
Beacon Pathway Submission to the Draft Annual Plan 2013/14 for Auckland Council

Date	25 February 2013
Author	Nick Collins, CEO

What is Beacon?

Beacon Pathway Incorporated aims to transform New Zealand's homes and neighbourhoods to be high performing, adaptable, resilient and affordable. To achieve this, Beacon's work uses demonstrations and monitoring to provide proof of the benefits of improving New Zealand's housing stock.

Beacon Pathway Inc. builds on the successful research programme completed by Beacon's original consortium which developed a whole-of-house approach to improving the performance of both new and existing homes, using demonstrations and monitoring to provide proof of the benefits of improving New Zealand's housing stock. Much of this work was developed with Waitakere City Council and is available free of charge on Beacon's website www.beaconpathway.co.nz. Tools developed by Beacon include:

- Neighbourhood Sustainability Framework – a framework and tools to measure the sustainability of neighbourhoods
- HSS High Standard of Sustainability – performance benchmarks for a sustainable home which take a whole-of-house approach to improving the performance of both new and existing homes. This encompasses energy, water, indoor environment, waste, and material/product selection.
- A HomeSmart approach to assessing existing homes and developing a renovation plan – this underpins the Retrofit Your Home initiative.
- *Policy Options for Sustainable Homes: A Resource Manual for Local Government* – this provides an overview of the range of tools available to councils to encourage people to make more sustainable choices in their homes and neighbourhoods

Beacon has been working with Auckland Council over the past year, including input to the Housing Action Plan Stage 1 and in the areas of new build, retrofit and neighbourhoods. Beacon has also been working with Rodney Local Board on a housing/employment training programme being developed by Ngāti Whātua o Kaipara.

Beacon's Members include: Christchurch City Council, EECA, New Zealand Steel, Fletcher Aluminium, Certified Builders, Resene and Insulpro Manufacturing. Beacon would welcome the opportunity to discuss the benefits that membership of the Society could bring Auckland Council.

Nick Collins

Chief Executive, Beacon Pathway Incorporated

PO Box 74618, Greenlane, Auckland 1546

Business Phone: (09) 522 5170

nicke@beaconpathway.co.nz

- Beacon wishes to speak in support of its Annual Plan submission to the Auckland Council hearing panel.

Contents

What is Beacon?.....	1
Beacon's Perspective on the Draft Annual Plan 2013/14	3
Beacon Pathway's Comments on the draft Annual Plan 2013/14 document.....	5
Appendix One: Beacon Resources	12
Neighbourhoods.....	12
Homes	13
Expertise	14

Beacon's Perspective on the Draft Annual Plan 2013/14

Beacon congratulates Auckland Council on developing its draft Annual Plan for 2013/14, the work programme for the next year to deliver on the vision – *the world's most liveable city*. To achieve this vision will require a step change in the types of activities provided by the Council and how these activities are delivered. It cannot be achieved by delivering business as usual, nor can it be achieved by Auckland Council alone.

A core theme of the Auckland Plan is growth and opportunity that builds and sustains the quality of life available to Aucklanders. In order to deliver on the Mayoral vision, all aspects of 21st century sustainability must be addressed including housing needs, climate change, a move to a low carbon future, and improved community resilience. Strong leadership, innovation and a focus on working collaboratively across communities, industry and central government and all parts of Auckland Council (including Local Boards and Council Controlled Organisations (CCOs)) will be needed to deliver many aspects in the Auckland Plan.

Beacon welcomes the focus that the Auckland Council is placing on improving the quantity, quality and affordability of housing in the Auckland area. It is particularly pleasing to see Stage 1 of the Housing Action Plan completed. The challenge now is to move the actions into tangible outcomes. It is critical that budget and other resources are provided in 2013/14 and subsequent years to ensure delivery on these actions.

Beacon identifies the following key points.

1.1 Quality, well-designed homes and neighbourhoods underpin Auckland Council's vision

In Beacon's view, quality, sustainable and affordable housing and neighbourhoods can underpin much of the progress required to achieve the vision and direction outlined in the Auckland Plan. The realisation of a quality compact city with intensification around transport hubs will require an urban design framework with a strong emphasis on resilience, low impact design, demand management and diversity of infrastructure supply.

Beacon's research has identified that medium density mixed-use is a sustainable neighbourhood form which brings benefits to a city. Unfortunately, to date, New Zealand has not specifically designed dwellings and neighbourhoods to achieve these benefits; Aucklanders' experiences of higher density, mixed use has been poor. The opportunity is to plan, design and retrofit Auckland neighbourhoods to realise the liveable city vision. Beacon proposes its Neighbourhood Sustainability Framework and Assessment Kit as a robust evidence-based tool for Auckland Council to use. See Appendix One: Beacon Resources.

Quality housing must include not only the 13,000 new homes required to be built each year, but also the retrofit of existing homes which comprise over 50% of the 2040 housing stock.

Beacon research indicates that the highest costs to the economy, environment and to homeowners occurs during the operation of a home (see Appendix One: Beacon Resources). Therefore, strong emphasis should be given to quality design and retrofit to optimise operational performance, including demand management and opportunities for diversity of supply - water, energy and localised waste management.

1.2 Step change needed to achieve vision

Achieving Auckland's vision will require a range of innovative strategic and policy approaches – backed up by methods, actions and delivery the like of which has not been seen in Auckland before. A key component of achieving this vision is improving Auckland's housing stock.

1.3 Council is a key player determining Auckland's housing outcomes

Council is a key player in the housing outcomes for Auckland – influencing the supporting infrastructure, and the development of existing and new neighbourhoods and homes. For example:

- Council can take a leadership role in providing demonstrations of high performing neighbourhoods and homes.
- Beacon's research shows that councils can make it easier for homeowners to build and retrofit more sustainable homes. In partnership with councils, Beacon has developed a Resource Manual to support improved housing outcomes (see Appendix One: Beacon Resources) and has expertise in this area.
- Strategies, policies and plans being developed by the Auckland Council need to take full account of climate change, reducing reliance on fossil fuels and other aspects of resilience and sustainability such as demand management, local sourcing and local initiatives. The new Unitary Plan must assist in delivering the step changes required to achieve the vision for Auckland.
- Infrastructure is a major cost to Council. Council must focus on demand management, resilience, and creating an enabling environment for innovative solutions including localised and diverse networks for all infrastructure – roading, waters, energy. Involving communities in such design and decision making can also help to change behaviour.

All parts of the Council – the governing body, local boards and Council Controlled Organisations need to be clearly delivering on the intent of the Auckland Plan.

1.4 Beacon resources

A summary of the key programmes of work undertaken by Beacon which could assist Auckland Council is provided as Appendix 1. Further details are available free of charge on the Beacon website www.beaconpathway.co.nz or through contacting Beacon directly.

Beacon Pathway's Comments on the draft Annual Plan 2013/14 document

The below comments are made on the content of the draft Annual Plan. It is difficult to make specific comment on the funding of projects given the aggregated nature of most funding.

2.1 Volume One - An Overview of 2013/14

Governance Theme

Beacon acknowledges the key roles that Auckland Council plays in the leadership of Auckland and supports:

- the provision of information on a full group basis rather than just for the parent entity. CCOs are, and should be, an important part of delivering on the Auckland vision, along with the governing body and local boards.
- the review of CCOs; however, this investigation should also include how well the CCOs are delivering on Auckland Council's strategic direction and, in particular, the goals of the Auckland Plan.

Planning Theme

Beacon acknowledges the considerable work undertaken over the past 2 ½ years by Auckland Council planning for future growth. The goal of increasing housing numbers and affordability, with an emphasis on quality new developments occurring predominantly within the urban area, is supported. To meet Auckland's projected population growth, around 400,000 additional dwellings will be required by 2040. At least 13,000 additional houses must be built each year, yet currently only 5,000 consents for new homes are issued per year in Auckland, and not all these are built (source: Auckland Plan). Council has the opportunity to help catalyse some this development through activities such as facilitating exemplar medium density housing.

Beacon supports spatial-based projects such as the Southern Initiative. Existing housing in South Auckland, like much of New Zealand housing, is cold, damp and unhealthy which leads to poor social and health outcomes. There is an opportunity to improve wellbeing by retrofitting the poorly performing housing stock as part of the Southern Initiative. Beacon supports the exploration of a Rental Warrant of Fitness as one means of improving poor quality rental housing.

Within the city, there is a need for better examples of mixed-use urban residential development of a high standard. It is hoped that Council has explored as part of the Unitary Plan and other policy development, mechanisms to ensure that a greater level of sustainability e.g. provision for their own energy, heat, cooling and water needs is integrated within all new and existing developments. One way of achieving this is through a renewable energy policy requiring a

certain percentage of any new developments to offset their carbon footprint through renewable energy provision on site (following the Merton Rule example from the UK¹).

It is pleasing to note the inclusion of exemplar housing development demonstrations in the Housing Action Plan Stage 1 (action 8). Beacon has experience in this area, being the catalyst for the development of the Christchurch Breathe project, as noted in the Housing Action Plan. Beacon recommends that Council develop a pilot example of affordable, sustainable urban living in partnership with key stakeholders such as NZIA, MBIE, NZPI, social housing providers and developers and that funding be provided in the 2013/14 and future financial years to ensure that this and other similar projects can be undertaken.

Spatial-based initiatives also provide opportunities for the development of exemplar 'best-practice neighbourhoods'. Such developments will contribute to the tools, incentives and education needed to shift approaches from what is currently accepted as business as usual (e.g. urban sprawl) to more sustainable way of doing things, encouraging homeowners to seriously consider new forms of central city living. Exemplar best-practice neighbourhoods will also inform developments in other areas, such as suburban and peri-urban areas, and offer the opportunity for Auckland to be recognised as a leader in eco-city dwellings and lifestyles internationally.

Beacon supports activities to enable the development of papakāinga within the Auckland area and draws Council's attention to work that Ngāti Whātua o Kaipara is undertaking to improve the quality of housing for their iwi and hapū. Beacon has been working with Ngāti Whātua o Kaipara scoping this project, alongside Rodney Local Board and other project partners. Given that the project will deliver on a number of the Council's strategic goals including those related to improved health outcomes, quality of housing, training/employment and contributing to the Māori community, Beacon submits that the Council provide budget and other resources to input to the project.

Commercial and Investment Theme

Beacon submits that the primary focus of CCOs such as Auckland Council Property Limited be on delivering on the Council's vision, with a secondary goal of achieving good financial returns.

Economic Development Theme

Beacon supports a holistic economic development approach focussing on delivering a more resilient and self-reliant economy. The next 30 years will provide significant challenges to the economy of Auckland from the perspective of energy price increases, resource availability and energy security as well as vulnerability to global economic events. Beacon recommends that Council should be setting the stage for supporting an economy that is not primarily dependent on export products which in turn are dependent on imports of energy (in particular oil and gas).

1 For more information please see 'The Merton Rule, A review of the practical, environmental and economic effects' available from www.nhbcfoundation.org

Economic development activity needs to provide opportunities for all Aucklanders, supporting and developing local opportunities for people to live, work and play close to home, thus reducing the need to travel and enabling a broader participation in and development of local areas. Beacon supports the implementation of the Mayor's Taskforce for Jobs as one means of facilitating local employment for young people.

Beacon research shows that retrofit can be a key provider of employment. For every 1000 houses retrofitted to Beacon's HSS High Standard of Sustainability®, a total of 392 full time equivalent jobs are created (see Appendix One: Beacon Resources).

Built and Natural Environment Theme

Auckland Council's role in the built environment needs to be emphasised in this theme, particularly around housing – new build and retrofit of existing houses. Housing quality and affordability are key issues for Auckland and the rest of New Zealand. Affordability must also take into account ongoing running costs (e.g. energy, water, maintenance, and transport costs). Beacon also draws the Council's attention to innovative shared equity schemes such as those pursued by organisations such as the New Zealand Housing Foundation. In the face of declining home ownership, these 'third sector' partnerships show great promise in delivering new models of ownership.

These problems will only be addressed through multiple parties working together. Beacon has a track record of bringing together collaborative models to successfully address complex problems, for example, in Christchurch the Breathe project and Build Back Smarter – a demonstration project aimed at developing a robust approach to including home performance interventions into 'standard' repairs without slowing down the rebuild process.

Beacon supports the Retrofit Your Home programme but seeks that the water, wastewater and stormwater components of the Retrofit Your Home project be incorporated as originally envisaged in the whole-of-house approach endorsed by the Strategy and Finance Committee (resolution SF/2010/30). Beacon supports the continued funding and future expansion of the Retrofit Your Home programme including provision of a targeted rate and the rates funding of free home assessments.

Retrofit Your Home is the Council's main programme by which Auckland can transform existing housing stock to deliver:

- Improved health outcomes – cold damp homes pose serious health risks
- Improved productivity outcomes – for individuals, communities and business
- Economic benefit – Large scale renovation is BIG on job creation. Beacon research for the Job Summit showed that for every 1,000 houses retrofitted to perform to Beacon's HSS®, a total of 392 full time equivalent jobs are required. (see Appendix One: Beacon Resources)
- Reduced load on water infrastructure – household level water efficiencies have direct benefits at the community scale, particularly where there is growing demand for new

housing within catchments, as in the Auckland area. (see Appendix One: Beacon Resources)

- More efficient resource use, resilience and reduced operational costs – protecting the community from inevitable price increases and providing a more resilient infrastructure and carbon savings.

Eco-design advisors play an important role in Retrofit Your Home and other sustainability initiatives and Beacon supports the continuation of these roles.

Beacon supports the focus on the spatial initiatives. Housing and neighbourhoods should be a key part of each of these initiatives. There are opportunities for sustainable housing (new and retrofit) and neighbourhood pilot examples within these projects.

As part of its regulatory functions related to accommodation quality e.g. boarding house assessments, the Council must undertake actions to ensure these buildings are brought up to standard where required.

Solid Waste Theme

Beacon supports Auckland Council initiatives to reduce solid waste, in particular user pays to signal the cost of waste creation and disposal. The highest costs to the economy, environment and homeowners are during the operation of the home and better design can reduce the amount of waste generated and energy required to run a home e.g. through better solar orientation, design to increase the ease of activities such as recycling and composting.

In addition, construction waste is a major contributor to landfill. The building of an average three bedroom house sends five tonnes of new material waste to landfill. Good construction management can cut this to two tonnes without significant cost to the builder/developer. Beacon submits that Auckland Council explore ways to reduce the amount of construction waste being developed and going to landfill, and take the opportunity to learn from the best practice developed in other local authorities such as Christchurch City Council's use of bylaws.

Water Supply and Wastewater Theme

Beacon supports projects to manage demand for services, create a more resilient, localised and diverse network, and where appropriate, maintain the network. An enabling environment allowing people to have a supplementary water supply with rainwater tanks and the aggressive promotion of demand management and good neighbourhood design is required. Beacon has done extensive work on the benefits to local government of demand management – including cost benefits and value analysis. Beacon draws Auckland Council's attention to the report *Slowing The Flow – A Comprehensive Demand Management Framework for Reticulated Water Supply* and *Water Demand Management: An Economic Framework to Value* (www.beaconpathway.co.nz/further-research/article/reports_and_presentations_water) as sources of information around best practice demand management approaches.

Beacon seeks that the water, wastewater and stormwater components of the Retrofit Your Home programme be incorporated. Inclusion of aspects such as supply of water efficient devices (e.g. low flow shower head, dual flush toilets), stormwater management and supplementary water supply systems is consistent with the whole-of-house approach endorsed by the Strategy and Finance Committee (resolution SF/2010/30).

Beacon supports initiatives to reduce demand for wastewater services and identify to users that there is a cost associated with their use. Beacon submits that Auckland Council investigates local servicing options and distributed systems, particularly for areas not currently served by centralised infrastructure. In rural and peri-urban areas, greywater systems should also be supported more strongly as a method to sit alongside more conventional on-site wastewater disposal systems.

Community Theme

Beacon supports Council taking key roles in the building of strong communities so that Aucklanders feel a sense of belonging to their neighbourhoods and take pride in their region. For communities to become stronger, more resilient, and better able to meet their needs, so that Auckland becomes a better place to live, work and play, Council and communities must work together to ensure the design and function of local places (dwellings, neighbourhoods and connecting infrastructure such as roads and parks) meets the needs of local communities. The Council also has the opportunity to be an enabler of quality and affordable housing, creating exemplar, mixed-use, medium density developments as part of the redevelopment of council-owned facilities.

While endorsing Council's provision of high-quality facilities and services such as libraries, community services, cemeteries and emergency management services, Beacon recommends that Council extend the focus of the community theme to recognise that communities (residents, business owners, workers, iwi) have an important role to play in other themes as well; for example, as identified earlier in this submission, access to quality and affordable housing and neighbourhoods in terms of fostering individual and community wellbeing. Further, communities play a significant role in the success of how places and the services, such as public transport, that are provided within these places function and adapt.

2.2 Volume Two - Local Board Information and Draft Agreements

Beacon Pathway supports the important role of Local Boards to enable democratic decision-making by, and on behalf of their communities and to promote the social, economic, environmental and cultural wellbeing of communities within their local board area.

It is critical that Local Boards support the creation and maintenance of a strong sense of community identity and fostering wellbeing across their diverse communities. Beacon encourages Local Boards to support local efforts towards improved resilience and sustainability and to foster collaborative ways of working across the themes in the Annual Plan.

Beacon also raises the importance of quality and affordable housing in promoting the wellbeing of communities. There are many long-term benefits to be gained from making more sustainable building choices. Improving the performance of buildings can benefit the health, productivity and resource efficiency of building occupants, as well as generating community-wide benefits such as savings in infrastructure investment and improvements to air and water quality and the natural environment. Despite the importance of housing to community wellbeing, Beacon is surprised that few local boards made any reference to housing or provide budgets in support of housing initiatives in their draft Local Board Agreements.

Beacon strongly supports the role of Local Boards in promoting resilience and localised solutions and infrastructure. Local Boards are the major interface between Council and local communities. They are ideally situated to promote and support local activities that can improve the quality of life in Auckland while also improving sustainability and resilience.

Beacon also supports delivery of demonstration projects at the localised level. There are particular opportunities, such as the Southern Initiative, Ngāti Whātua o Kaipara and growth areas already identified in the Auckland Plan. These must include significant input from local communities.

Beacon submits that all Local Boards include in their current and future Local Board Plans and Agreements:

- a strategic priority - *Our people have good quality and affordable housing and neighbourhoods*
- an initiative - *support participation of their residents in the Auckland Retrofit Your Home programme and other sustainability initiatives/programmes.*

Beacon supports the following initiatives included by Local Boards in their draft Local Board Agreements:

- Mangere-Otahuhu Local Board's support for the Southern Initiative, including *leveraging the opportunities for better outcomes for local residents, and our young people. We will continue to work to improve employment, youth empowerment, education, better housing and improved transport connections.*
- Maungakiekie-Tamaki Local Board priority – *Our people will have good quality and affordable housing – we will work towards increasing home ownership among low-income families and ensuring houses are healthy and safe.*
- Rodney Local Board key initiatives including the need for coordinated investment and actions around providing additional opportunities for Rodney residents to participate in environment/community lead programmes.

Beacon acknowledges the support the Rodney Local Board has provided to Ngāti Whātua o Kaipara in scoping/developing housing and employment/training opportunities in the area. Beacon submits that the Rodney Local Board provide funding in the 2013/14 financial year for ongoing support for the project given that it delivers on a number of its objectives around employment/training, housing, environmental programmes and iwi.

2.3 Volume Three – Financial Information Policies and Fees

Beacon supports the following actions arising from Volume Three:

- User charges to signal the cost of services and as a demand management tool. However, an analysis of the positive externalities from a good or service must be undertaken as in some cases the benefits arising may be such that the service or good should be rates funded. Beacon supports fixed and volumetric charging for water and wastewater service as a demand management tool and to identify the cost associated with its use (see Appendix One: Beacon Resources).
- The provision of information on a full group basis rather than just for the parent entity. CCOs are, and should be an important part of delivering on the Auckland vision, along with the governing body and local boards.
- Changes to Auckland Council's Maori freehold land rates remission and postponement policy including extending the policy to other Maori land with similar legal and economic characteristics.
- Changes to Auckland Council's Rates Remission and Postponement Policy enabling Council to remit the UAGC to residents who would otherwise qualify for central government's rates rebate scheme except that they occupy a papakāinga unit under a licence to occupy scheme.

Appendix One: Beacon Resources

Neighbourhoods

Neighbourhood Sustainability Framework and Assessment Kit

Neighbourhoods are important because the way they are laid out and organised has significant impacts on how a home performs and on the direct, as well as indirect, costs to households.

Beacon's Neighbourhood research team has developed a framework and tools to measure the sustainability of New Zealand neighbourhoods - *The Neighbourhood Sustainability Framework and Assessment Kit*.

This research indicates that the neighbourhood scale presents opportunities for:

- House retrofit
- New design and construction awareness/desirability
- Distributed reticulation systems – electricity and water
- Improved stormwater management
- Improved connectivity and mixed use
- Reduced transport costs

The Kit is available free to help planners, designers, neighbourhood managers and developers identify, discuss and prioritise changes to improve the sustainability of both new and existing neighbourhoods.

Download from

www.beaconpathway.co.nz/neighbourhoods/article/the_neighbourhood_sustainability_framework

The value of neighbourhoods

Beacon's research has identified that low density non-mixed use (e.g. neighbourhood that are almost entirely residential) generate net costs rather than net benefits for a city. As a corollary, mixed use, medium density neighbourhoods are of value to cities. Research which awarded monetary values to different neighbourhoods showed that a sustainable neighbourhood is worth \$1,362 per household compared to a negative value of \$595 per household for NZ's least sustainable neighbourhoods.

Find out more at

[www.beaconpathway.co.nz/images/uploads/Final_Report_NH3112\(2\)_Valuing_neighbourhoods.pdf](http://www.beaconpathway.co.nz/images/uploads/Final_Report_NH3112(2)_Valuing_neighbourhoods.pdf)

Homes

HSS High Standard of Sustainability®

New Zealand homes can and should perform better. Homes that perform well have benefits that go beyond direct financial savings; they benefit the whole economy, local council budgets, and, most importantly, families.

A sustainable home is the sum of its parts. Beacon's focus is on whole-of-house sustainability - encompassing energy, water, indoor environment, waste and material/product selection. This focus is reflected in our work on a set of performance benchmarks to achieve a sustainable home - the HSS High Standard of Sustainability®.

See

www.beaconpathway.co.nz/being-homesmart/article/beacons_hss_high_standard_of_sustainability

Policy Options for Sustainable Homes – A resource manual for local government

Beacon Pathway has conducted research into the council-induced barriers to building and renovating homes to a high standard of sustainability. The research found that policy and regulatory barriers to sustainable building choices exist in:

- administering the Building Act and Building Code;
- inflexible conventional infrastructure standards (particularly for water); and
- District Plan provisions that provide no allowance for sustainable designs such as passive solar orientation or features such as rainwater tanks (e.g. traditional development controls for height, yards, and height-in-relation-to-boundary).

Beacon research has shown that councils throughout New Zealand have developed a range of initiatives to encourage people to make more sustainable choices in their homes and neighbourhoods, and are seeing some good results. The resource manual of policy options for councils provides an overview of the range of tools available to councils, and gives detailed examples of policies and practices already in place in New Zealand. Beacon recommends that Auckland City Council explore a number of the options outlined in the Resource Manual to assist in realising the visions outlined in the Auckland Plan.

Download the Manual from

www.beaconpathway.co.nz/further-research/article/a_resource_manual_for_local_government

National Value Case

Beacon's National Value Case for Sustainable Housing Innovations showed that there were clear national benefits to encouraging housing improvements on a wider scale. In particular, it showed the economic value to New Zealand of:

- A direct private economic gain to households of 1% GDP (\$2 billion in 2007 \$ terms).
- Savings in household energy consumption of 22PJ/year with reduction of CO2 emissions of 3600kt/year.
- Direct water savings of 130 million m³/year.

Renovation and job creation

Beacon research, supplied to the Job Summit, established the value to the nation of large-scale home renovation by illustrating that housing is a critical part of urban infrastructure and that renovation is a viable source of job creation. Large scale renovation is BIG on job creation showed that for every 1,000 houses retrofitted to perform to Beacon's HSS®, a total of 392 full time equivalent jobs are required.

See www.beaconpathway.co.nz/further-research/article/large_scale_renovation_creates_jobs

Water demand management

Beacon's water research has demonstrated the value of a demand management approach and provided a framework for councils considering instituting it. *Slowing the Flow: A Demand Management Framework* is a guide to the development of water demand management strategies and policies for all those working in reticulated water supply.

Beacon's research has also developed a comprehensive approach to valuing council implementation of water demand management. A case study of Tauranga City Council's demand management measures showed that the Council delayed the implementation of the next major water supply infrastructure by approximately 10 years with a net benefit to the community of \$53.3 million in 2009 terms.

See www.beaconpathway.co.nz/further-research/article/reports_and_presentations_water

Expertise

Beacon Pathway has considerable expertise in the sustainability of New Zealand homes and neighbourhoods and has worked extensively with local councils. We welcome the opportunity to further discuss how we can help with Auckland Council and local boards.