

Submission by Beacon Pathway Ltd (Beacon)

Submission on LTCCP for Queenstown Lakes District 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 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 be heard in relation to this submission.

Waste

Beacon supports implementing landfill levies to fund recycling (i.e. user or polluter pays).

In addition, Beacon recommends that these levies be set at a level sufficient to allow the Council to implement its organic waste collection in 2010 instead of 2013 as proposed.

Beacons strongly supports the subsidised home composting system proposed, plus the ongoing home composting public education service and retention of the green waste trial drop-off points.

Beacon also supports the green and food waste collection service for business offered from 2012, and seeks that this be accompanied by a strong education campaign to support its uptake.

Beacon also supports the choice based residual waste collection service for residents, so they can choose the option best suited to them, plus the use of biodegradable bags.

New facilities

Beacon seeks that, when any new facilities are agreed by the Council (for example, the potential Wanaka sports facilities, new public toilets and Aquatic Centre and new Council offices), sustainable building principles are embedded within their development.

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. The Council will be invited to the South Island launch and workshop of this manual, to be held in Christchurch in June 2009.

Water demand management

Beacon supports the introduction of water metering for new properties and seeks that this be phased in for all properties in the next five years.

Beacon supports working with the community regarding water use and conservation, alongside the provision of information and education to the community.

Beacon strongly supports the leak detection programme to identify and reduce water leaks from the network.

Beacon supports a collaborative approach to addressing the future capacity and demand from the water network, with environmental, cultural and social impacts prioritised when considering options.

See Beacon's document *Slowing the Flow*, which was prepared to assist local councils to put in place an appropriate package of water demand management practices. These draw on a range of methods from more efficient management of infrastructure and community education to a range of regulatory methods and economic tools.

Wastewater

Beacon strongly supports ending the practice of disposing of wastewater into the Shotover and Clutha Rivers.

Resource management and regulation

Beacon seeks that, in the review or development of existing policies, rules and regulation over the next ten years, including the District Plan, the Council makes provision for supporting the development of sustainable buildings. The *Local Government Resource Manual*, developed by Beacon, can assist in this.

Resource consents and building control

Beacon seeks the provision of design advice to enable people to build more sustainably, plus the provision of an Eco Design Advisor.

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)

Neighbourhood research

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.

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)