

Submission by Beacon Pathway Ltd (Beacon)

Submission on LTCCP for Auckland City Council

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About Beacon

- Beacon Pathway (Beacon) is a research consortium that seeks to radically change the design, construction and renovation of New Zealand's homes and neighbourhoods. Beacon aims to bring about a significant improvement in the sustainability of the residential built environment in New Zealand through science-based New Zealand research. Our vision is "Creating homes and neighbourhoods that work well into the future and don't cost the earth".
- Beacon's shareholding partners are organisations with a considerable stake in the quality of the residential sector: BRANZ, Fletcher Building, New Zealand Steel, Scion and Waitakere City Council. Contributions from the shareholders are matched, dollar for dollar, by funding from the Foundation for Research, Science and Technology (FRST).
- Beacon believes it is only through collaboration and the sharing of knowledge that there can be a significant improvement in New Zealand's homes.
- Beacon's goal is to significantly improve housing sustainability through:
 - influencing policy and regulation;
 - understanding consumer and industry needs;
 - defining an appropriate high standard of sustainability; and,
 - developing the tools to achieve, measure and monitor progress to achieving that standard at the house and neighbourhood levels.

A summary of Beacon's research is annexed to this submission.

Reason for Submission

Beacon recognises the need for maximising the sustainability potential of the residential built environment during the development process at all scales- including individual homes, new developments and neighbourhoods. It also recognises the important role that local councils play in both supporting and encouraging the development and management of homes with a greater emphasis on sustainability.

Submission

Beacon does not wish to make a verbal submission.

Facility upgrades

Beacon submits that as part of the Council's significant programme of upgrades to key facilities such as libraries, community centres and the Art Gallery, that sustainable building principles and practices are embedded within all of these developments.

Note that Beacon is producing a *Local Government Resource Manual* in June 2009, which provides the rationale, suggested solutions, case studies and best practice policy measures to support sustainable building. This Manual can assist the upgrades programme above and is being launched through a series of workshops. Auckland City Council will be invited to the Auckland launch and workshop of this manual, to be held in July/August 2009.

Sustainable building advice

Given the huge scale of the Council's facility development and upgrade programme (\$516million in capital projects in 2009/2010 alone), and the benefits and efficiencies to be gained by building sustainably, Beacon seeks that Council continue to fund an Eco Design Advisor and increases this resource/service during 2009/2010, to advise at the consents proposal and development stage on how to develop more sustainable buildings and urban development within Auckland City.

Street environments and town centres

Beacon supports the programme to upgrade streetscapes and public spaces, and seeks that sustainability principles inform these developments (see below).

Beacon's Neighbourhood research team have developed a framework which could be used to measure the sustainability of New Zealand's neighbourhoods. Our aim is to create a tool for developers, planners and local government which both measures neighbourhood sustainability and suggests improvements. The goal is how to design, construct, and manage neighbourhoods which: are adaptive; are resilient; allow people to construct rich satisfying lives; and, respect the limits of the environment.

Walking and cycling

Beacon seeks that at least \$10 million be added to the LTCCP for improving walking and cycling connections around Auckland City to 2019, to support more sustainable and people friendly neighbourhoods. This funding could be sourced from the \$240 million planned for footpaths to 2019.

Beacon submits that Council balances its expenditure on transport to fund more non-vehicle focused travel options. The Council's planned investment on roads seems out of proportion to its planned investment in public transport, walking and cycling.

District Plan review

Beacon seeks that the District Plan review makes provision for supporting the development of sustainable buildings. The *Local Government Resource Manual* developed by Beacon can assist in this.

Beacon submits in support of Council addressing energy within its district plan and LTCCP through highlighting specific local issues around energy security, energy efficiency, and encouraging distributed generation opportunities.

Beacon also submits in support of Council identifying its obligations under the RMA 2004 amendments, particularly 7 (b) the efficient use and development of natural and physical resources; (ba) the efficiency of the end use of energy and (j) the benefits to be derived from the use and development of renewable energy.

Quality Built Environment Strategy

Beacon supports the objectives of this strategy to create a more sustainable urban built environment, raise design quality and vibrant neighbourhoods. Beacon refers Council to the *Local Government Resource Manual* already mentioned to help make this happen.

As the city grows, Beacon supports the Council's compact city approach and seeks that the focus is strongly on developing sustainable housing. Refer to Beacon's *National Value Case* (see Appendix One) as to why it is so important to develop sustainable housing in order to meet Council's social, economic and environmental outcomes.

Beacon submits in support of simplified consenting processes, reduced consent fees (or waiving of fees) for solar water heating and for solar photovoltaic installations.

Beacon submits that the Property Enterprise Board has a strong focus on sustainable building and neighbourhoods, and is referred to the *Local Government Resource Manual* to assist this.

Beacon supports the planned stormwater network improvements focused on reducing the discharge of pollutants into the City's waterways.

Beacon also support the closed landfill remediation projects planned over the next ten years.

Beacon supports the waste reduction initiatives including public place recycling schemes, the proposed Galway recycling facility and increasing the percentage of city refuse recycled, up from the one third at present.

Beacon seeks that Council advocate for increased water demand management initiatives to reduce pressure on the city's water supply as the population grows.

Housing

Beacon seeks that sustainable building principles drive the 30 housing unit development with the New Zealand Housing Foundation.

Regional governance

Beacon seeks that the Council advocate for the importance of sustainable design and development principles driving development in the region, as new regional governance arrangements emerge.

Appendix One: Beacon's research

Reports and further information can be found at Beacon's website: www.beaconpathway.co.nz

National Value Case

Beacon believes there is a significant role for Government to drive the necessary upgrade of the existing housing stock to a higher standard of sustainability as well as substantially raise minimum standards in the Building Code for new houses. Furthermore, our research indicates a strong value case at a national level to transform a significant proportion of the New Zealand housing stock to Beacon's HSS High Standard of Sustainability® with beneficial social, health, environmental and economic outcomes.

■ [National Value Case for Sustainable Housing Innovations](#) (PDF 2MB)

Large-scale renovation is big on job creation

Prudent investment by the Government in New Zealand's residential infrastructure, in partnership with local government and industry, will maintain employment and critical mass in the building, building product manufacturing and building retail industries. Beacon's submission to the Government's Job Summit showed that, for every 1,000 houses retrofitted, a total of 151 full-time equivalent jobs would be required for delivery solely of on-site retrofitting services; a total of 392 full-time equivalent jobs would be required to provide the products and services involved in the renovation activity.

HomeSmart Renovations

The HomeSmart Renovation project involves the assessment and evaluation of renovations undertaken by approximately 600 homeowners across New Zealand to improve their building performance. Each home will receive an individually tailored renovation plan (based on our research so far) which shows participants how to get the best return on their investment, by drawing up a detailed pathway to improve the sustainability of their home. Through the project, we're developing tools which will assist homeowners in making good choices when they make changes to their homes, and collecting information to assess the benefits of renovating homes and the best ways to do this. The research outputs from the project will be available late 2010.

Barriers to sustainable building

Beacon has conducted detailed work looking at the barriers to sustainable building within local government and that this has resulted in the development of a *Local Government Resource Manual* which provides the detailed rationale, suggested solutions and case studies for best practice policy measures to support sustainable building. In 2009, this Resource Manual is being launched through a series of workshops in Christchurch, Wellington, Rotorua and Auckland. This resource will be available through our website to all councils.

- [Best Practice Policy Approaches to Encourage Sustainable Residential Building and Retrofitting: Evaluation and shortlist of initiatives](#) (PDF 118 KB)
- [Best Practice Policy Approaches to Encourage Sustainable Residential Building and Renovation: Survey and Literature Review Results](#) (PDF 820 KB)

Water research

Beacon has undertaken a significant amount of research over the past two years related to water. Our premise is that the increasing cost, the decreasing availability of water supply in some parts of the country, and conflicting demands for water allocation between some rural and urban parts, will require a more efficient and conservation-orientated approach if New Zealand is to achieve widespread household sustainability.

During 2008 Beacon ran workshops with six councils across the country in order to explain in detail the range of methods that Councils could consider to intensify their water demand management approaches. Each Council then prioritised their next likely steps. Beacon continues to observe their progress, so that ways of overcoming potential barriers might be identified and shared with others.

Three other current pieces of work are aimed at deepening our understanding of water issues. One looks at the value case for water, one looks at the relationship between water and energy, and the third looks at the benefits of the integrated management of the three waters.

Key water reports are:

- 2008 [Slowing the Flow: A Comprehensive Demand Management Framework for Reticulated Water Supply](#) (PDF 1.4MB)
- 2008 [Best Practice Water Efficiency Policy and Regulation](#) (PDF 1.4MB)
- 2007 [Demand Management Through Water Retrofit Projects \(Public report\)](#) (PDF 737KB)
- 2007 [Making Policy and Regulations Rain Tank Friendly](#) (PDF 234KB)
- 2006 [Water Efficiencies: Report on Existing Technologies/Expertise in New Zealand](#) (PDF 116KB)

Energy research

Our Energy Retrofit research will provide robust information to inform decision makers and actors in the value chain on how to cost effectively renovate New Zealand homes to a high standard of energy sustainability. We're tackling this in three ways.

- 1) We're looking at how hard or easy it is to renovate the energy performance of **different types** of existing homes. Our houses were built significantly differently over the last century and each type poses different problems for energy retrofits.
- 2) We want to understand how **different consumers** see the energy performance of their home and respond to retrofit opportunities. Specifically we've focused on landlords, high energy users and recent home buyers.
- 3) We're using what we learned along with our experience in the HomeSmart Renovations project to build a series of **energy retrofit packages** that will provide effective improvements for each type of home and different consumer groups.

- 2008 [New Zealand House Typologies to Inform Energy Retrofits](#) (PDF 651KB)
- 2008 [Housing Typologies: Current Stock Prevalence](#) (PDF 392KB)