

# Facing

Newsletter of Beacon Pathway August 2011



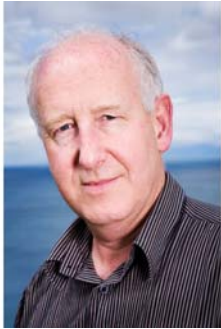
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Welcome to *Facing*, the newsletter of Beacon Pathway Incorporated. This is our first newsletter since becoming an Incorporated Society, and through it, we hope to keep you up to date with our activities and research.

## Our Members



Individuals: Lesley Jenkins, Dorothy Wilson, Rachel de Lambert, Maggie Lawton



## Welcome to Beacon Pathway Incorporated!

On 30 June 2010, Beacon Pathway Ltd completed its research contract with the Foundation for Research, Science and Technology (FRST). This brought to an end six years of research and activities aimed at improving the performance of New Zealand's homes and neighbourhoods. An end-of-term review by FRST commented on the success of Beacon's research programme in terms of both research advances and driving change. However, under the terms of the Shareholders' Agreement by which Beacon Pathway Ltd was set up, the end of the contract also brought to an end the company.

Despite the progress made, the job Beacon Pathway Ltd started is not finished. The step change required to transform New Zealand's costly, inefficient and poorly performing housing stock has not yet occurred. In recognition of this, two former shareholders in Beacon Pathway Ltd, Waitakere City Council and New Zealand Steel, proposed a successor organisation to build on the success of the original programme and address outstanding issues in the performance of new and existing homes.

A shared vision of the potential benefits of improving New Zealand's homes has brought stakeholders together to form an Incorporated Society, Beacon Pathway Incorporated. The Society's objective is to transform New Zealand's homes and neighbourhoods to be high performing, adaptable, resilient and affordable through demonstration projects, robust research and collaboration.

We've kicked off with a demonstration project in Christchurch. [Build Back Smarter in Christchurch](#) (page 5) has gained widespread support across industry, local community, council and government organisations, and we are pleased to welcome the support of Christchurch City Council, EECA, Fletcher Building, Ministry for Science and Innovation, Community Energy Action and the Christchurch Agency for Energy.

Getting Beacon, and these projects, up and going would not have been possible without the support and hard work of Robert Tromop (EECA), Scott Fuller (New Zealand Steel) and Lesley Jenkins. They have seen Beacon through from a fledgling Incorporated Society to developing a robust base for the future.

We now welcome our first elected Board directors:

Scott Fuller, New Zealand Steel  
Brian Fitzgerald, EECA  
Lesley Jenkins, council representative  
Lou Cadman, Fletcher Aluminium  
Godfrey Hall, Insulpro Manufacturing

With foundations firmly established, governance structures in place, and projects underway, we are looking forward to an exciting year ahead.

*Nick Collins*

## Build Back Smarter in Christchurch

The Build Back Smarter project aims to show that home performance interventions can - and should - be included in the 'standard' repair of earthquake damaged Christchurch homes.

Beacon's earlier research has shown the benefits of addressing the performance of the whole house (energy, water, indoor environment, materials). The [Waitakere NOW Home](#) and [Papakowhai Renovation](#) projects clearly demonstrated improvements in health, well-being, cost savings and efficient resource use. However, the Papakowhai project in particular also identified that there are critical intervention points at which it is both easier and more cost effective to undertake some interventions. Wall insulation, for example, is best combined with replacing internal or external cladding.

The extensive repair and rebuilding required in Christchurch presents an opportunity to include interventions which will:

- improve the household's resilience and ability to meet future challenges
- reduce ongoing operational costs
- provide healthier, warmer homes which result in lower health costs and higher productivity
- reduce demand on centralised electricity and water networks

Build Back Smarter wants to develop and demonstrate a robust approach to including home performance interventions into 'standard' repairs without slowing down the rebuild process.

Critically, the project is trying to identify the barriers to building back smarter and find a way to address them so that the demonstration can be scaled up and used city-wide.

## Ten demonstration homes

Ten homes will be selected for performance interventions, focusing on ceiling, floor and wall insulation, double glazing, solar or heat pump hot water, rainwater collection, heating upgrades and a range of energy and water efficiency measures. The upgrades will be individualised, depending on the extent of damage suffered by each home.

The upgrade process and fitting in with insurance repairs will be managed by Beacon's Project Manager, Bill King.

Typical chimney damage



Broken windows and boarded walls



Source: *Christchurch Earthquake Community Journal*

## Next steps

Selected homes will be assessed and a plan for the additional interventions developed, in consultation with the homeowners. The online Homestar™ assessment will be used to rate the home before and after the repairs, adding yet another part of the 'value case' for consumers to consider building back smarter.

The effectiveness of the repairs will be evaluated by interviews with homeowners, contractors and PMOs after upgrade / repair completion and again after several months. The process will be both documented with evaluation of its effectiveness from all perspectives (insurers, contractors, Council and homeowners). Ideally, the demonstration will show that building back smarter is possible and beneficial, and will identify how it can be achieved.



Source: Christchurch Earthquake Community Journal

## Funding

Build Back Smarter has been made possible by funding and support from:

- EECA
- Fletcher Building
- Ministry for Science and Innovation
- Christchurch City Council
- Christchurch Agency for Energy



## New build and repair guides for Christchurch

Verney Ryan has been working with Christchurch City Council to develop guides to building back smarter for Christchurch residents.

Beacon's research suggests that there are key intervention points for making home performance improvements. Christchurch earthquake repairs and rebuilds provide an opportunity for residents to go a step further and consider improving their home's comfort and efficiency.

The guides take the typical earthquake damage and suggest the opportunities offered by them. For example:

### Walls

#### Challenge:

Internal or external wall damage

#### Opportunity:

If you have to replace the wall linings or external wall cladding this is the best time to add or upgrade the insulation in the walls.

#### Solution:

In timber and steel frame walls, remove damaged linings or external wall cladding as well as any damaged framing. Increase the bracing where required. Add insulation and building wrap (building paper). Replace with new linings or cladding. Add insulation that is at least R2.6, the higher the better. Note that higher levels of wall insulation beyond R2.8 may only be possible if you increase the width of the walls or rebuild completely.

#### Cost estimate:

The insulation itself isn't that expensive but fitting it will take the tradespeople extra time. Allow between \$2,200 and \$2,800 for the costs of the insulation for an average sized house, and \$1,200 extra for fitting.

#### Benefits:

Wall insulation will stop heat being lost, keeping your home warmer in winter and providing as much as \$400 worth of savings per year compared to a non-insulated house.

Household running cost savings					
Improved comfort and better health					
Increased capital value of the home					
Improved Homestar™ rating					

The guides also indicate the financial, health and value benefits of the improvements, give a cost estimate and suggest the steps to take to investigate the options.

These guides will be produced by Christchurch City Council and distributed to Christchurch residents.

## Retrofit Your Home

Beacon is delighted that Auckland Council has extended Waitakere City Council's original Retrofit Your Home programme region-wide. The programme is underpinned by tools developed through Beacon research.

Retrofit Your Home was developed out of Beacon's [HomeSmart Renovation project](#) which tested whether information and a renovation plan would stimulate homeowners into improving home performance. The project developed a home assessment tool and a renovation plan builder, which took details of the home's current state and generated an individualised plan. This was prioritised so that homeowners could work through the steps in the most cost-effective way.

Beacon worked with Waitakere City Council staff to adapt these tools for Waitakere homes and to train building inspectors as assessors. The programme got underway in September 2010 and 198 homes have been assessed so far

In April Auckland Council announced that it was extending the programme through the region in partnership with EECA. Retrofit Your Home allows homeowners access to financial assistance to help pay for insulation, clean heating, ventilation, water efficiency and other sustainability measures. A maximum of \$5000 including GST per rateable property is available and the financial assistance from the Council will be paid back through the property rates over nine years.

Insulation is undertaken through the Warm Up New Zealand scheme, but further home improvements, such as clean heating, double glazing or water efficient fittings, are based on a free Sustainable Home Assessment and Retrofit Plan recommendations. Lois Easton has been working with Auckland Council to further refine the original assessment and plan builder tools for their purposes.

## Use our knowledge to help your council

### ***Our existing knowledge base***

Beacon Pathway Inc. is built on a successful six year government research programme dedicated to the transformation of homes and neighbourhoods. Demonstration projects established not only how to improve our homes, but the value of improving them.

Recognising that local government plays a vital part in stimulating and mandating for more sustainable building and renovation, Beacon's research has built up an impressive knowledge base on the issues and barriers councils face and has developed solutions, tools and guides to address them.

These include:

- *Policy Options for Sustainable Homes*, a resource manual of best practice policies and methods with examples to help councils encourage sustainable building and renovation.
- Tools which assess the performance of homes and generate individualised renovation plans, as used in the Auckland Council Retrofit Your Home programme.
- A *Neighbourhood Sustainability Kit* to evaluate the sustainability of both new and existing neighbourhoods.

### ***Experience in working with councils***

Beacon's knowledge and expertise has already contributed to new local government initiatives. We've already talked about Retrofit Your Home, developed by Waitakere City Council, picked up by Auckland Council, and based on Beacon's tools. Beacon has also worked with Nelson City Council on their Solar Saver Scheme, and with the Far North District Council on providing advice to ratepayers aimed at increasing uptake of renewable energy.

In 2009 we ran workshops for council staff in Auckland, Rotorua, Christchurch and Queenstown. These built on the robust base of our research to give staff an overview of sustainable building issues and knowledge. Most recently, Beacon researchers developed similar workshops specifically to upskill Hasting District Council staff.

### ***What services might we offer your council?***

***Straight technical insight*** – many barriers are common across New Zealand and we can help you understand these in relation to your situation. We have experts and tools (robust, tested and simple) that will help your council review how best to move forward. If your council has a quirky barrier, we'd love to work with you to unpick it. Our expertise lies in integrated water management, new and existing neighbourhoods, high performance housing (for both new and existing) and council approaches to facilitate better residential outcomes.

***Professional development*** – our expert team can develop bespoke workshops to enable your council to make informed and well-considered decisions about homes and neighbourhoods.

***Connect to a network*** – draw on Beacon to link with new partners to help you move forward. Another council may have tried something you are considering; an industry player might have contacted us about an initiative that would be perfect for your council (e.g. a high profile demonstration home, neighbourhood renewal).