



Report

Review of Eco Design Advisor Service

Final

**A report prepared by Beacon Pathway Limited
1 September 2010**

Contents

1	Introduction.....	3
1.1	Purpose of This Report	3
1.2	Background.....	3
1.3	Current State of the Programme	5
1.4	Local Government Context.....	6
2	Evaluation of the Eco Design Advisor Programme.....	9
2.1	Pilot Scheme Evaluation 2007	9
2.2	2008 Evaluation	11
2.3	Current 2009 Evaluation	12
3	Discussion.....	22
3.1	Evaluation Method and Performance Measures	22
3.2	Area of Focus.....	22
3.3	Ongoing Training and Support	23
3.4	Gaps in Coverage.....	23
3.5	Linkages with Other Sustainable Building Programmes	23
4	Recommendations.....	24
5	References.....	25

1 Introduction

1.1 Purpose of This Report

This report brings together a range of current information about the Eco Design Advisor programme and presents the findings of the independent evaluation of the programme (the 2009 evaluation) undertaken by Beacon Pathway Limited, a sustainable housing research organisation.

The report is intended to be used by local Councils, central government agencies and other relevant stakeholders to gain an understanding of the performance of the programme and the benefits which have resulted to date from its implementation.

1.2 Background

The Eco Design Advisor service was initiated based on research undertaken by BRANZ (Christie and Stoecklein, 2005) which indicated that there was a need to provide factual, independent advice on a face to face basis to a wide range of stakeholders on sustainable design and construction in the residential built environment.

In particular, research identified that there were three key obstacles to sustainable residential design which needed to be addressed (Christie and Stoecklein, 2005 and Stoecklein, 2005):

- there is no stage at which the home owner is directly prompted to make decisions regarding sustainability;
- there is lack of specific technical information and advice; and
- there is a lack of industry expertise combined with a general reluctance to implement sustainability features.

Findings from research also identified that people were more influenced by personal and first-hand sources (for example, from their own experience or friends/neighbours) compared to other marketing sources (Christie et al, 2005). BRANZ also considered other research that emphasised the importance of educators and experts in helping people understand concepts and overcome barriers, instead of just relying purely on facts, figures and information (Christie, Stoecklein and Jaques, 2007)

The concept of the Eco Design Advisor Programme had benefits beyond addressing these obstacles. It was part of a larger programme by BRANZ to make the findings of sustainability research available to builders, designers and members of the public (Christie, Stoecklein and Jaques, 2007).

Other research undertaken by Beacon Pathway (Easton et al, 2006; Trenouth and Mead, 2007) has drawn similar conclusions and supported in particular a number of key components included in the Eco Design Advisor Programme. These include:

- Provision of dedicated staff support for sustainable building to provide advice and information;
- Free design review for sustainable buildings;
- Provision of education/information on sustainable building including funding opportunities;
- Active promotion of sustainable building rating tools
- Actively promoting to applicants for building and resource consent a simple checklist of ways to make their homes more sustainable.

After consideration of the options, BRANZ identified that local Councils, as the main point of contact for Building Consents, and many of whom were already providing some information on sustainable building such as design guides, were the best location for such a service. A number of benefits were identified from the location of the programme in local Councils (Christie, Stoecklein and Jaques, 2007). These include:

- The potential for close co-operation with the local councils in terms of council education, influencing urban planning and streamlining compliance for new technologies;
- The potential to target people at the earlier stages of the design process, before important long-term decisions have been made.

Accordingly the principles of an Eco Design Advisor role were established. The role was intended to:

- Be free
- Be independent (i.e. not promote particular products or suppliers)
- Provide robust advice supported by good science – supplied by BRANZ
- Be part of a national network so that issues and solutions could be shared and discussed
- Be primarily a face to face service
- Target a range of particular stakeholders in the residential new build and renovation sector
 - Homeowners
 - Designers
 - Building contractors
 - Community organisations and interest groups
 - Council policymakers and planners
 - Commercial suppliers to the industry
- Provide home visits as part of its core function – for new houses, existing homes and renovations
- Provide short phone and email advice as a minor role
- Include an education and presentation role for the wider building sector elements
- Participate in events such as Eco Days and Home Shows
- Provide articles about sustainable building for local newspapers and national magazines

- BRANZ undertook to co-ordinate the network and underpin it by providing technical advice and training .

1.2.1 Pilot Programme

Initial funding to pilot the programme was gained from a number of central and local government sources and the service commenced as a pilot in 2006 with eco design advisors located in Waitakere City, Hamilton City and Kapiti Coast District Councils. This was the subject of a BRANZ research programme as reported in a range of research papers and a BRANZ Study report (see Christie, Stoecklein and Jaques, 2007; Christie, Jaques, Stoecklein and Mathews, 2007, and Christie, Jaques, Mathews and Stoecklein, 2007). After 12 months the research indicated that the programme was having a number of very positive impacts, and that its expansion was warranted. Some key findings from the pilot evaluation are outlined in Sections 2 and 3 of this report.

1.2.2 Expansion to Nine Local Councils

Following the success of the pilot programme, the service was expanded to a further six local councils between 2007 and 2009: Auckland City, Wellington City, Nelson City, Queenstown Lakes District, Western Bay of Plenty and Tauranga City. The Western Bay of Plenty District/Tauranga City position is one Eco Design Advisor providing a part-time service for both councils while the Queenstown district service is split between two advisors, based in Queenstown and Wanaka respectively.

After one year the Wellington Eco Design Advisor resigned from her role and the Wellington City Council decided to disestablish the position.

In most instances, the Eco Design Advisor was established in the participant Councils with a varying component of funding from the Ministry for the Environment Sustainable Management Fund, and with programme co-ordination, technical support and training funded by BRANZ (with contributions from EECA and the Building Levy). This funding package was put in place for up to two years of each Eco Design Advisor. Some Councils had an understanding that the position would be fully funded by the participant Councils at the end of this period, however this was not the clear understanding of others.

1.3 Current State of the Programme

While perceived as being successful, the initial funding has now finished and many of the participant Councils and their partners are reviewing the extent and type of ongoing involvement that they will have with the scheme. In addition, the Government has cancelled this year's round of SMF funding and put future rounds on hold, which reduces the incentive for new Councils to join the scheme.

BRANZ has reviewed its involvement in the scheme and has decided that its initial research project is complete and it will have only a limited future role, providing key technical advice and assisting with ongoing training.

Partnerships with complementary services – the Home Energy Advice Centre (which offers a phone and email based energy advice service), and the Sustainable Living Education Trust (which provides information used by Councils to run detailed sustainability workshops and community programmes), are currently being explored, with a view to maximising synergies between these other organisations.

A draft Business Plan for the programme has been prepared, and this (Morrison et al, 2009) anticipates that the programme continue and expand into other local authority jurisdictions. Governance proposals are currently being developed which envisage the development of a central administering body which would co-ordinate training and support activities for the advisors, seek funding for specific aspects, and which the participant local Councils could affiliate to.

In May 2010 Hutt City decided to participate in the programme and appointed a part time Eco Design Advisor.

1.4 Local Government Context

As part of establishing the Eco Design Advisor programme, the individual participant Councils have identified the values and benefits that they see of the programme, primarily within strategic documents such as their Long Term Council Community Plans. In some instances these differ slightly from the role as envisaged by BRANZ.

Error! Reference source not found. provides some examples of some of the key areas identified by participant local Councils where the programme is seen to contribute to their local needs and strategic direction.

Table 1 Examples of Key Areas Where the Eco Design Advisor Programme is Seen to Contribute, as Identified in Local Council Documents

Council	Source Document	Goals for the Programme
Auckland City	Long Term Council Community Plan	The quality built environment strategy has five objectives that the EDA scheme contributes to: achieve a more sustainable urban built environment; raise the design quality of buildings, spaces and developments; support a built environment that is responsive to the Auckland character; develop a world-class mixed-use CBD and waterfront; and foster the further development of vibrant centres and successful neighbourhoods ¹
	Long Term Plan for Sustainable Auckland ²	Key goals: Vigorously promote the provision of more sustainable buildings and developments – now and ongoing Support the adoption nationally of minimum standards for sustainable building design and rating systems for residential buildings – now and ongoing
Waitakere City	Long Term Council Community Plan	The Eco-Design adviser service fits into the strategic framework in the 10 year plan in a wide range of locations. The position was created as part of a package of initiatives around Climate Change, however the contributions to good urban form and implementation of the growth management strategy are also considered important.
	Environmental Strategy	Contributes to the 'low carbon city' goal of the Environmental Strategy.
	Community Outcomes Plan	Delivers on the sustainable outcomes aspect of the community outcomes plan through 'managing our energy, waste and water innovatively and responsibly. It also delivers on the community outcome of Wairua through 'minimising pollutants.' It also delivers on the community outcome of Toiora - Healthy lifestyles 'Good health, education and increased participation in a healthy and positive lifestyle'.
Hamilton City	Long Term Council Community Plan	Section 3 of the LTCCP, "Moving toward Sustainable development ".,Key themes of the Environmental Sustainable Strategy include, Environmentally Sustainable Growth, Healthy Eco Systems and Resource Conservation

¹ Pg 68 Auckland City Council 10 Year Plan 2009-2019

² Keeping Auckland's Future Bright, Long Term Plan for a Sustainable Auckland, May 2008

Council	Source Document	Goals for the Programme
Kapiti Coast District	Long Term Council Community Plan	<p>Contributes to 5 key community outcomes:</p> <ul style="list-style-type: none"> - there are healthy natural systems which people can enjoy - the nature and rate of population growth is appropriate to community goals - the District's resources are used wisely - there is increased choice to work locally - the District has a strong healthy and involved community
Nelson City	Long Term Council Community Plan	<p>Contributes to 3 key community outcomes:</p> <ul style="list-style-type: none"> -healthy land, sea, air and water -people friendly places -strong economy
Queenstown Lakes District	Long Term Council Community Plan	<p>Contributes to the following Community Outcomes:</p> <ul style="list-style-type: none"> -Sustainable growth management -High quality urban environments respectful of the character of individual communities -Contributes to LTCCP workplans: -Facilitate access to energy efficiency advice for residential construction. Facilitate partnerships to implement energy efficient retrofitting projects, targeted to lower income households -Mitigate winter time air pollution in Arrowtown

2 Evaluation of the Eco Design Advisor Programme

2.1 Pilot Scheme Evaluation 2007

The pilot scheme was evaluated after the first 10 months of the programme and a number of research papers and a BRANZ study report were developed around this.

There were two key components to the evaluation. The first of these related to the home consultations and changes between the initial evaluation by the Eco Design Advisor of the house design in relation to the cut down Green Home Scheme and a followup evaluation undertaken by BRANZ (Christie, Jaques, Stoecklein and Mathews, 2007).

The second component focused on the impact of the programme on the values and long-term behaviours of the homeowners and designers who had accessed the programme (Christie, 2009).

2.1.1 Findings from Evaluation

The research programme evaluating the pilot had a number of key findings as summarised in Table 2 below.

Table 2: Key Findings From Pilot Scheme Evaluation

Component	Finding
Impact of Home Consultations on Green Home Scheme ³ Rating	<ul style="list-style-type: none"> ■ Average increase in dwelling Green Home Scheme credits from 18 at initial consultation to 37 (from a total possible of 78) after the consultation. ■ Increases in credits occurred across a number of key environmental performance areas with thermal performance and water the most frequently improved areas.

■ ³ *The Eco Design Advisors undertook an abridged BRANZ Green Home Scheme Assessment for each home consultation. The Green Home Scheme is a Home Rating Tool that examines dwelling sustainability across a wide range of themes including thermal performance, appliance resource use, water economy, site selection, spatial efficiency and indoor air quality.*

Component	Finding
Impact on Values and Long Term Behaviours of Homeowners and Designers	<ul style="list-style-type: none"> ■ 67% of designers and 75% of homeowners surveyed who had had EDA consultations thought the EDA was effective in increasing their knowledge of environmental opportunities ■ After their EDA consultation 71% of participant homeowners surveyed believed that incorporating eco design practices into their home was worthwhile; 69% believe it will benefit their lifestyle; 56% believed it is easier to include sustainable features than they had previously thought; and 49% believed that eco design features will increase the value of their house ■ After their EDA consultation 64% of designers believed eco design practices are more important than prior to meeting the EDA; 54% believed it would benefit their career more; 54% believed that eco design features would be more attractive to clients; 53% believed it was a more essential component of design; 46% realised eco design features were easier to include than they had previously thought. ■ Where designers had seen an EDA 43% of their environmental behaviours were attributed to seeing the EDA; and where homeowners had seen an EDA an 18% improvement in incorporating environmental technologies in the house was observed. ■ The longer the amount of time the EDA spent with a designer, the more significant the behaviour change which occurred ■ Longer home visits (greater than 2 hours) didn't result in any significant increase in the behaviour change of the homeowners. ■ Over 90% of homeowners and over 80% of designers said they would recommend the scheme to others.

2.1.2 Key Conclusions

As a result of the findings of the evaluation, it was concluded that the programme was performing to a high degree of success, and that expansion to a greater number of Councils was warranted. In particular it was concluded that:

- There was a very high degree of satisfaction from participant homeowners and designers with the service offered;

- The service was having a significant impact on the values and long-term behaviours of the participant homeowners and designers;
- The service was resulting in significant improvements to the designs and performance of the dwellings which had been the subject of in-depth consultations; and

The method of delivery of the service (free consultations including in-home visits) was an effective method of achieving these outcomes.

2.2 2008 Evaluation

BRANZ continued to collect data through the post pilot phase – November 2007 to June 2008. This unpublished information has been made available to Beacon and is reported below.

The year two follow up survey aimed to extend on the encouraging Year 1 results to investigate how the scheme can be more effective in targeting a wider audience – and not just those already inclined towards sustainable housing. Specifically, its aim was to:

- establish how the EDA scheme can target different audiences/market segments;
- gain an understanding of the type of people who are visiting an EDA and their motivations for visiting;
- gain feedback on the effectiveness of the service (for example, marketing, and information provision);
- gain an understanding of the perceived value of the service.

2.2.1 Findings:

The survey found that, in relation to participants' values and perceptions of housing and sustainability, reducing energy use and achieving suitable heating and warmth benefits were consistently the main concerns.

The personal one-to-one nature of the meetings and the opportunity for on-site meetings was identified as the key factor in the success of the scheme. In light of this it is considered that one-to-one discussions should continue to be an important feature of this scheme. While there are a wide range of websites and help-lines available to New Zealand residents for information on eco-design, the EDA programme is ground-breaking in that the free one-to-one in home advice is provided.

The survey also found that the material being covered by the EDA's appears to be on-track with what the public are wanting, although it was mentioned that further information on trusted suppliers and installers is still needed. The desire for information on trusted suppliers and installers has also been identified by Beacon research (Trotman et al, 2007). A tension exists however in providing independent advice versus specifying certain products and suppliers. The large majority (74%) of respondents reported that they were satisfied with the information they received, and this gives reasonable grounds for not extending the programme into supplier and installer recommendations.

Of the survey respondents who had already seen an EDA, 90% said they would use the service again. Further, 95% of respondents said they would recommend this service to others.

2.3 Current 2009 Evaluation

2.3.1 Method

This section outlines the evaluation undertaken of the expanded scheme by Beacon Pathway during December 2009 which is the main focus of this report. This is based on unpublished information collected by BRANZ. The second part of the evaluation looks at the overall programme and considers how well it has met the objectives identified in its inception. It considers information which has been collected by the Eco Design Advisors through the life of the programme, and also the overall picture in terms of the BRANZ data.

This evaluation has been undertaken to look specifically at the performance of the programme in relation to the key outcomes sought, as defined in the funding applications to central and local government agencies and identified in supporting documentation for these. Table 3 identifies the outcomes which have been able to be looked at in this evaluation. The evaluation of the other outcomes will require the implementation of a planned follow up survey with participants, and will be the subject of future reporting.

Table 3: Key Outcomes Looked at in 2009 Evaluation and Source of Information Used to Evaluate These

Outcome Sought	Source of Information
1) Better streamlined consent process for sustainability options within the council consent process	2) EDA records of improvements made
3) Improved and strengthened network within the design and building industry around sustainable design	4) Records of Media Articles, Presentations and Networking Events
5) A representative number of EDAs trained in all areas of well targeted, practical, achievable eco design concepts and implementation	6) Training records
7) Each Eco Design Advisor undertaking an annual quota of 450 “events” – a combination of full consultations, short consultations, networking with and presentations to groups of stakeholders	8) EDA records of consultations

2.3.2 Results

2.3.2.1 Improved/Streamlined Consent Processes

Table 4 outlines where initiatives to improve or streamline consent processes have been undertaken within the participant Councils for more sustainable options. Primarily these have focussed around more sustainable hot water systems, and in particular solar hot water systems. One reason for this– and one of the benefits of the programme nature of the Eco Design Advisor Role, is that streamlined processes developed in one Council have been able to be picked up and adapted for use in other EDA participant Councils creating efficiency for such projects.

Table 4: Better streamlined consent process for sustainability options

Council	Initiatives Undertaken
Auckland City	<ul style="list-style-type: none"> ■ Solar hot water and heat pump hot water building consent process streamlining ■ Smoothing lodgement of H1 and water reuse consent applications.
Waitakere City	<ul style="list-style-type: none"> ■ Solar hot water and heat pump hot water building consent process streamlining
Hamilton City	<ul style="list-style-type: none"> ■ Zero consent fees on solar hot water systems
Tauranga City/ Western Bay of Plenty District	<ul style="list-style-type: none"> ■ Zero consent fees on solar hot water systems in Western Bay of Plenty ■ 50% reduction on consent fees for solar hot water systems in Tauranga City
Nelson City	<ul style="list-style-type: none"> ■ Solar hot water building consent process streamlining and zero fee charges for solar consents.
Queenstown Lakes District	<ul style="list-style-type: none"> ■ Solar hot water and heat pump hot water building consent process streamlining discussions in progress

2.3.2.2 Improved/Strengthened industry network

Table 5 summarises the wide range of industry events and presentations which have been undertaken by some of the Eco Design Advisors. While each Eco Design Advisor is not capturing the information in an identical fashion, it is clear that networking and presentations on sustainable building are a critical part of the role being undertaken by the EDAs.

Table 5: Networking Events and Presentations Undertaken by Eco Design Advisors Sep 2007 – Dec 2009⁴

EDA Location	Networking Events Detail	Presentations Detail
Auckland City	73 Community groups 76 Industry groups 38 Council/govt groups	43 Community groups 15 Industry groups 17 Council/govt groups
Waitakere City	49 community groups 182 industry groups 47 Council groups	52 community groups 26 industry groups 12 Council groups
Hamilton City	25 Community Groups 67 Industry Groups 5 Council Groups	67 Community Groups 23 Industry Groups 17 School Groups 8 Conferences
Tauranga City/ Western Bays District	175 networking events	79 presentations
Kapiti Coast District	69 promotional events 119 networking events	
Wellington City	44 networking events	NA ⁵
Nelson City 0.75 FTE position	2 community groups 34 industry groups 2 other	2 community groups 43 industry groups 2 other
Queenstown Lakes District – 0.6 FTE position	12 community groups 10 industry groups	9 community groups 3 industry groups

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⁴ Note the start date of employment of each Eco Design Advisor varies

⁵ Position disestablished

Table 7 identify the range of media articles and website coverage for the programme. It can be seen that over time and as the reach of the programme has increased, media coverage has extended. As a generalisation, media coverage is generated by proactive measures by the EDA (eg issuing a press release or even drafting an article) whereas website coverage is generated as a response to market awareness of the programme.

Table 6: Media Articles Relating to the Eco Design Advisor Programme

Date	Headline	Location	EDA
10/11/2006	Council launches climate change plan	Scoop	Waitakere
01/02/2007	New EDA service at Waitakere	Waitakere News	Waitakere
10/07/2007	major design changes part of eco city's bid ...	NZ Herald	Waitakere
30/10/2007	Eco housing: how it makes a difference	Raglan Chronicle	Hamilton
01/11/2007	Free service aims to make your home eco friendly	Bay of Plenty Times	Tauranga
26/11/2007	Free sustainable building advice: new service	www.infonews.co.nz	Queenstown
10/12/2007	Mission to make our homes more efficient	Bay News	Tauranga
24/02/2008	Eco advice for Kapiti people	Kapiti News	Kapiti
26/02/2009	At your service	Mountain Scene	Queenstown
13/03/2008	Cold homes cause ills	The Mirror	Queenstown
27/03/2008	Focus on home sustainability	CityLife	Wellington
30/03/2008	Sensible design – do we need such big houses?	Kapiti Observer	Kapiti
26/05/2008	Help to make your home healthier	NZ Herald	Auckland
17/06/2008	Eco design service launches	Scoop	Auckland
21/06/2008	Happy ending for waste project	Otago Daily Times	Queenstown

Date	Headline	Location	EDA
25/06/2008	Resident warms to eco advisers tips	East & Bays Courier	Auckland
14/08/2008	Eco design advisor promotes benefits of insulation	www.3news.co.nz	Tauranga
01/09/2008	Advice for eco builders	Te Puke Times	Tauranga
24/10/2008	Insulation advice on offer	Bay of Plenty Times	Tauranga
Autumn 09	Earth Building in Central Otago and Waiheke	Earthbuilding Magazine	Wellington/Kapiti/Auckland
12/3/2009	Eco-advisor for renovators	Gulf News	Auckland
17/03/2009	Warmer drier homes at no cost	Waikato Times	Hamilton
30/3/2009	Earth Hour well supported in Queenstown	Otago Daily Times	Queenstown
01/04/2009	Pledge rewarded	Otago Daily Times	Queenstown
08/04/2009	Down with power bills	Otago Daily Times	Queenstown
27/05/2009	Jobs boom seen in insulation	Waikato Times	Hamilton
01/06/2009	Going green down south	Build Jun/Jul	General
05/06/2009	Warm tips from a cool guy	Nelson Mail	Nelson
11/06/2009	Pupils immersed in water studies	Otago Daily Times	Queenstown
19/06/2009	Red hot demand for green advice	www.infonews.co.nz	General
11/7/2009	Insulation the hot topic of the day	NZ Herald	Auckland
1/8/2009	Energy efficiency and historic buildings	Build	General
23/11/2009	Expert advice on water matters	Scoop	Kapiti

Table 7: Web Coverage Eco Design Advisor Programme

Location	Website
General	www.aboutit.co.nz www.adnz.org.nz www.beaconpathway.co.nz Submissions by Beacon Pathway to local councils www.beckstones.co.nz/ www.branz.co.nz www.buildconnect.co.nz/green-home-schemes www.consumer.org.nz/reports/home-energy-advice www.dect.org.nz Dunedin Environment Centre Trust www.ecobob.co.nz www.eeca.govt.nz www.greenlist.co.nz/ www.localgovt.co.nz/ www.mfe.govt.nz www.nzbcsc.org.nz www.nzgbc.org.nz/ www.sustainabilitymatters.co.nz www.sustainableliving.org.nz www.smarterhomes.org.nz/news/ www.sustainableliving.org.nz www.sustainability.govt.nz/news www.zerocarbon.ideax.org.nz www.ecodesignadvisor.co.nz
Auckland	www.aucklandcity.govt.nz/ www.solarenergyhouse.com www.selwyncomed.school.nz/.../sustainable-practices-in-building-renovation course adult education Selwyn College www.ptchev.school.nz newsletter
Waitakere	www.unlimited.school.nz/ Unlimited Paenga Tawhiti school newsletter www.waitakere.govt.nz www.ecomatters.org.nz/ www.ranui.org.nz/
Hamilton	www.hamilton.co.nz/sud www.envirocentre.wordjot.co.nz/ / Hamilton Envirocentre www.hamilton.co.nz www.buildhamilton.co.nz www.fieldays.co.nz

Location	Website
Tauranga/ Western Bay of Plenty	www.tauranga.govt.nz/ www.westernbay.govt.nz www.taurangasenior.net.co.nz newsletter www.smarteeconomy.co.nz
Kapiti / Wellington	www.kapiticoast.govt.nz/ www.wellington.govt.nz/ www.enterprisecoastnz.com
Nelson	www.nelsoncitycouncil.co.nz/eco-building-design-advisor/ www.hybridhomes.co.nz/ www.ecofestnelsontasman.co.nz
Queenstown / Wanaka	www.sustainablewanaka.co.nz www.healthinharmony.co.nz www.seedbuilding.co.nz/residential/ www.qldc.govt.nz www.georgiep.co.nz/eco_design_sustainability.html www.nzica.com – qnstwn eda talk www.queenstown.school.nz newsletter www.scene.co.nz www.bullerdc.govt.nz www.timaru.govt.nz http://www.otagopolytechnic.ac.nz www.lwb.co.nz

The Eco Design Advisor Programme, and findings from research into the programme, have been disseminated to industry peers through some conference papers and presentations.

Examples include:

- NZSSES Conference 2007 , The Eco-Design Advisor: an Independent Resource for the Building Industry
- NZ SB10 Conference 2007, The Role of an Eco Design Advisor – How Effective Has it Been.
- Green Building and Facilities Conference 2008, Eco Design Advisor Programme: Analysing the case for and Experiences from the Programme.
- BOINZ Conference 2009. Sustainability – Role of the Eco Design Adviser and how this has assisted TA's.

2.3.2.3 Representation and Training

The network of Eco Design Advisors has an uneven geographic spread with a strong presence in the North Island, but less so in the South Island. Table 8 identifies the population covered by the current Eco Design Advisor positions – which equates to about ¼ of New Zealand’s population. Significant gaps in the service have been identified in particular in the major Christchurch and Dunedin population centres, and in the eastern and western mid North Island areas. Recently (mid 2010) Hutt City Council has decided to fund an Eco Design Advisor position, strengthening the presence of the service in the Wellington Region.

However with the decision to not continue to fund the Wellington City Eco Design Advisor service, a gap exists in this area. The Kapiti Coast Eco Design Advisor does in fact provide short consultations to Wellington City residents, but this is a “pro bono” measure and not funded by the Wellington City Council or promoted in any way. While currently the Auckland subpopulations of Manukau, North Shore, Papakura, Rodney and Franklin do not have access to an EDA programme, with the creation of the Auckland Council, in theory this will become available to them. In practice however, given the large number of consultations already undertaken by the two Eco Design Advisors, it seems likely that waiting lists could arise for the programme in Auckland if it is not further resourced.

Table 8: Location and Coverage of the Eco Design Advisor Service

Eco Design Advisor Location	Population Coverage
Waitakere City (soon to be part of Auckland Super City)	185,000
Auckland City (soon to be part of Auckland Super City)	380,000
Hamilton City	145,000
Tauranga City	118,200
Western Bay of Plenty District	42,075
Kapiti Coast District	48,400
Hutt City	97,700
Nelson City	54,500
Queenstown Lakes District	23,000
Total Population Coverage of Current EDA Service	1,093,875

Training activities have been a core part of the central administration of the Eco Design Advisor programme by BRANZ. Conferences for the programme, with intensive workshops and training are held twice a year. In addition fortnightly conference call discussions, and an online forum enables the EDAs to network with each other, keep up to date with new initiatives, and pass on technical information of use to the wider group.

Table 9: Training Activities Undertaken by Eco Design Advisors

Training Activities	Key Topic Areas Covered
EDA Conference December 2007, Wellington	Thermal performance, ALF, solar hot water, water issues, photovoltaics
EDA Conference May 2008, New Plymouth	Renewable electricity generation – solar, hydro, wind, energy efficiency, economics of these, case studies, off grid houses, grid tied generation
EDA Conference March 2009, Wanaka	Solar water heating Rainwater & greywater harvesting Case studies: retrofit eco house, straw bale house
EDA Conference November 2009, Wellington	Use of ALF 3.1, weathertightness and moisture issues, thermal performance levels above building code, ALF 3.2, heat pump water heating comparisons, solutions for downlight replacement/improvement, Nelson Solarsaver scheme, chemical toxicity/materials, energy efficiency detailing
Fortnightly conference call discussions	Update from each EDA on consultation trend, event report or planning, technical issues discussion, development of the EDA service ideas. Conference calls serve several purposes. Collegial cross-checking/validating/mentoring. Technical information sharing. Brainstorming. Coordinating.
Online forum	The forum was created in January 09 and contains (at Jan 10) about 20 topics. It is used continually by EDAs to share information, coordinate activity, and ask questions.
Eco express	This occasional technical newsletter from BRANZ comprised about 20 issues between Feb and Dec 08

2.3.2.4 Eco Design Advisor Quota of Events

As part of the MFE contract, the Eco Design Advisor programme was supposed to deliver 450 “events” on an annual basis, per FTE. Several of the positions are part time, or split across localities and different types of events will take different lengths of time (from a 2 hour full consultation to a short phone call) so a direct comparison between the number of events undertaken by each EDA/year is not necessarily the easiest or most useful of indicators of performance. However the programme has delivered a large number of total interventions – with over 4000 individual events and over 3000 individual consultations – either full or short, with individual homeowners/advisers in relation to specific dwellings.

Table 10: Total Events Undertaken by Eco Design Advisors 2007 - 2009

EDA Location	2007	2008	2009
Auckland City	NA	328 full consultations, 155 short consultations, 85 presentations and 167 networking events = 700 events	
Waitakere City	269 home visits, 400 short consultations, 129 presentations and 285 networking events = total 1083 events		
Hamilton City	NA	270 full consultations, 152 short consultations, 41 presentations and 139 networking events = 602 events	
Tauranga City/Western Bay of Plenty District	NA	298 full consultations, 594 short consultations, 79 presentations and 175 networking events = 1146 events	
Kapiti Coast District	341 full consultations, 357 short consultations, 119 networking events and 69 presentations = total 885 events		
Wellington City	NA	112 full consultations, 103 short consultations, 44 networking events and 13 presentations = 272 events	NA
Nelson City 0.75 FTE position	NA		221 full consultations, 135 short consultations, 38 networking events and 47 presentations = total 441 events
Queenstown Lakes District – 0.6 FTE position	NA	168 full consultations, 72 short consultations, 63 presentations and 93 networking events = total 396 events	
Total	1707 full consultations, 1568 short consultations, 297 presentations and 967 networking events = total 4640 events		

3 Discussion

3.1 Evaluation Method and Performance Measures

The data collected and performance measures required by the MFE contract aren't very useful to determine the actual efficacy of the programme. It's clear that the EDAs are highly successful in providing advice and information to a wide range of stakeholders through a range of mechanisms, and that this advice is strongly valued by participants to the programme. What is less clear is the effectiveness of that advice in relation to all its objectives, in particular the extent to which advice and recommendations are taken on board and implemented in homes. Follow up surveying in particular with homeowners who have had EDA consultations is recommended to help determine the extent of impact of the programme on actual homes.

The main consultations undertaken are full in house consultations and short consultations. Given that a short consultation is less than half hour, and a full consultation can be two hours, a key question must be how much more effective are full consultations. This needs to be considered in any evaluation.

An extensive data set has been collected which uses the Green Home Scheme as a benchmark for home assessment. This has not been analysed (Jaques pers. Comm.). As part of the preparation of this report the raw data was examined, but it was clear that without follow up surveying, the usefulness of the information was not high. Given the recent development of the Homestar* New Zealand Residential Rating Tool it may be more useful for future assessments to be undertaken by EDAs in relation to this, rather than a cut down Green Homes Scheme. However there is no point collecting data which no-one is going to analyse, so this issue needs a thorough look at as to what data should actually be collected.

The value Councils place on the EDA programme needs to be considered, and data collection needs to better reflect Council needs. The programme was setup very much around a BRANZ research frame, and now that BRANZ is no longer involved in evaluation, the MFE contracts are complete and individual Councils are fully funding the programme, the future evaluation and performance measures for the programme need to better reflect the issues and concerns of local government.

3.2 Area of Focus

Through discussions with BRANZ, the Eco Design Advisors and their managers through the development of this evaluation, it is clear that the programme as originally set up, and with the support provided by BRANZ, has had a strong focus on energy efficiency. This is also reflected in the mix of researcher funders for the early stages of the project. Energy and energy efficiency are not however areas of primary responsibility of local government, and some Councils report a perceived mis-match in funding, that they are being asked to support a service which delivers on central government, rather than local government, responsibilities.

This is not an issue with all of the EDA programme councils – for Kapiti Coast District, Tauranga City and Waitakere City, water efficiency in particular is a core focus of the programme, reflecting both the local community issue, and the responsibility of local government for water supply and wastewater disposal. Alongside this construction waste reduction is also a focus area which resonates strongly with local government responsibilities, and some EDAs also place a strong emphasis on the programme.

The issue for the programme therefore is how to reflect both the local concerns and needs of their local Council funder and local community within the wider ambit of the programme. This should not be a significant issue, as sustainable building encompasses a wide range of aspects, including many issues – not just water and waste, which are primary responsibilities for local government. It may however be that a greater range of support resources need to be developed for the programme on these key focus areas. Beacon Pathway has been undertaking a significant programme of water research over the last 3 years and this information could be developed to better support the EDA programme, as this has been a weaker area for BRANZ and their technical support reflects this.

3.3 Ongoing Training and Support

It is clear that one of the strengths of the programme is its national brand and linkages. Significant benefit in terms of skills and strength of recommendations is gained from the national networking which occurs through regular conference calls, the website and semi-annual conferences held.

3.4 Gaps in Coverage

There are several notable gaps in coverage of the programme, but in particular the South Island is poorly represented. This is ironic given the original energy efficiency focus –as South Island homes are likely to deliver significant benefits in terms of energy efficiency if retrofitted or built to higher performance standards. It is understood that Christchurch City Council is interested in the idea of participating in the programme, and the establishment of a Christchurch EDA is strongly endorsed.

3.5 Linkages with Other Sustainable Building Programmes

Links with Sustainable Living and the Home Energy Advice Centres are already being made. BRANZ and Beacon are both providing technical support to ensure a high speed of information transfer on latest sustainable building research findings.

The Homestar New Zealand Residential Rating Tool creates a new opportunity and potential link for the EDAs. Given the poor takeup of HERS and the problems around this there may well not be a large interest from the assessor community in becoming accredited NZ Residential Rating Tool assessors, particularly in smaller municipalities. It could be a significant benefit to

the NZRRT uptake if EDAs became accredited assessors, as in many instances they may be the only assessor in their community. This could also have a limited effect in providing a small potential funding stream for EDAs, as given the time to undertake an accredited assessment, and the fact that other, non EDA, assessors will charge, it could be a cost recovery service.

4 Recommendations

- Develop a follow up survey to be undertaken with homeowners who have participated in the programme. This should have some key focus areas, in particular
 - Gauge the difference in effectiveness between a short consultation and a full consultation
 - Determining the actual impact (in terms of implementation in a house) of the programme
 - Collecting data which will assist local Councils in determining the value to their operations and functions of the service, and how it can best be targeted to meet their needs.
 - Investigate how some cost recovery can be achieved as this would be a key incentive to Councils retaining/joining provision of the service. Options could include:
- Charging for consultations that last longer than 2 hours
 - Homestar* assessments (partial assessment of the home using the online tool as part of an EDA consultation, or a full certification, probably conducted independently of an EDA advice consultation)
 - Building consent application review (include within Building Consent fee)
 - Full consultations/ Homestar* assessments that are undertaken as a mandatory part of a Council subsidised housing improvement loan scheme (eg Retrofit the City, Nelson Solarsaver) with the fee added to the loan
- Setting up of a national co-ordinator to provide the services previously provided by the BRANZ co-ordinator, including:
 - National marketing of the service
 - Co-ordinating training events
 - Expanding the service to other Councils
- Advocacy/funding applications for central Government and other support for the service

5 References

Auckland City Council, (May 2008). *Keeping Auckland's Future Bright, Long-term plan for a Sustainable Auckland*. <http://www.aucklandcity.govt.nz/council/documents/bright/goals.asp>

Christie, L., & Stoecklein, A. (2005). *'Sustainable Design Decisions: Processes, influences, values of the homebuilder'*. Architectural Science Association (ANZAScA), Wellington, 2005.

Christie, L. Jaques, R. Stoecklein, A. and Mathews I. (2007) *The Role of an Eco Design Advisor – How Effective Has it Been?* Proceedings of the SB07 New Zealand Conference, November 2007, Auckland.

Christie, L. Jaques, R. Mathews, I. and Stoecklein, A. (2007) *The Eco Design Advisor Scheme Evaluation*. Draft BRANZ Study Report.

Christie, L. Stoecklein, A. and Jaques R. (2007) *The Eco-Design Advisor: An Independent Resource for the Building Industry*. Proceedings of the NZSSES Conference, **DATE**

Easton, L., Mead, D., Trenouth, C., Young Cooper, H., Fullbrook, D., & Arnold, P. (2006). *Local Council Sustainable Barriers and Incentive: Auckland City Case Study*. Report PR200/3 prepared for Auckland City Council and Beacon Pathway Limited.

Morrison, R., Scott, E., and Braxton, F. (2009) *Draft Eco Design Advisor Business Plan July 2009-2012*.

Stoecklein, A., Zhao, Y., Christie, L., and Skumatz, L. (2005). *100\$ worth of Comfort: The Real Value of Energy Technologies*, 2005 Architectural Science Association (ANZAScA), Wellington, 2005.

Stoecklein, A. 2005. *"Energy Efficient Housing in New Zealand – Barriers and a Structured Methodology on How to Address Them."* BRANZ report #EC1006/1, EECA, Wellington.

Trenouth, C. and Mead, D. 2007. *Local Government Sustainable Building Barriers and Incentives: Case Studies*. Report PR201/3 for Beacon Pathway Limited, Auckland.