon is hoping to attract a great deal of official, public and media interest through the tenant selection process and house opening.

Once built, the house will be monitored for two years, to establish the level of performance achieved. Regular updates will be put on the website and released in the media. Information on sustainable choices in building new homes will be available to the public.

For more information on the NOW Home, including decisions made in designing the house, visit www.nowhome.co.nz

Beacon's website

The Beacon website is currently under construction and should be complete by mid-July. The website will provide an overview of Beacon's research and project activities. Summaries of projects will be posted on the site and there will be a secure portal for researchers to access Beacon's knowledge base.



An earlier view, showing the front door and garage

Words from the General Manager

Since I joined Beacon in late 2004 I have seen considerable progress made in establishing the foundations of the company. We have defined our identity. Workshops were held in Wellington and Auckland to update interested parties on Beacon's progress and to reach a pragmatic understanding of Sustainability in the Residential Built Environment. From the broad contributions made, Beacon was able to define our Vision and Goals.

Beacon's Vision

*Creating homes and neighbourhoods
that work well into the future
and don't cost the Earth*

Beacon's Goals

1. To bring the vast majority (90%) of NZ homes to a high standard of sustainability by 2012 and;
2. Every new subdivision and any redeveloped subdivision or neighbourhood from 2008 onwards be developed with reference to a nationally recognized sustainability framework.

Over the last six months I have developed the structure of the company, trying to adopt a model of a virtual organisation. Rather than having our own offices, we will endeavour to use our shareholders' services and facilities as much as possible. This will enable us to maximize shareholder / stakeholder engagement, and to minimize the costs of bureaucracy. Key roles and responsibilities have been established and you will read more about key members of the team in future newsletters. Our visual identity is reflected in the Beacon logo, which reflects Beacon's values in incorporating house, neighbourhood and people.

This establishment period has embarked me on the steepest learning curve of my life. It has been challenging but very rewarding. I look forward to further progress as our research projects report back and as new shareholders and stakeholders join us.

Nick Collins, GM

Beacon has a new shareholder!

Beacon is pleased to announce a new shareholder to share the Beacon vision. Joining current shareholders,

- Fletcher Building,
- Scion (formerly Forest Research),
- Building Research,
- Waitakere City Council, and
- Foundation for Research, Science & Technology,



Beacon welcomes New Zealand Steel.

New Zealand Steel Limited is the country's sole producer of flat rolled steel products for the building, construction, manufacturing and agricultural industries. It operates a fully integrated steel mill at Glenbrook, south of Auckland, which produces a range of flat steel products for both domestic and export markets. 60% of steel output is exported. Steel products produced by NZ Steel include **COLORSTEEL®**, **ZINCALUME® steel**, and **GALVSTEEL™**.

Beacon Research Framework

Beacon began with a Project Confirmation Phase of research which confirmed the approach and focus of future research. A report is being prepared which summarises the key themes and learning from this preparatory phase. Once published, it will be available on the Beacon website.

With the Project Confirmation Phase now complete, Beacon has embarked on an extensive research programme which currently includes 12 research projects totaling over \$600,000 in the following areas:

- Policy & Regulation
- Neighbourhoods
- Technology
- Market Transformation

Meet the Research team leaders

Each research stream is managed by a team leader, each of whom has been contracted part time from stakeholder organizations.

Lynda Amitrano, (from BRANZ) – Policy & Regulation team leader

Lynda is a building technologist and energy efficiency consultant now working for BRANZ as a Building Energy Scientist, and second in charge to the BRANZ Built Environment Manager. While at BRANZ Lynda has managed the day-to-day activities of the Household Energy End-use Project (HEEP) which involves monitoring the energy-use in a number of houses. Lynda was involved in the Warm Home Energy Check scheme run by Environment Canterbury, as part of their Clean Heat initiative. Lynda is the BRANZ key account manager for EECA and the Ministry for the Environment and works closely with these government bodies. She is also a member of the Ministry for the Environment's Warm Homes expert advisory group. This group has been set up to help develop the national policy and programmes to encourage households to choose clean, healthy and sustainable heating and improve the energy efficiency of their homes.

Megan Howell, (from Waitakere City) – Neighbourhoods team leader

Megan is a Senior Strategic Advisor for Waitakere City Council. She is a planner and policy analyst specialising in urban form, design and development – working with a range of programmes, research projects and initiatives currently underway within the Auckland region, and nationally, to encourage the sustainable development of our towns and cities. Currently she is project managing the Urban Form, Design and Development work strand of the Auckland Sustainable Cities Programme which includes demonstrating and analysing the value of sustainable housing construction. She is part of the Local Government New Zealand Sustainable Development Project Team and the Year of the Built Environment 2005 Steering Group.

Jeremy Warnes, (from Scion) – Technology team leader

Jeremy is currently Business Development Manager at Scion (formerly Forest Research), and a Project Leader within the Biomaterials Engineering Business Unit where the focus is new bio-based materials. His background is in chemistry and he spent 9 years with industry before joining Forest Research. While at Forest Research, Jeremy has managed the technical side of commercialising a wood hardening technology; worked as Resource Centre Manager for the Adhesives Group which works on adhesives assessment and development for timber based products; and managed the Composite Materials Project where the focus was on adhesives for solid wood and fibre-based composites, fibre plastic development and new bio-based materials. He also managed the Construction Project, which included timber engineering, remanufacturing and the technical side of the Built Environment Programme.

Ann Smith, (from Landcare Research) – Market Transformation team leader

Ann is a Senior Advisor in the Sustainable Business & Government Group at Manaaki Whenua - Landcare Research. Ann's current research is focused on developing and evaluating sustainable development strategies for business and industry with particular emphasis on the residential housing, screen production, and the food and drink sectors. Her particular research interests are waste minimisation, environmental management systems, sustainable development reporting and sustainable procurement. Ann joined Landcare Research two years ago coming from the University of Hertfordshire where she was the University's environmental coordinator. In this role, she worked directly with suppliers and contractors to implement sustainability tests and principles in the tender, design and construction phases of the University's £109 million new de Havilland campus.