



Ministry for the Environment
PO Box 10362
Wellington

Attention: Product Stewardship Submissions

VIA EMAIL: product.stewardship@mfe.govt.nz

31 August 2005

**RE: Beacon Pathway Ltd Submission on Product Stewardship
& Water Efficiency Labelling in New Zealand**

Dear Sir or Madam,

Beacon Pathway Ltd. welcomes the opportunity to submit this letter in response to the Ministry for the Environment's recently released discussion document. Beacon considers product stewardship essential to improving the sustainability of the residential built environment and for meeting the sustainability objectives of the new Building Act.

Beacon Pathway Ltd.
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About Beacon

Beacon Pathway Ltd (Beacon) is a virtual organisation committed to providing research excellence and informing stakeholders about the opportunities to make our built environment more sustainable. Beacon is committed to funding research and initiating intervention projects that will enable a more sustainable residential built environment.

Beacon is a residential building industry research consortium aiming to drive sustainability outcomes consistent with New Zealand sustainable development requirements. Beacon is funded by industry, with matched monies from Government research funds from the Foundation for Research, Science and Technology. There are currently four shareholding partners – Building Research, Scion (formerly Forest Research), Waitakere City Council, Fletcher Building and NZ Steel.

Beacon's vision of "Creating homes and neighbourhoods that work well into the future and don't cost the Earth" will be realised through the achievement of the following two 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 recognised sustainability framework.

The consortium has been established to bring about significant improvement in the sustainability of the residential built environment in NZ, by carrying out research, managing resultant Intellectual Property ("IP"), and facilitating development and increased availability of products and systems via emergent markets, through working together with like minded organisations, and by lobbying regulatory organisations.

In 2004, Beacon began to deliver on its goals by establishing four research streams, with each stream of research led through relationships with specialist organisations. The four streams are:

- Technology (Scion)
- Policy and Regulation (BRANZ Ltd)
- Market Transformation (Landcare Research)
- Neighbourhoods (Waitakere City Council)

Beacon intends to develop interventions, which meet energy efficiency and sustainability goals in a manner that aligns with consumer lifestyle and choices, achieving home quality and comfort with appropriate affordability.

Beacon is committed to funding research and initiating projects on interventions that will enable a more sustainable residential built environment. This will assist New Zealand consumers to adopt more sustainable residential built environment outcomes, ensuring better returns (social, environment, cultural, and economic) for shareholders, stakeholders and the wider public.

Reason for Submission

Beacon recognises the need for maximising the sustainability potential of the residential built environment by influencing the product life cycle. The housing sector has a major impact on sustainability in New Zealand. Housing construction contributes the largest volume of waste to landfills, approximately 5 tonnes of waste for an average 3 bedroom house. Continuing construction and increasing urban density impact on water and energy resources, waste water infrastructure and product consumption. 32% of New Zealand's electricity is for domestic use. As a significant contributor to resource waste, the residential built environment would be an effective sector in which to apply the principles of product stewardship.

Beacon's Approach to Product Stewardship

Beacon proposes that product stewardship in the housing sector take a life cycle approach. For all housing products (the house, materials, fixtures and fittings), the manufacturer should take responsibility for minimising environmental and social impacts:

- during the sourcing of raw materials,
- during manufacture and transport of the products,
- during the use of the products, and,
- during disposal of products at the end of their useful life.

Manufacturers should be encouraged to provide their products with user information which includes details on:

- Material content
- Embodied energy and water
- Correct use of the product
- Expected energy and water consumption during use (performance of the product)
- The type of waste generated at the end of the product's life
- How to dispose of the product.

The responsibility of manufacturers should be extended to how builders and householders use their building materials and appliances, and how they dispose of the packaging and waste materials. If the product is to be returned to the manufacturer at the end of its life, then there needs to be a system of passports or documentation which can be passed on when the product changes hands. Indeed, as a matter of principle, where materials or components can be recycled or remanufactured, the responsibility for establishing the scheme should rest with the manufacturer or the sector.

An example of such extended product responsibility is Fisher & Paykel, which collects old appliances when delivering the new replacement appliances. The old appliances are then deconstructed. The metal is used for scrap, the Gentle Annie motors are used by another company to build wind and water generators, and the copper is recycled. Another example is Dow Chemicals, which rather than selling solvents to their customers, provides a solvent service. They provide the solvent to the customer on the basis that the used solvent and container belong to Dow and must be returned to them.

Applying Product Stewardship to Housing

Product stewardship could be applied to housing at three levels, by considering:

1. The house as a product
2. The building materials used
3. The fixtures and fittings

At each of these levels great gains can be made in the overall sustainability footprint of the house by applying product stewardship principles at the planning and design stages. Designing with environmental impact in mind, utilising life cycle assessment, using resources more efficiently and reducing waste can all be incorporated into the early stages of planning.

If a new house is considered as a product, the house builder as the manufacturer should be required to provide, at the point of sale, a manual for the house, including details of the expected performance in energy efficiency and water conservation. This would drive the planning and design stage toward more comprehensively considering sustainability criteria.

Limitations on types and quantity of waste which can go to landfill could drive building material manufacturers to develop their own recycling, remanufacturing and take-back schemes. In turn this would drive further thought in the planning and design of materials.

Some options for reducing packaging and for recycling or remanufacturing building materials, fixtures and fittings involve replacing plastics with biodegradable or compostable biopolymers. When materials such as these can be composted, it does not make sense to return them to the manufacturer. Local composting infrastructure needs to be developed at local authority level. This could be done in conjunction with large end-users of compost such as garden centres or market gardens.

While it is easier to apply product stewardship principles to new houses or products, some consideration must be given to improving existing houses with older materials, fittings and fixtures. The majority of New Zealanders live in homes, and with products, which may not be energy or resource efficient, and which may represent future undesirable waste. Time frames for the replacement of such products may need to be instituted so that these existing materials and products do not remain an undesirable alternative where higher standards have been introduced for new materials and products.

Drivers to Enhance Uptake of Product Stewardship

In order to encourage the ownership and uptake of product stewardship principles by manufacturers in the residential built environment, it would be useful to:

- Set targets to reduce or ban certain types of waste from landfills. This could be based on factors such as risk, impact, scarcity of resources and the ability to recycle.
- Apply economic instruments to encourage the use of recycled materials in construction, in building materials, and in the possible remanufacture of appliances and fittings.
- Identify potentially undesirable commercial alternatives. Put measures in place to prevent use of those materials, and to prevent such materials rendering more desirable options uncompetitive.
- Ensure that, when required, the necessary public infrastructure is in place to encourage composting and recycling.
- Have enforcement measures in place to prevent undesirable avoidance of recycling, composting, remanufacture and other product stewardship schemes, for example, the dumping of waste that can no longer go to landfill.

Summary

Beacon considers that applying the principles of product stewardship to the housing sector would lead to many benefits in other national policy areas, including the Building Act, energy efficiency, water conservation, waste reduction, growth and innovation, the Sustainable Development Programme of Action as well as a host of social policies in employment and health. In the wider context of sustainable development, a focus on the key sectors, products and materials which contribute to 'end of pipe' waste problems, will have many positive spin-offs.

Beacon supports the strengthening of the proposed product stewardship approach and encourages manufacturers to take on an extended responsibility for their products.

If there are any further queries, or for correspondence, please feel free to contact me at Beacon Pathway Ltd, on Ph. 021 464 252.

Yours faithfully

A handwritten signature in blue ink that reads "Nick Collins". The signature is written in a cursive style and is underlined with a horizontal line.

Nick Collins
General Manager
Beacon Pathway Ltd